

**Problem Determination Guide
for the Service Coordinator**

**Operating System/2™
Extended Edition
Version 1.3**

Programming Family

First Edition (September 1990)

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About This Guide

The purpose of this guide is to provide assistance for you to:

- Identify problems or errors that system users are unable to resolve using online reference information or the *IBM Operating System/2 Extended Edition Version 1.3 User's Guide, Volumes 1, 2, and 3* (hereafter referred to as the *User's Guide, Volumes 1, 2, and 3*).
- Gather information to resolve such problems.

One copy of this guide is available free of charge to all registered service coordinators. Additional copies can be purchased from an authorized IBM* sales representative.

This guide contains information to resolve *only relatively complex problems* that:

- Are considered to be beyond the capability or training level of many system users. (The problem could be caused by an equipment failure, an error in programming, or a user error.)
- Cannot be resolved using the information in any of the reference sources listed in "Sources of Related Information" on page vi.

The panels, screen, and menus shown are *only* examples and may not exactly depict what you may see on your workstation.

Who Should Use This Guide

The *IBM Operating System/2 Extended Edition Version 1.3 Problem Determination Guide for the Service Coordinator* is designed to be used by the person who is:

- Designated as service coordinator for your system
- Registered as service coordinator with IBM at the time the program license was acquired.

Conventions Used in This Guide

The format for date and time, and the characters used as separators for date and time, are for a system configured to use the United States national language format. These may be different on your display, depending on the national language format used by your system.

Before You Begin

IBM Operating System/2* program service coordinators should be familiar with the following:

- Base operating system, communications, database, and local area network (LAN) concepts
- Hardware and software requirements and options (see Appendix I, "Supported Hardware and Software Considerations")
- The overall configurations of the OS/2* systems they support

- Application programs and other special operations being run on these systems
- The information and special diagnostic tools described in this guide
- The types of reference information available in “Sources of Related Information” that follows.

Sources of Related Information

This section describes online information and related publications.

Information Available Online

The OS/2 program provides an extensive array of online reference and help information. A description of related facilities follows. Additional information is provided in the *User's Guide, Volumes 1, 2, and 3*.

Introducing OS/2 provides an online overview of the basic tasks you can perform using the OS/2 program.

Panel and Menu Item Helps provide additional information. To access this information, select Help when **F1 = Help** is displayed. These are *context-sensitive* Helps, which means that Help information is displayed for the menu, panel, or menu item on which the cursor is positioned.

Message Helps are available for many OS/2 program messages. These Helps describe the *cause* of the message and any *action* you should take to resolve related problems. For the Communications Manager and Database Manager messages that have online Help information, select Help when **F1 = Help** is displayed. For the base operating system messages that have online Help information, type HELP xxxx (xxxx is the message number) at the OS/2 command prompt and type HELP NETxxxx (xxxx is the message number) at the OS/2 command prompt and select Enter.

Key Helps provide descriptions of commonly used keys. To access key helps for Communications Manager, Database Manager, **F9 = Keys** when a menu Help panel or message Help panel is displayed. The list of keys is displayed. To display commonly used key definitions at the top of the base operating system command prompt screen, type HELP ON and select Enter. The system displays a description of keys used to switch between programs and the Start Programs window. To remove the description, type HELP OFF and select Enter. For a description of other commonly used base operating system keys, type HELP at a base operating system command line and select Enter.

Help on Help provides additional information about the online Help facility. To view Help on Help, select Help when a menu Help or message Help is displayed. This feature is available for the Communications Manager and Database Manager components only.

Prerequisite Publications

You should have access to the following publications:

- *IBM Operating System/2 Extended Edition Version 1.3 Getting Started*
- *IBM Operating System/2 Extended Edition Version 1.3 User's Guide, Volume 1: Base Operating System*
- *IBM Operating System/2 Extended Edition Version 1.3 User's Guide, Volume 2: Communications Manager and LAN Requester*
- *IBM Operating System/2 Extended Edition Version 1.3 User's Guide, Volume 3: Database Manager*
- *IBM Operating System/2 Extended Edition Version 1.3 Guide to Information.*

List of Related Publications

Related publications are listed on the following pages. If you need more information about these publications, refer to the *Guide to Information*, or contact your IBM representative or authorized dealer.

Application Programming Books

Following is a list of related application programming books:

- *IBM Operating System/2 Extended Edition Version 1.3 ACDI Programming Reference*
- *IBM Operating System/2 Extended Edition Version 1.3 APPC Programming Reference*
- *IBM Operating System/2 Extended Edition Version 1.3 ECF Server-Requester (SRPI) Programming Reference*
- *IBM Operating System/2 Extended Edition Version 1.3 EHLLAPI Programming Reference*
- *IBM Operating System/2 Extended Edition Version 1.3 Database Manager Programming Guide and Reference*
- *IBM LAN Technical Reference Manual*
- *IBM Operating System/2 Extended Edition Version 1.3 X.25 Programming Reference.*

IBM OS/2 LAN Server Books

Following is a list of IBM OS/2 LAN Server books:

- *IBM OS/2 LAN Server Version 1.3 Getting Started*
- *IBM OS/2 LAN Server Version 1.3 User's Guide*
- *IBM OS/2 LAN Server Version 1.3 Network Administrator's Guide.*

Other Related Publications

Following is a list of other related publications:

- *IBM Operating System/2 Extended Edition Version 1.3 Programming Services and Advanced Problem Determination for Communications*
- *IBM Operating System/2 Extended Edition Version 1.3 System Administrator's Guide for Communications*

- *IBM Operating System/2 Extended Edition Version 1.3 Database Manager Administrator's Guide*
- *IBM Operating System/2 Extended Edition Version 1.3 Commands Reference*
- *IBM Operating System/2 Information and Planning Guide*
- *IBM Operating System/2 Extended Edition Version 1.3 Keyboard Layouts*
- *IBM Systems Network Architecture Network Product Formats*
- *IBM Operating System/2 Version 1.2 Programming Tools and Information*
- *IBM Operating System/2 Extended Edition Version 1.3 Database Manager Structured Query Language (SQL) Reference*
- *IBM Operating System/2 Extended Edition Version 1.3 Structured Query Language (SQL) Concepts*
- *IBM PC Network Hardware Maintenance and Service Manual*
- *IBM Token-Ring Network Problem Determination Guide*
- *AS/400 Communications: User's Guide*
- *IBM 5250 Information Display System Functions Reference Manual*
- *IBM 5250 Information Display System Planning and Site Preparation Guide*
- *IBM 5251 Display Station Models 1 and 11 and IBM 5252 Dual Display Station Operator*
- *IBM 5251 Display Station Models 2 and 12 Operator*
- *IBM 5291 Display Station Operator*
- *IBM 5292 Color Display Station Models 1 and 2 Operator*
- *GDDM Base Programming Reference, Volume 2*
- *GDDM Installation and System Management*
- *Yellow Book, Volume VIII - Fascicle VIII.2, Data Communications Networks Services and Facilities, Terminal Equipment and Interfaces, Recommendations X.1 - X.29 (VIIth Plenary Assembly, Geneva, November 1980)*
- *Red Book, Volume VIII - Fascicle VIII.3, Data Communications Networks Interfaces, Recommendations X.20 - X.32 (VIIIth Plenary Assembly, Malaga-Torremolinos, October 1984)*
- *Data Communication Networks Interfaces, Volume VIII, Fascicle VIII.3, Rec. X.20-X.32, Malaga-Torremolinos, October 1984*
- *IBM X.25 1984 Interface for Attaching IBM SNA Nodes to Packet-Switched Data Networks: General Information Manual*
- *IBM X.25 Interface Co-Processor/2: Technical Reference.*

Other X.25 technical information documents may be available from your X.25 network provider.

How This Guide Is Organized

This guide presents a comprehensive strategy and process for registered service coordinators to assist users in resolving or identifying the source of hardware or software problems. The following chapters and appendixes are arranged (and should be read) in an order that allows service coordinators to prepare for, identify, and accomplish procedures associated with the roles described in “Service Coordinator’s Role” on page 1-1.

- Chapter 1, “Before You Begin”

Provides information and preliminary preparations to develop an understanding of the related resources that are available for service coordinators and the users they support to resolve problems. These resources include other system support personnel and the “Sources of Related Information” described earlier in this preface. The information is designed to help service coordinators determine when it is appropriate to respond directly to a user’s problem or redirect a user to another resource.

- Chapter 2, “Problem Determination: Getting Started”

Provides information to help determine the course of action, or *path*, that service coordinators should take to resolve various types of problems. Information is provided to help determine *when* it is appropriate to (a) use one or more of the diagnostic tools described in Chapter 3, “Using Diagnostic Tools” and (b) contact IBM.

- Chapter 3, “Using Diagnostic Tools”

Provides a description of and procedures for using the OS/2 program *diagnostic tools*. These tools are used to gather and process data that may help identify the cause of a problem. They include *logging utilities*, *trace utilities*, and *dump utilities*. These tools are designed to be used as part of the overall problem determination process and should be used *only* upon direction provided in Chapter 2, “Problem Determination: Getting Started,” in Appendixes A through H, “Messages That May Require Service Coordinator Intervention,” or by an IBM Support Center representative. Only procedural information is provided in this chapter.

- Chapter 4, “When and How to Contact IBM”

Provides a description of the types of assistance IBM can provide to registered service coordinators for suspected program defects.

These services are designed to be used as part of an overall problem determination process and should be used *only* after service coordinators have (a) followed a problem path in Chapter 2, “Problem Determination: Getting Started” or responded to an error message as directed in Appendixes A through H, “Messages That May Require Service Coordinator Intervention,” and (b) were directed in that information to refer to the procedures in this chapter for contacting IBM.

- **Chapter 5, “Installing Program Updates”**
Describes the circumstances under which IBM develops and distributes a *Corrective Service diskette* that includes a *program update* designed to resolve a user’s problem. Directions for accessing and printing related installation instructions are also presented.
- **Appendix A, “Base Operating System (SYS) Messages”**
Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.
- **Appendix B, “ACS Messages That May Require Service Coordinator Intervention”**
Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.
- **Appendix C, “MACH Messages That May Require Service Coordinator Intervention”**
Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.
- **Appendix D, “File Transfer (TRANS) Messages That May Require Service Coordinator Intervention”**
Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.
- **Appendix E, “GDDM (ADM) Messages That May Require Service Coordinator Intervention”**
Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.

- Appendix F, “LAN Requester or OS/2 LAN Server (NET) Messages That May Require Service Coordinator Intervention”

Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.

- Appendix G, “Database Manager (QRW or SQL) Messages That May Require Service Coordinator Intervention”

Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.

- Appendix H, “User Profile Management (UPM) Messages That May Require Service Coordinator Intervention”

Contains lists of messages that may be reported to the service coordinator, along with actions users are supposed to take and procedures for the service coordinator to follow in responding to each message. The information and procedures in these appendixes are provided as part of the overall problem determination process and are designed to be used upon direction from or in concert with the information and procedures provided in “Responding to Error Messages” on page 2-8.

- Appendix I, “Supported Hardware and Software Considerations”

Provides operating considerations associated with supported hardware and host and other software.

- Appendix J, “Problem Report Form”

Contains the OS/2 Problem Report Form (PRF), describes when and why a PRF should be used, and provides information for completing a PRF.

- Appendix K, “Authorized Program Analysis Report (APAR) Mailing Labels”

Contains the OS/2 APAR mailing labels, describes when and why a mailing label should be used, and provides information for using an APAR label.

- Glossary

Provides definitions for OS/2 program terms, phrases, and acronyms that may be of interest to service coordinators.

- Index.

Contents

Chapter 1. Before You Begin	1-1
Service Coordinator's Role	1-1
Maintaining Records	1-2
Creating and Maintaining a List of Users and Their Environments	1-2
Creating and Maintaining a Record of Problems and Solutions	1-2
Knowing When to Redirect a Problem	1-2
Other Sources of Information Available for System Users	1-3
Role of Other System Support Personnel	1-3
Administrator Roles in the OS/2 Program	1-4
When and How to Use the Information in This Guide	1-7
When to Call IBM	1-7
Chapter 2. Problem Determination: Getting Started	2-1
Understanding the Problem Determination Process	2-1
Getting Started	2-2
Determining if the Problem Involves Hardware or Software	2-2
Determining if Your Hardware is Functioning Properly	2-3
Determining if Your IBM Software Is Functioning Properly	2-5
Identifying the Application or Scenario Needed to Re-Create the Problem ..	2-6
Responding to Error Messages	2-8
Other Message Sources	2-12
Classifying a Software Problem	2-12
Using the Problem Report Form	2-13
Determining Which Component Is Associated with the Problem	2-15
Chapter 3. Using Diagnostic Tools	3-1
When to Use a Diagnostic Tool and Why	3-1
Types of Diagnostic Tools	3-1
Logging Utilities	3-2
Trace Utilities	3-3
Dump Utilities	3-3
Using Logging Utilities	3-5
Using the OS/2 Logging Facility for OS/2 Problems	3-5
Using ACSLAN.LOG for LAN Problems	3-10
Using the LAN Requester or OS/2 LAN Server Error Log for LAN	
Problems	3-10
Using the OS/2 LAN Server Audit Trail for LAN Problems	3-14
Using the Message Log for Communications Problems	3-17
Locating 5250 Work Station Feature (WSF) Job Logs	3-23
Using Error Log Services for Communications Problems	3-23
Using Import and Export Message Files	3-30
Tools for Advanced Problem Determination of the Base Operating System,	
LAN Requester, and Database Manager	3-31
Preliminary Considerations for Using the System Trace Utility	3-31
Using the Standalone Dump Utility	3-36
The PSTAT Utility	3-40
Using the PSTAT Utility	3-40
Tools for Advanced Problem Determination of Communications	3-41
Preliminary Considerations for Using Trace and Dump Services	3-42
Accessing Trace Services	3-44

Using the Trace Services Menu	3-45
Recommended Procedures for Performing a Communications Trace	3-46
Using the Dump Services Menus	3-53
Recommended Procedure for a Communications Trace and Dump	3-57
Chapter 4. When and How to Contact IBM	4-1
Types of Assistance IBM Provides	4-1
Who Should Contact IBM	4-1
When to Seek Help	4-1
Why You Should Contact IBM	4-2
Completing the Problem Report Form	4-2
Using ServiceLine (U.S.A. Only)	4-2
Preliminary Considerations	4-3
How to Use ServiceLine	4-3
Using the IBM Support Center	4-4
When to Contact the IBM Support Center	4-4
How the IBM Support Center Works for You	4-5
Sending Problem Determination Information to IBM	4-6
Understanding Your Right to Privacy	4-6
Types of Problem Determination Information to Send to IBM	4-6
Mailing Labels for Problem Report Information	4-9
Chapter 5. Installing Program Updates	5-1
What is Corrective Service?	5-1
How to Install Program Updates	5-2
Printing Installation Directions	5-2
Determining the Level of Corrective Service Currently Loaded on a Workstation	5-2
Appendix A. Base Operating System (SYS) Messages	A-1
Using the Problem Report Form	A-2
SYS Messages	A-3
Appendix B. ACS Messages That May Require Service Coordinator Intervention	B-1
When to Use This Appendix	B-1
How to Use This Information	B-1
Using the Problem Report Form	B-2
Communications Manager (ACS) Messages	B-3
Appendix C. MACH Messages That May Require Service Coordinator Intervention	C-1
When to Use This Appendix	C-1
How to Use This Information	C-1
Using the Problem Report Form	C-2
Appendix D. File Transfer (TRANS) Messages That May Require Service Coordinator Intervention	D-1
When to Use This Appendix	D-1
How to Use This Information	D-1
Using the Problem Report Form	D-2
File Transfer (TRANS) Messages	D-3
Appendix E. GDDM (ADM) Messages That May Require Service Coordinator Intervention	E-1
When to Use This Appendix	E-1
How to Use This Information	E-1

Using the Problem Report Form	E-2
GDDM (ADM) Messages	E-3
Appendix F. LAN Requester or OS/2 LAN Server (NET) Messages That May Require Service Coordinator Intervention	F-1
When to Use This Appendix	F-1
How to Use This Information	F-1
Where to Find a Message	F-1
Using the Problem Report Form	F-2
LAN Requester or OS/2 LAN Server (NET) Messages	F-3
Appendix G. Database Manager (QRW or SQL) Messages That May Require Service Coordinator Intervention	G-1
Using Query Manager Messages	G-1
Sources of Related Information	G-1
Where to Turn for Diagnostic Procedures	G-1
Query Manager (QRW) Messages	G-2
Database Services and Query Manager (SQL) Messages	G-10
Appendix H. User Profile Management (UPM) Messages That May Require Service Coordinator Intervention	H-1
User Profile Management (UPM) Messages	H-3
Base Operating System Return Codes	H-6
Appendix I. Supported Hardware and Software Considerations	I-1
Determining Hardware Requirements for the OS/2 Workstation	I-1
Models, Diskette Drives, and Fixed-Disk Drives	I-1
Displays and Adapters	I-3
Communications Adapters	I-4
Keyboards and Keyboard Templates	I-8
Pointing Devices	I-9
Printers	I-9
Plotters	I-10
Controllers	I-10
Protocol Converters	I-11
Modems	I-11
X.25 Connection Types	I-17
Host Software Considerations	I-19
Host Communications Programs	I-20
Host Communications Programs for NCP	I-21
Host File Transfer Programs	I-22
Communications and System Management Host Programs	I-22
Host Graphical Data Display Manager (GDDM) Programs	I-23
Appendix J. Problem Report Form	J-1
When and Why You Should Use This Form	J-1
How to Use a Problem Report Form	J-1
Problem Report Form	J-6
Appendix K. Authorized Program Analysis Report (APAR) Mailing Labels ..	K-1
Before Sending Problem Report Information to IBM	K-1
How to Use an APAR Mailing Label	K-2
Boca Raton APAR Mailing Label (USA Only)	K-3
Austin APAR Mailing Label (USA Only)	K-3

Glossary	X-1
Index	X-57

Figures

2-1.	TRAP Error Sample	2-9
3-1.	OS/2 Logging Facility Main Menu	3-7
3-2.	Display System Log File Panel	3-7
3-3.	Print System Log File Panel	3-8
3-4.	Standard Record Entry Example	3-8
3-5.	Generic Alert Entry Example	3-9
3-6.	Sample of the Contents of the LAN Error Log	3-12
3-7.	Main Panel	3-12
3-8.	Statistics and Logs Pop-Up	3-13
3-9.	Error Log Example	3-13
3-10.	Printer Selection Pop-Up	3-14
3-11.	Main Panel	3-16
3-12.	Statistics and Logs Pop-Up	3-16
3-13.	Audit Trail Example Pop-Up	3-16
3-14.	Print Selection Pop-Up	3-17
3-15.	Communications Manager Main Menu	3-18
3-16.	Display Messages Pull-Down	3-18
3-17.	Display Messages Example	3-19
3-18.	Message Log Display Panel Example	3-22
3-19.	Communications Manager Main Menu	3-24
3-20.	Advanced Pull-Down	3-24
3-21.	Problem Determination Aids Menu	3-24
3-22.	Error Log Services Menu Example	3-25
3-23.	Error Log Display Criteria Pop-Up Example	3-25
3-24.	Error Log Display Panel Example	3-26
3-25.	Error Log Print Criteria Menu Example	3-28
3-26.	Error Log Output Format Example	3-29
3-27.	Communications Manager Main Menu	3-44
3-28.	Advanced Options Panel	3-44
3-29.	Problem Determination Aids Menu	3-44
3-30.	Trace Services Menu	3-45
3-31.	Trace Services Menu	3-45
3-32.	Trace Type Selection Panel	3-47
3-33.	Trace Selections Menu	3-47
3-34.	Trace Services Menu	3-48
3-35.	Copy Storage Trace to File Panel	3-48
3-36.	Trace Services Menu	3-49
3-37.	Auto-Trace Services Panel	3-49
3-38.	Trace Type Selection Panel	3-50
3-39.	Trace Selections Menu	3-50
3-40.	Auto-Trace Services Panel	3-51
3-41.	Copy Storage Trace to File Panel	3-51
3-42.	Communications Manager Main Menu	3-53
3-43.	Advanced Pull-Down	3-53
3-44.	Problem Determination Aids Menu	3-53
3-45.	Dump Services Menu	3-54
3-46.	Dump Selections Menu	3-54
3-47.	Dump Destination Pop-Up Example	3-55
3-48.	Dump Activation Warning Pop-Up Example	3-55
3-49.	Dump in Process Status Pop-Up	3-56
5-1.	Sample of Current Level of Corrective Service Display Information	5-3
J-1.	Priority Checklist	J-4

Tables

1-1.	Summary of System Support Personnel Roles	1-6
2-1.	Types of Software Problems	2-13
I-1.	IBM Personal System/2 Models, Diskette Drives, and Fixed-Disk Drives	I-2
I-2.	IBM Personal Computer AT Models, Diskette Drives, and Fixed Disks	I-2
I-3.	IBM Personal System/2 Adapters and Displays	I-3
I-4.	The IBM Personal Computer AT Adapters and Displays	I-3
I-5.	OS/2 Supported Communications Adapters	I-4
I-6.	Hardware Limitations	I-7
I-7.	Keyboards Supported by the OS/2 Program	I-8
I-8.	Pointing Devices Supported by the OS/2 Program	I-9
I-9.	Parallel Pointing Devices for the IBM Personal Computer AT Supported by the OS/2 Program	I-9
I-10.	Printers Supported by the OS/2 Program	I-9
I-11.	Plotters Supported by the OS/2 Program in the OS/2 Mode	I-10
I-12.	IBM Controllers Supported by the OS/2 Program	I-11
I-13.	Protocol Converters Supported by the OS/2 Program	I-11
I-14.	Modems for Communications Manager	I-13
I-15.	Front Switch Setting for IBM 5841 (1200 bps External)	I-14
I-16.	Dip Switch Setting for IBM 5841 (1200 bps External)	I-14
I-17.	Front Configuration Switches	I-15
I-18.	Rear Configuration Switches	I-15
I-19.	Racal-Vadic VI2422S Switch Settings	I-15
I-20.	Acronym Definitions	I-19
I-21.	Host Communications Programs	I-20
I-22.	Programs for Host Communication Controllers	I-21
I-23.	Host File Transfer Programs	I-22
I-24.	Communications and System Management Host Programs	I-22

Chapter 1. Before You Begin

If users experience a problem and the cause is not immediately apparent, they may call you, the service coordinator. In some cases, users are directed to call you. The information in this guide is designed to help you determine the nature of the problem and provide assistance to resolve it.

To help resolve or define problems in a timely manner, IBM suggests that you use the information in this chapter to:

- Complete the preliminary preparations described in this chapter.
- Identify resources (other than this guide) and other system support personnel that may be of assistance to you and the users you support.

Note: If, while reading this guide, you find a word or phrase you do not understand, the glossary or index at the back of this guide can provide assistance.

Service Coordinator's Role

See "Chapter 1, Before You Begin ."

Service coordinators for the OS/2 program are designated and registered at the time the program license is acquired. Service coordinators assist users to resolve or define their problems.

To help resolve or define problems in a timely manner, IBM suggests that registered service coordinators:

- Establish and maintain problem-related records including:
 - A list of the users they support
 - A history of problems that have been reported and actions taken to resolve them.
- Provide the following types of assistance to users:
 - Advise users that a service coordinator is available to help resolve or define problems that users cannot resolve using other resources available to them.
 - Use the information and special diagnostic tools described in this guide.
- Interface with IBM:
 - Report suspected OS/2 program defects to IBM.
 - When necessary, use special diagnostic tools described in this guide and respond accordingly *under the direction of the IBM Support Center* to resolve a user's problems.
 - Receive Corrective Service diskettes from IBM and help users install corrections.

Service coordinators must inform IBM if they are relocated, reassigned, or if a new person assumes these responsibilities.

Maintaining Records

Service coordination requires a certain amount of record keeping. In particular, you should establish and maintain problem-related records. Some specific suggestions follow.

Creating and Maintaining a List of Users and Their Environments

IBM recommends that you gather, and update as necessary, the following information:

- A list of users of the system or systems you support.
In addition to user names, you should establish a record of system user addresses and IDs, and any other information, such as users' office and telephone numbers, that may be pertinent to day-to-day service coordination.
- Descriptions of the users' operating environments, including:
 - The overall configuration of the OS/2 systems you support.
 - The latest level of *corrective service* installed on each user's system (see Chapter 5, "Installing Program Updates" for additional information).

Creating and Maintaining a Record of Problems and Solutions

IBM also recommends that you maintain a history of problems that have been reported and actions taken to resolve or identify them. This information can help you isolate some problems and anticipate or avoid others. In particular, you should:

- Make several copies (and maintain originals to make additional copies if needed) of the Problem Report Form (PRF) provided in Appendix J, "Problem Report Form."
- As you complete the procedures and answer the questions associated with the flow chart contained in Chapter 2, "Problem Determination: Getting Started," record the information you gather in the appropriate places on the PRF.

Should you be directed to contact IBM to resolve your problem, the information contained on the PRF helps IBM respond to you in a prompt and effective manner.

- Make copies of a completed PRF *before* sending it to IBM for analysis.
Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Additional information, including the types of information you should send to IBM, is provided in "Sending Problem Determination Information to IBM" on page 4-6.
- Update the PRF as additional information becomes available. In particular, be sure to note the resolution of problems on the PRF.
- Keep completed PRFs for your records and for later reference.

Knowing When to Redirect a Problem

You may be contacted by users who do not know where to turn for assistance. Depending upon the nature of the problem, you may be able to assist the user by relying on your knowledge and experience or on one of the resources described in "Sources of Related Information" on page vi.

In other cases, it may be appropriate for you to direct a user to other available resources or system support personnel to resolve the problem. To determine when this is appropriate, read the information in the following sections:

- “Other Sources of Information Available for System Users”
- “Role of Other System Support Personnel.”

For example, usage problems (such as *how to* questions) should be directed to the appropriate user reference information. Usage problems *do not* include suspected program bugs (code defects) or system problems.

Other Sources of Information Available for System Users

In many cases, the cause of a problem may be readily apparent and the user can recover without assistance. In most other cases, the user can recover using one of the resources described in the following sections:

- “Information Available Online” on page vi
- “List of Related Publications” on page vii.

A user should attempt to resolve problems using the appropriate items *before* calling you. Similarly, as service coordinator, you should use these resources along with this book to attempt to solve problems or to determine when it is appropriate to contact IBM for assistance.

Role of Other System Support Personnel

Your IBM computer may be part of a complex system that includes both mid-range and mainframe host computers, as well as other personal computers. As a result, there can be numerous procedures associated with setting up and maintaining a computer system. Many of these procedures may be performed and supported by personnel other than the service coordinator.

This section describes the roles of other system personnel. Use this information to determine when it is appropriate to:

- Direct a user to someone else for assistance
- or
- Act as go-between for users and other system support personnel.

Other system support personnel include local hardware personnel, system and network administrators, host personnel, and in some cases, application programmers. An overview of their roles and the types of problems they may be able to help resolve follows.

Local Hardware Personnel and Procedures

General information and directions for resolving some types of hardware problems are provided in “Determining if Your Hardware is Functioning Properly” on page 2-3. However, local personnel have the primary responsibility for maintaining system hardware and for providing problem-recovery procedures and assistance. The primary focus of this guide is on the OS/2 program software.

If you are unable to resolve a hardware problem using the information provided in this guide, refer to your local hardware personnel and procedures.

Administrator Roles in the OS/2 Program

The following definitions describe four different types of administrators. These roles can be performed by one or more individuals, depending upon your organization. For example, the Communications Manager system administrator and network administrator can be the same person, or they can be two different people. These same people can also have different titles in your organization. In some cases, an organization can have many people responsible for different aspects of one or more of these roles.

Communications Manager System Administrator

The Communications Manager system administrator (referred to as system administrator) helps users plan for, install, configure, and use Communications Manager and helps to ensure the successful operation of the communications system by users.

Communications Manager provides a variety of communications capabilities. However, this component must be *configured* to customize a system to fit the needs of a particular user and environment. For larger networks, there may be a staff of system administrators to support a large number of Communications Manager users.

A system administrator's role includes:

- Installing and configuring Communications Manager.

This includes determining the requirements for all users in the network and creating configuration diskettes or configuration worksheets for the users.

If Communications Manager is being used by entry-level or first-time users, the system administrator provides run books or instruction sheets to assist the user in performing Communications Manager functions. The information provided is customized to the specific Communications Manager functions being used.

- Verifying the proper operation of Communications Manager in the end-user environment.
- Interfacing with the network administrator to identify local area network (LAN) specific Communications Manager requirements, such as the IEEE 802.2 and NETBIOS Profiles.

Database Manager System Administrator

The database manager system administrator helps users plan for, install, configure, and use Database Manager. To perform many of these tasks, this person must have SYSADM (system administrator) authority for Database Manager.

A database manager system administrator's role includes:

- Creating and controlling databases
- Determining where databases are stored
- Establishing users and groups
- Helping users understand database server and requester concepts and use.

Network Administrator

The network administrator has primary responsibility for setting up and maintaining the LAN to which the computers are connected. The network administrator should be an experienced user or an application programmer who:

- Serves as network installer, coordinator, and analyst by:
 - Configuring (and changing as necessary) the LAN Requester and OS/2 LAN Server environment
 - Interfacing with end users to answer questions or resolve problems associated with LAN hardware or non-IBM LAN application software
 - Monitoring system performance and fine tuning as necessary to improve performance and resolve problems.
- Interfaces with other network administrators
- Interfaces with system administrators to identify LAN specific Communications Manager requirements, such as the IEEE 802.2 and NETBIOS Profiles.

Host Computer Personnel

Host personnel maintain the mid-range and mainframe computers that may be part of your network. In particular, host personnel should:

- Configure the host system software to function properly with the OS/2 program and the other computers in your network
- Resolve host-related problems.

Application Programmers

Many systems require application programs and programmers to meet required work needs. User-written programs occasionally contain errors that can cause problems for the programmer who wrote the application or for other system users. Such problems commonly result from incomplete debugging of an application.

If you suspect that a problem is the result of an error in an application program, direct the user to the programmer who wrote the application for assistance. When writing OS/2 applications, programmers should adhere to the writing and debugging guidelines contained in the guides listed in “Application Programming Books” on page vii.

Summary of Roles of Other System Support Personnel

The main points of this chapter consist of recognizing:

- When it is appropriate to direct a user to other information or personnel
- When you should take the lead in helping to resolve a user's problem.

To determine a correct course of action, you should be familiar with:

- The type of information provided in the OS/2 program online facilities
- Reference books described in "Sources of Related Information" on page vi
- The roles, summarized in Table 1-1, of other system support personnel.

Support Person	Support Provided	Types of Problems
Local hardware personnel	Maintain system hardware and provide related problem recovery procedures and assistance.	Hardware problems that cannot be resolved using the procedures described in "Determining if Your Hardware is Functioning Properly" on page 2-3.
Communications Manager system administrator	Configure, help install, and verify correct operation of Communications Manager.	Damage to, loss of, or errors in configuration files or related profiles.
Database Manager system administrator	Control, operate, and determine the content, data structures, and locations of databases.	Optimize for performance, monitor use and resolve problems resulting from damage to, loss of, or errors in database configuration files, and from the use of Remote Data Services (RDS).
Network administrator	Set up and maintain LANs to which workstations are connected.	LAN Requester and OS/2 LAN Server software configuration problems, and LAN hardware or system performance problems.
Host personnel	Maintain and configure systems controllers and host computers to function with the OS/2 program.	Host system failure.
Application programmers	Write, install, and debug application programs.	Problems resulting from application programming errors (sources of debugging information are listed in "Application Programming Books" on page vii).

When and How to Use the Information in This Guide

The procedures in this guide are designed to help you respond to a user's problem by:

- Determining if a problem is software- or hardware-related.
- Determining if a problem is caused by equipment or programming other than that supplied by IBM (for example, a problem might be isolated to a telephone circuit, in which case it can be corrected only by a telephone company).
- Attempting to isolate the problem to a particular workstation or to a LAN.
- Correcting the problem when possible and resuming operations without having to call IBM for assistance, or circumventing the problem temporarily and continuing operations while you arrange for service.
- Using the diagnostic tools described in Chapter 3, when appropriate, to gather information that can help the IBM Support Center find and correct the problem.
- Discovering patterns of similar problems by maintaining a file consisting of copies of completed Problem Report Forms (a blank form is contained in Appendix J); this knowledge may be useful in the event of recurring problems.

For specific information about the contents of each chapter and appendix, refer to "How This Guide Is Organized" on page ix.

When to Call IBM

The process for identifying the cause or source of a problem is described in Chapter 2 and in the Messages Appendixes A through H. Procedures for contacting IBM are provided in Chapter 4.

Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Do not send IBM information that is considered confidential or proprietary by you or any licensed end user. If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

Chapter 2. Problem Determination: Getting Started

As service coordinator, users may call upon you to resolve a variety of problems that differ in nature and severity. Your response depends on:

- The specific nature of the problem
- Any related information that you can gather
- Your experiences resolving similar problems.

For example, your response to a hardware problem should be different from your response to a software problem. There is a different course of action, or *path*, that you should take for each of these cases.

Understanding the Problem Determination Process

The OS/2 problem determination paths are illustrated in the flow chart that begins on the following page. The purpose of this flow chart and the supporting text is to get you started on the correct path to find the source of a problem.

When appropriate, additional information is provided to explain or expand upon actions and concepts (a number in a black box **n** next to an action or question indicates that additional information follows the chart).

The OS/2 program offers a variety of diagnostic tools to help you identify the source of a problem. Additional support is available from IBM. The information in this chapter is intended to help you decide *when* it is appropriate to use one or more of the OS/2 program diagnostic tools to identify the source of a problem and when you should contact IBM.

Directions on *how* to use these tools or contact IBM are provided in the following chapters:

- Chapter 3, “Using Diagnostic Tools”

As part of an overall problem determination process, these tools should be used *only* upon direction provided in this chapter; in the Messages Appendixes A through H; or by an authorized IBM representative.

- Chapter 4, “When and How to Contact IBM”

Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Additional information, including the types of information you should send to IBM, is provided in “Sending Problem Determination Information to IBM” on page 4-6.

Getting Started

Each major section of this chapter begins with an important question you may need to answer and a flow chart designed to help you answer the question and proceed in a logical manner toward identifying the source of the problem.

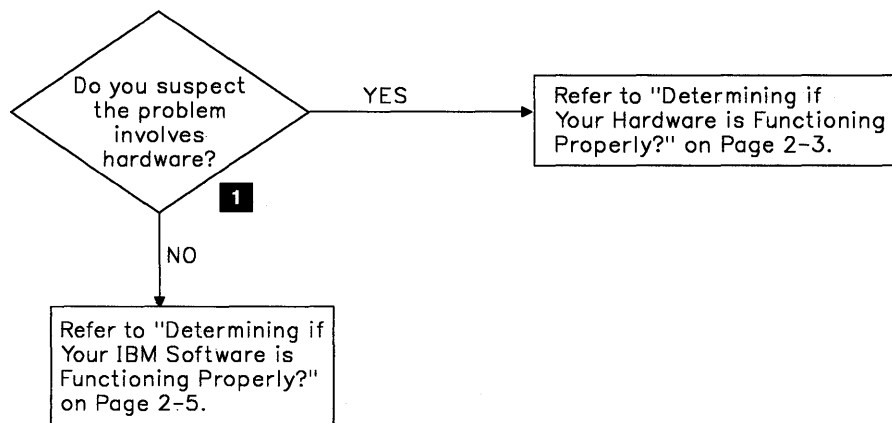
Obtain a copy of the Appendix J, "Problem Report Form" and answer these questions in the appropriate places on the form. A description of each item on the PRF is also provided in this appendix.

If there is not a specific space provided on the PRF to answer a particular question, use the space provided in Part B: "Problem Description."

The first question you should ask is, "Does the problem involve hardware or software?"

Determining if the Problem Involves Hardware or Software

Determining if the problem is related to the hardware or software is your first important decision. If you know or suspect the problem is hardware-related, follow the hardware path.

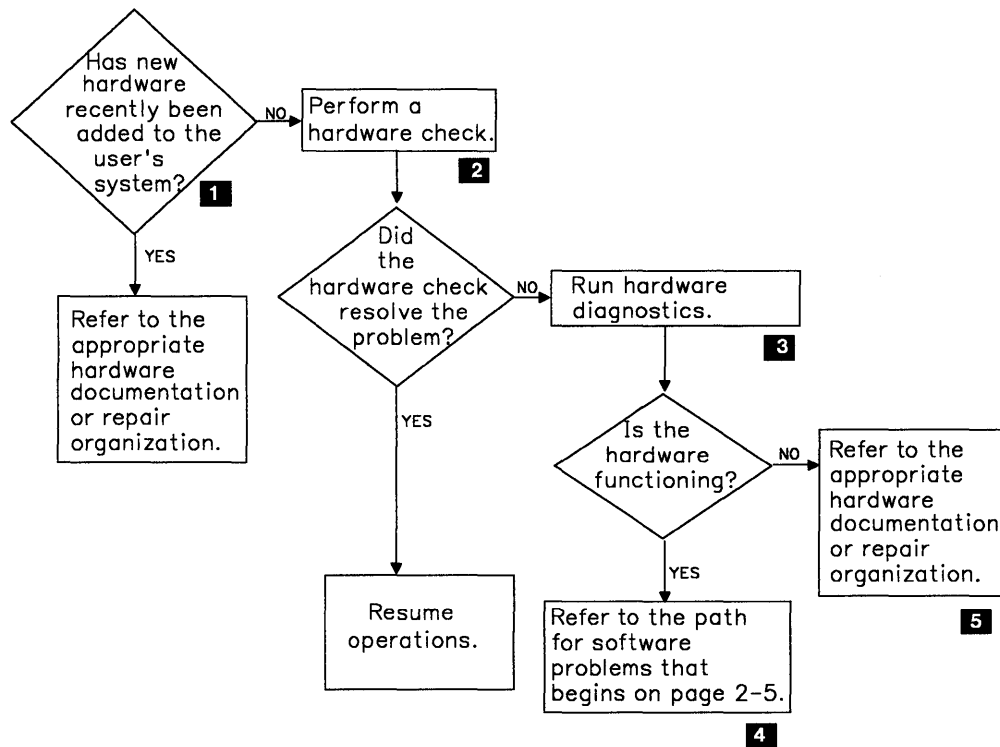


- 1** If the user is usually able to successfully complete the operation that failed, there were no messages indicating a software problem, and no software has been changed, a hardware problem may have occurred.

When You Are Not Sure, Use the Process of Elimination: If you are not sure if the problem is hardware- or software-related, begin by following the hardware path.

If you determine that the hardware is working properly, but the problem persists, the next question you should ask is, "Does my IBM software function properly?" and refer to "Determining if Your Hardware is Functioning Properly" on page 2-3.

Determining if Your Hardware is Functioning Properly



1 New Hardware Installed

If new hardware has been added to the system just before the problem occurred, refer to the documentation provided with that hardware. If new hardware was not recently installed, proceed to 2.

2 Perform a Hardware Check

A good technique for determining a hardware failure is to attempt to run the failing operation on another OS/2-supported system. If it works on another system, you should suspect a hardware failure. If this is the case, proceed by checking all switches and personal computer hardware products attached to or installed in the user's computer to ensure that:

- Power switches are on
- Contrast and brightness controls are properly adjusted
- Any physical connections to the user's computer, including electrical outlets, cables, and power cords, are secure and functional
- Any installed options, such as adapters, are:
 - Designed for use with your system
 - Installed according to their instructions
 - Properly installed (seated).

Notes:

1. Some devices that attach to your system, such as modems or printers, have test instructions of their own. Refer to the directions provided with those products when testing such attached devices.
2. When a user is running applications in more than one DOS or OS/2 session, performance degradation can result from certain problems associated with hardware configuration. If you suspect such a problem, refer to the discussion of hardware-related considerations under "Running Multiple Applications Using Different Modes" on page 2-19.

3 Run the Hardware Diagnostics

Use the procedures provided with your IBM Personal Computer AT* or IBM Personal System/2* computer.

If you suspect a problem is associated with LAN hardware such as an adapter, refer to the *IBM LAN Guide to Operations* that was shipped with the adapter that is installed on the user's workstation.

4 Problem is not Hardware-Related

If, after completing both the hardware check described on the previous page and a hardware diagnostics test, you determine that the problem is not hardware-related, but you have not yet identified the source of your problem, refer to "Determining if Your IBM Software Is Functioning Properly" on page 2-5.

5 Hardware Problem

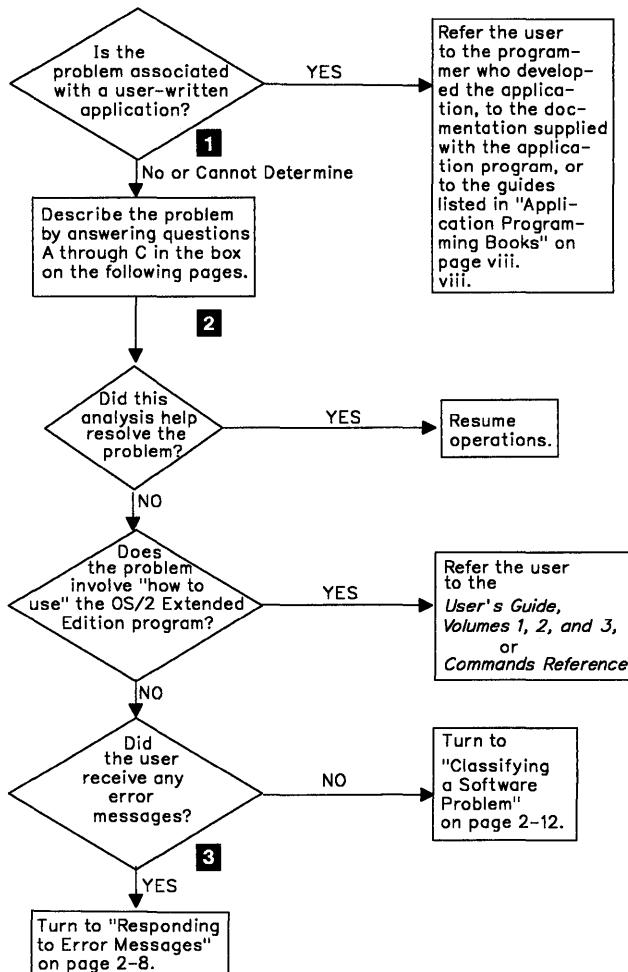
If the hardware diagnostics procedures indicate a hardware problem:

- For an IBM Personal Computer AT, refer to the *Guide to Operations* for the computer.
- For an IBM Personal System/2 computer, refer to the *Quick Reference or Reference Diskette*.
- For other hardware devices, refer to local hardware personnel, procedures, or documentation.

Determining if Your IBM Software Is Functioning Properly

There are three important questions associated with this portion of the *software* path:

- Is the problem associated with an application program?
- What is the nature of the problem?
- Were there any error messages?



1 Problems with an Application Program

User-written programs occasionally contain errors that can cause problems for system users. Such problems commonly result from incomplete debugging of an application.

If you suspect that a problem is resulting from an error in an application program, consult the programmer who wrote the application or the appropriate programming support personnel for assistance. When writing OS/2 applications, programmers should adhere to the writing and debugging guidelines contained in the guides listed in “Application Programming Books” on page vii.

Related error information can be found in one of the logging utilities. See “Logging Utilities” on page 3-2.

2 Describing a Software Problem

In your own words or the words of the user who reported the problem, describe the problem. Some pertinent questions are provided in the box following this section. Write your answers in the space provided for Part B, question 2 on the Appendix J, “Problem Report Form,” that you are using to document this problem.

3 Responding to Error Messages

If the user received an error message on the display screen or in a message log, refer to “Responding to Error Messages” on page 2-8.

If there were no messages displayed or logged when the problem occurred, refer to “Classifying a Software Problem” on page 2-12.

Identifying the Application or Scenario Needed to Re-Create the Problem

The *advanced problem determination procedures* presented later in this guide require an attempt to re-create the problem for the purpose of gathering diagnostic information to identify the source of the problem.

By answering the following questions, you may isolate the source of the problem. Or, should you later be directed to re-create the problem, this information can be used to help *identify the application or scenario needed to reproduce the problem*.

Answer the Following Questions to Describe the Software Problem

A. How would you describe the problem?

- Specifically, what tasks is the user unable to perform?
- Is the user's keyboard locked (keys do not respond when pressed)?

B. What was going on when the problem occurred?

- Was the user working in an OS/2 full-screen session, an OS/2 window, or a DOS session?
- Did the system stop when the problem occurred?
- What is the exact sequence of events, including user actions, that led up to the problem?
- Were these actions successfully executed in the past? If yes, was there anything different about the way or circumstances in which they were attempted when the problem occurred?
- Can you or the user reduce the size of the failing application or scenario as much as possible to eliminate extraneous symptoms and to demonstrate the failure more clearly?

If the failure is associated with a specific statement or operation, note its parameters or variables on the PRF.

- Were there any indications (messages or otherwise) that a problem might occur?

If the user received any messages, request that the user note the message identification number and any error codes contained in the message. If there is no identification number associated with a message, ask the user to record the text of the message.

If possible, correct all problems reported by messages and ensure that any messages previously generated have nothing to do with the problem being worked on. If you have not yet followed the path for messages, do so at this time (refer to "Responding to Error Messages" on page 2-8).

If no messages were displayed or logged, continue as follows.

- What was the last operation that worked?
- What was the last screen that was displayed?
- What other programs are active at the workstation?
- Is this a recurring problem?

Additional questions are provided on the following page.

Answer the Following Questions to Describe the Software Problem

C. Are there any special or unusual operating circumstances?

- Is this a new application?
- Are new procedures being used?
- Are there recent changes that might be affecting the system?

Has the OS/2 program been changed since the application or scenario last ran successfully? If you suspect that the problem has been caused or is related to such a change, note the change on the PRF (Part B, question 2).

- For application programs, what application programming interface (API) was used to create the program?
- Have other applications that use Database Manager or Communications Manager APIs been run on the user's system? If yes, list the applications on the PRF (Part B, question 2).
- Has corrective service recently been installed? If the problem occurred when a user tried to use a feature that had not been used (or loaded) on their system since the OS/2 program was installed, determine IBM's most recent level of corrective service and load that level *after* installing the feature. For more information, refer to Chapter 5.

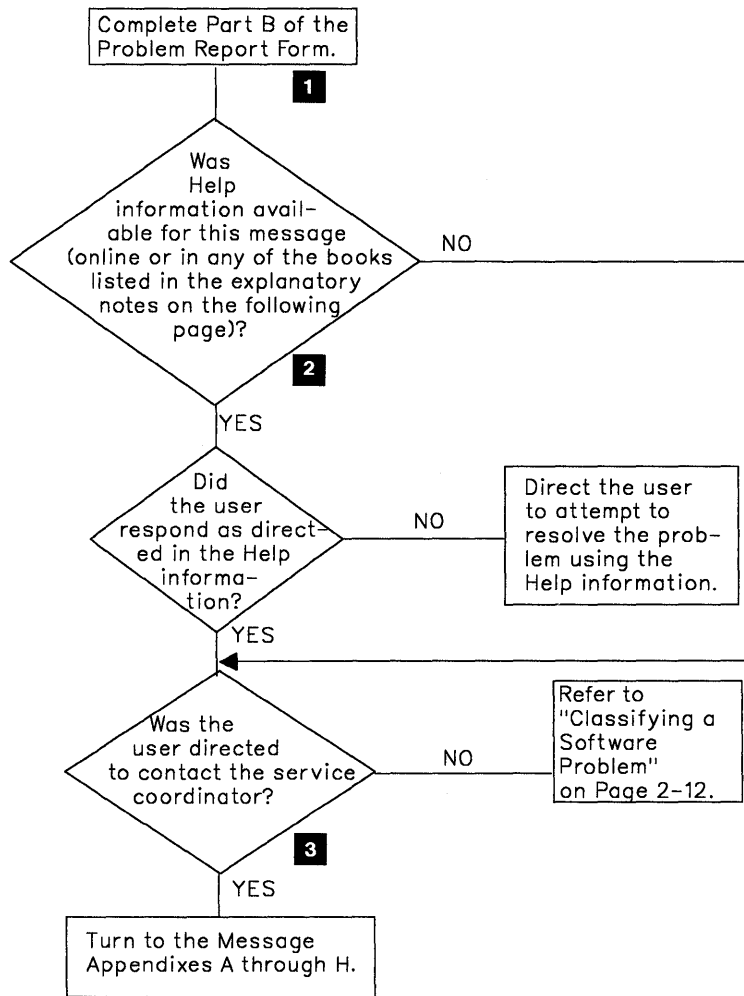
Responding to Error Messages

Use this portion of the flow chart if the user received any messages that can be associated with the problem. Messages may be displayed or sent to a message log or error log at the time a problem occurs or is discovered. For additional information about the OS/2 program logging utilities, refer to "Logging Utilities" on page 3-2.

The information in this section is designed to help you respond to the following situations that can involve a displayed or logged message:

- An abnormal termination (abend)
- A message that specifically directs users to contact the service coordinator
- A message displayed at an inappropriate time
- Other messages associated with a problem a user cannot resolve.

Directions on how to proceed for each situation follow. Use this portion of the flow chart to determine which situation applies.



Information describing the numbered items in this section of the flow chart is provided on the following pages.

1 For all problems involving messages, begin by asking the user to provide the information that follows. Record this information on the Problem Report Form; refer to Part B, question 1:

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - The following, if the message is contained in Appendixes A through H or in a message log, and if it is specified directly following the text of the message:
 - The *Originator* for messages that begin with an *ACS* prefix
 - or
 - The *Environment* for messages that begin with an *SQL* prefix.

If an abbreviation is provided for the originator or environment, use the abbreviation on the PRF.

- The text of the message (necessary only if the message did not include an identification number or code or if you are directed elsewhere to provide the text).

Note: If information on the screen indicates an abnormal termination (such as a TRAP error like the one illustrated in Figure 2-1) refer to “Responding to ABEND Messages” on page 2-10.

Session Title: CM.CMD

SYS1943: A program caused a protection violation.

TRAP 000D
AX = 0070 BX = 1818 CX = 1890 DX = 3030 BP = 01EE
SI = 0234 DI = 1888 DS = 0207 ES = 3D8F FLG = 2006
CS = 013F IP = 003E SS = 026E SP = 01E0 MSW = FFFD
CSLIM = 0318 SSLIM = D3 D3ACC = F3 ESACC = F3
ERRCD = 0000 ERLIM = ** ERACC = ****

End the program

Figure 2-1. TRAP Error Sample

2 If the user received an error message on the display screen or in a message log, determine if additional Help information about the message is available in one of the following:

- An online Help (the online Help facility for messages is described in “Information Available Online” on page vi)
- or
- If no online Help is available:
 - The *User’s Guide, Volume 2: Communications Manager and LAN Requester* or the *User’s Guide, Volume 3: Database Manager*

- The *Commands Reference* for many base operating system messages
- The *Database Manager Programming Guide and Reference* for messages whose identification number begins with *SQL*.

Also, if there was Help information, whether the user took the recommended action:

- What was the user's initial action in response to the message?
- Did the message or the Help information instruct the user to contact you (the service coordinator)?

If the user responded as directed in available Help information but the problem persists, refer to item **3** that follows.

If you suspect the message was displayed at an inappropriate time, refer to "Responding to a Message That Is Displayed at an Inappropriate Time."

- 3** If a message or message Help (either online or in a reference guide) directed the user to contact the service coordinator, refer to Appendixes A through H for information to respond to the message.

If the message or Help information did not direct the user to the service coordinator, refer to "Classifying a Software Problem" on page 2-12.

Note: When responding to a problem that was brought to the user's attention by a message on the display screen, it is important to remember that the user should have tried to resolve problems using one or more of the other available resources *before* calling you. Some of these are described in "Other Sources of Information Available for System Users" on page 1-3.

The recommended actions for service coordinators provided in Appendixes A through H assume that the users, and when appropriate, system administrators or network administrators, have performed all recommended recovery procedures prescribed in online Helps or in the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *User's Guide, Volume 3: Database Manager*, the *System Administrator's Guide*, or the *LAN Server Network Administrator's Guide*.

Responding to ABEND Messages: If the message indicates an abnormal termination such as a TRAP error, also place a check mark (✓) next to ABEND for Part B, question 1.

If you suspect a particular component may be associated with the abnormal termination, proceed as follows:

- If the base operating system reported an abnormal termination, refer to "Operating System Problems" on page 2-16.
- If Database Manager reported an abnormal termination, refer to "Database Problems" on page 2-24.
- If Communications Manager reported an abnormal termination, refer to "Communications Problems" on page 2-30.

Responding to a Message That Is Displayed at an Inappropriate Time: If you suspect a message has been displayed at an inappropriate time (for example, a message that describes a problem that does not exist, or is associated with a different operating environment from the one the user was in when the message occurred):

1. Verify that the user responded as directed in Help information, but that this action did not resolve the problem.
2. On the Problem Report Form:

- a. Place a check mark (✓) next to MSG (Part B, question 1).
 - b. Record the message identification number (including the alphabetic prefix SYS for base operating system messages; ACS, MACH, TRANS, or ADM for Communications Manager messages; QRW or SQL for Database Manager messages; UPM for User Profile Management messages) and any return, error, or reason codes or statement type.
 - c. Place a check mark (✓) next to that component on the PRF (Part A, question 3d).
3. Respond as directed for the component you checked:
- For the base operating system, refer to “Operating System Problems” on page 2-16.
 - For Communications Manager, refer to “Communications Problems” on page 2-30.
 - For Database Manager:
 - a. If the message text indicates the problem may have resulted from the processing of multiple statement or command types, include (if possible) the statement or command that caused the error.
 - b. If user actions associated with the message directed the user to the service coordinator, see Appendix G, “Database Manager (QRW or SQL) Messages That May Require Service Coordinator Intervention” for specific actions for this message or return code.
 - c. If the problem was experienced with trace event 183 and 184 active, format the contents of the trace buffer. Related procedures are discussed in “Preliminary Considerations for Using the System Trace Utility” on page 3-31.
 - d. If the problem was experienced during application development using database services API, record the values in the following fields of the SQL Communication Area (SQLCA): SQLCODE, SQLERRMC, SQLERRP, and SQLERRD.
 - e. If the problem can be re-created, gather trace information:
 - 1) Refer to the preliminary considerations provided in “Tools for Advanced Problem Determination of the Base Operating System, LAN Requester, and Database Manager” on page 3-31.

Software Problems

- 2) Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.
- 3) Activate a trace using one of the following methods:
 - Modify the CONFIG.SYS file to activate trace events 176, 182, 183, 184, and 191 (TRACE=ON 176,182,183,184,191). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.

or

- Use the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34 to activate trace events 176, 182, 183, 184, and 191 from an OS/2 command prompt.

Note: If the problem has been associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- f. After completing the “Recommended Procedure for Collecting and Formatting System Trace Information,” or if the problem cannot be re-created, refer to Chapter 4. If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

Other Message Sources

When running other programs on OS/2, you may receive messages with prefixes other than those mentioned in the messages appendixes in this book.

For example, a host program called IBM SAA Application Connection Services issues messages with BPS as a prefix. For information on these messages, see the publications that you received with that program product.

Classifying a Software Problem

If there were no messages associated with a user’s problem or if the user was unable to resolve the problem using available message Help information, the next step is to try to classify the problem by *component* and *type*.

Component refers to the portion of the OS/2 Extended Edition program (the base operating system, Database Manager, Communications Manager, that caused or reported the problem.

A general description of several *types* of software problems follows. Proceed by familiarizing yourself with these descriptions. Then, use the flow chart under “Determining Which Component Is Associated with the Problem” on page 2-15 for *component-specific* recovery assistance for each type of problem.

Note: Remember, if the user received any error messages that may be associated with the problem, use the path associated with “Responding to Error Messages” on page 2-8.

Using the Problem Report Form

The problem reporting utilities and databases described in Chapter 4, “When and How to Contact IBM,” and the Problem Report Form contained in Appendix J, “Problem Report Form,” are structured based upon the categories of problems listed in the following table. By categorizing a problem by type and component, and specifying this information on the PRF, you can narrow the range of probable causes, expedite the search of IBM’s Known Problems Database, and quicken the problem resolution process.

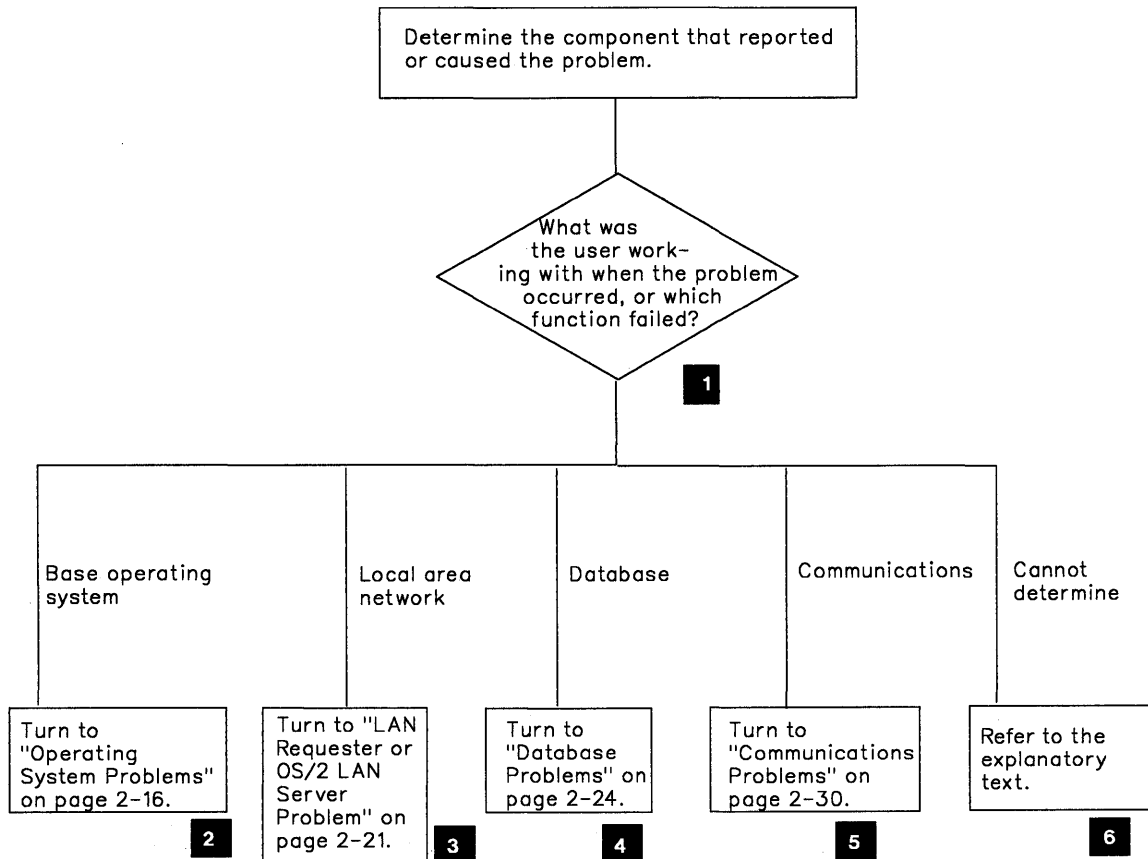
Problem Keywords	Description of the Problem
Installation (INSTALL)	Problems caused by program changes, or experienced during or resulting from the installation of the OS/2 program, applications, or new hardware can be classified as <i>install</i> problems.
Abnormal termination (ABEND)	<p><i>Abnormal termination</i> refers to a recurring or unrecoverable problem caused by a program defect that unexpectedly ends processing by a component, application, or function.</p> <p>An abnormal termination can result from a software compatibility problem or from problems associated with a workstation’s hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 for additional information.</p>
WAIT/LOOP	<p>If the user’s keyboard is locked (there is no response when pressing any keys) or if the program is not responding as it should, an unexpected program suspension, referred to as a <i>wait</i>, may have occurred (pressing the Alternate (Alt) + Escape (Esc) keys or the Control (Ctrl) + Esc keys return the user to the Task List window).</p> <p>If a program encounters a problem or contains a coding error that causes it to repeatedly execute a certain sequence of instructions while the error condition persists, an uncontrollable program <i>loop</i> may be occurring.</p> <p>Based upon external symptoms, you may not be able to distinguish between a wait and a loop. For this reason, these two types of problems have been grouped together.</p>

Software Problems

Table 2-1 (Page 2 of 2). Types of Software Problems	
Problem Keywords	Description of the Problem
Performance problems	<p>Refers to unusually slow or delayed system execution or response time that causes programs to take longer than usual to complete a task. Poor server performance problems can be caused by many factors including the shortage of disk space, improper allocation of buffers, and OS/2 program resources.</p> <p>Many performance problems can be resolved through system tuning. Before proceeding to directions for a particular component, check the CONFIG.SYS entries to ensure they are appropriate for the number of applications and files currently running on your system. The following CONFIG.SYS entries can affect performance:</p> <ul style="list-style-type: none"> • BUFFERS • DISKCACHE • FCBS (DOS mode only) • MAXWAIT • MEMMAN • PRIORITY • TIMESLICE • SWAPPATH • RMSIZE • THREADS. <p>A performance problem may also result from a software compatibility problem or from problems associated with a workstation's hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 for additional information.</p> <p>Note: The OS/2 program optimizes performance by executing some subsystems in the calling application's process. This exposes some internal data area Local Descriptor Table (LDT) selectors to potential misuse by application programs that have not been fully or correctly debugged. Accordingly, IBM recommends that applications ensure the correct use of LDT selectors and avoid LDT selector manipulation.</p>
Deficient documentation	<p>If a user's documentation is deficient in a way that results in lost time for the user (or for other users), the problem should be reported using the procedure described in Chapter 4, "When and How to Contact IBM." Examples of documentation problems include Help information that is incorrect or insufficient, or steps or procedures that are inaccurate.</p> <p>If you suspect that any product documentation is in error:</p> <ol style="list-style-type: none"> 1. Place a check mark (✓) on the Problem Report Form next to DOC (Part B, question 1). 2. Describe the documentation error in detail in the space provided for Part B, question 2. Include the title and part number of the book (with the page numbers) or the online screen or help containing the erroneous or incomplete information. 3. If possible, note the involved component on the PRF (Part A, question 3d). 4. Refer to Chapter 4 to contact IBM.
Incorrect output	<p>Refers to the displaying of unexpected data or the loss or failure of expected data to be displayed. For user-written applications, this type of problem commonly results from incomplete debugging of an application program. When writing an OS/2 application, programmers should adhere to the writing and debugging guidelines contained in the guides listed in "Application Programming Books" on page vii.</p> <p>Incorrect output may be caused by a software compatibility problem or from problems associated with a workstation's hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 for additional information.</p>
<p>Note: Sometimes external symptoms match more than one problem type. If this occurs, review each description to determine the best match, and then respond as directed for each component.</p>	

Determining Which Component Is Associated with the Problem

Use this portion of the flow chart to determine which component reported, caused, or experienced the problem.



1 For each path you select:

1. Identify the associated type of problem that best describes the situation described by the user.
2. Note your response as directed on the PRF.

2 Base operating system problems include those that occur when responding to OS/2 prompts and when using:

- Windows
- System editor
- File system
- Print spooler.

3 LAN problems include those that occur when using:

- LAN Requester
- OS/2 LAN Server
- Network commands.

For other types of LAN problems, refer to 5.

4 Database problems include those that occur when using:

- Query Manager
- SQL applications.

Operating System Problems

5 Communications problems include those that occur when using:

- Terminal emulation
- File transfer
- Application programs using a communications API.

6 If you cannot determine which path to follow:

- If, based upon the descriptions provided in “Classifying a Software Problem” on page 2-12, you suspect that a particular type of problem has occurred, refer to that problem under the branch in the flow chart on page 2-15 that describes either what the user was working with when the problem occurred or which function failed.
- If, after reading the component-specific information, you are not able to determine the component, place a check mark (✓) next to the abbreviation for that type on the PRF (Part B, question 1), but *do not* specify a component. Then continue problem determination procedures as directed for that type of problem.

Note: Do not follow any of the paths on the preceding page for problems associated with user-written applications *unless* you were unable to resolve the problem using the information provided for item **1** in “Determining if Your IBM Software Is Functioning Properly” on page 2-5.

Operating System Problems

If you suspect an operating system problem, place a check mark (✓) on the Problem Report Form next to Base Operating System (Part A, question 3d). Operating system problems include:

- Installation problems (INSTALL)

If you suspect that a user’s installation problem is associated with the operating system, complete the following procedures:

1. Try to re-create the problem.
2. Review the information in the following two files:
 - CUSTBLD.HST for customer build errors
 - EEINST.HST for all other errors.
3. Reinstall the OS/2 program with the original diskettes. *Do not change any files or add any other software.* Install the latest corrective service diskettes you have available and retry the failing operation. If the operation runs successfully, your problem has been corrected. If not, proceed as follows.
4. Remove any non-IBM or non-supported IBM hardware and retry the failing operation. If the problem resolves, refer to the information supplied with the hardware, and use that information to correct your problem. If the problem still persists, refer to Chapter 4, “When and How to Contact IBM.”

- **Abnormal termination (ABEND)**

Indicators of an abnormal termination include:

- An unexpected return to the OS/2 program Group – Main window or to the Task List window.
- One of the following is displayed on the user's screen:
 - A TRAP error.

For example, TRAP D displayed on a user's screen indicates that a trap error has caused the abnormal termination. Traps are generated when the base operating system or the hardware terminates an application because it has violated one of the rules maintained by the base operating system or the hardware.

Two possible causes of traps are:

- An application attempting to access storage that it does not own
- The processor trying to execute a privileged or unexecutable instruction.

Trap message panels typically include the session title, a system error message with an error description, the trap type (that is, TRAP000D for a general protection fault), the registers, code, stack pointers, and other pertinent data.

Note: For many trap conditions, the CS or IP, as displayed in the trap message, points to the instruction that caused the trap. Application programmers may find that this information is all they need to localize a problem. Record all of the data in the TRAP error and save it for comparison purposes. Refer to Figure 2-1 on page 2-9 for a sample of the information displayed.

Once the system error message is recorded, check it for additional information or instructions. If the base operating system is suspected as the reason for the trap, refer to Chapter 4, "When and How to Contact IBM."

- A message indicating that the system has stopped unexpectedly.

If you receive such a message, note the occurrence of an abnormal termination on a PRF. If either the message or the help directed the user to contact you, refer to the Messages Appendixes A through H.

- **Wait or loop**

It may be difficult to tell if an application is blocked (waiting for something), hanging (in an apparently unrecoverable *wait* state), or looping. If a blockage or hanging has occurred, a WAIT condition may exist. If you suspect such a condition, attempt to collect information as follows:

1. Try to isolate the problem to a single application. If the problem can be isolated to a single application, suspect that application. Correct the problem using the information supplied with the application.
2. Try to isolate the set of concurrent applications or the circumstances leading up to the WAIT condition.
3. Document the steps leading to the failure.
4. Refer to Chapter 4, "When and How to Contact IBM."

Operating System Problems

If you suspect a loop condition involving the base operating system has occurred, attempt to isolate a specific application that is involved. If the problem can be isolated to a specific application, use the information supplied with the application to correct the problem.

- Performance problems

Performance problems are difficult to diagnose. Collect as much of the following types of information as possible:

1. If something was altered before this problem occurred, refer to "Operating System Problems" on page 2-16.
2. Try to isolate the problem to a single application. If this is not possible, try to isolate the set of concurrent applications or the circumstances that lead to the performance problem.
3. Check the CONFIG.SYS entries to ensure that they are appropriate for the number of applications and files currently running on your system. The following CONFIG.SYS entries can affect performance:
 - BUFFERS
 - DISKCACHE
 - FCBS (DOS mode only)
 - MAXWAIT
 - MEMMAN
 - PRIORITY
 - TIMESLICE
 - THREADS
 - SWAPPATH
 - RMSIZE.
4. If possible, try to re-create the problem on another system. If the problem cannot be re-created on another system with the same configuration and memory size, suspect a hardware problem.
5. If you have followed the preceding instructions and the problem remains, refer to Chapter 4, "When and How to Contact IBM."

A performance problem may result from:

- Software incompatibility.

Programs being run in DOS mode that can affect the performance of OS/2 components or application programs. Conversely, OS/2 program components or applications programs can affect the performance of programs being run in DOS mode.
- OS/2 program components or application programs that can affect other OS/2 components or applications.
- Hardware restrictions that impact operation in both modes.

In these cases, the following problems may result:

- Unusually slow or delayed system processing or response time that causes programs to take longer than usual to complete a task
- Program suspension when a user switches from one OS/2 session to another OS/2 session
- Unpredictable (incorrect or incomplete) program processing, sometimes resulting in incorrect output
- Program or system failure (abnormal termination).

If, while using the OS/2 program, system operations slow down or fail, there may be a problem with one or more other applications running simultaneously in a DOS or OS/2 mode. The following information may help users avoid or circumvent this type of problem.

Running Multiple Applications Using Different Modes: The following information applies when different applications are run simultaneously in DOS and OS/2 modes or in different OS/2 modes:

- DOS programs can run only within the first megabyte (MB) of system storage and are limited to not more than 640 kilobytes (KBs).
- Applications that may not run or that execute unpredictably in DOS mode include time-dependent programs such as communications and real-time applications, hardware-specific routines such as device drivers, and network-dependent applications.
- Performance degradation or errors in time-dependent programs (such as communications) running in OS/2 mode can occur as a result of programs that have excessive interrupt disable times. The recommended maximum interrupt disable time is 400 microseconds. Programs that have the privilege to disable interrupts are device drivers, input output privilege level (IOPL) segments, and DOS mode programs when displayed on the screen.
- When switching among active modes:

Only one COMMAND.COM command processor can process a command or program at a time. Thus, only one DOS program can run at a time, and it is processed only when it is displayed on your screen as your current task. For example, if you are working on a DOS program and you switch to an OS/2 program, the DOS program stops running. It begins running again when you refer to it. If the DOS program was keeping track of the time of day by counting clock ticks, it may have an incorrect time when it resumes.

Programs running in DOS mode and displayed on the screen can cause performance degradation or errors in time-dependent programs (such as communications) running in OS/2 mode in the background. If undesired effects occur in time-dependent programs (such as communications) that are running in a background OS/2 session while a DOS session is displayed, users can resolve or avoid this problem by switching to the OS/2 session in which the affected program is running and avoid switching back to the DOS mode until the displayed program finishes processing.

- Hardware-related considerations:

Performance degradation or errors in time-dependent programs (such as communications) running in OS/2 mode on a Personal System/2 computer can occur due to Personal System/2 direct memory access (DMA) or bus master adapter cards installed in the user's Personal System/2 computer. These hardware devices compete with the central processing unit (CPU) for access to memory and input/output (I/O) and are at a higher priority bus arbitration level than the CPU. Therefore, processor execution is delayed when these devices are actively using the system resources.

Also, these devices compete with each other for system bus time. A problem can occur if a device that normally occupies the system bus for a lengthy period of time to complete an activity, such as a hard file controller moving a sector, does not yield (as configured) to devices that require shorter periods of time per activity (like a Synchronous Data Link Control (SDLC) adapter moving a byte).

Operating System Problems

To avoid this type of problem, device arbitration level assignments and device fairness selections should, if the option is available, be reviewed for consistency.

If applications are adhering to the preceding considerations, but the problem persists:

1. Place a check mark (✓) on the Problem Report Form next to PERFM (Part B, question 1).
2. Complete *all* relevant sections of the Problem Report Form (leave Part F: "Problem Resolution" blank until the problem has been resolved).
3. Refer to Chapter 4, "When and How to Contact IBM" for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to "Sending Problem Determination Information to IBM" on page 4-6.

Additional hardware diagnostic procedures are described in "Determining if Your Hardware is Functioning Properly" on page 2-3.

- **Incorrect output.**

Unpredictable output or intermittent problems are those that occur infrequently or do not seem to follow any set pattern. Refer to the procedures in this section if:

- A user or an application programmer reports incorrect or unpredictable output, or if a user's problem occurs intermittently
and
- You suspect that the problem is associated with the base operating system.

If a user reports incorrect or unpredictable output:

1. Attempt to localize the problem to the smallest possible executable program or to a .CMD or .BAT file.
2. If possible, re-create the problem on another system to ensure that the hardware is not at fault.
3. If the problem can be isolated to a specific software package, suspect that package. Use the information supplied with that package to correct the problem.
4. If you have followed the preceding instructions and the problem remains, refer to Chapter 4, "When and How to Contact IBM."

If a problem occurs intermittently:

1. If the system was altered before this problem occurred, refer to "Operating System Problems" on page 2-16 before continuing.
2. For each occurrence, record as much information about the problem as possible.
3. Once you have gathered enough information to see a pattern, refer to "Determining if the Problem Involves Hardware or Software" on page 2-2. Now that you have identified a pattern, you may be able to identify a problem path that will lead to the source of the problem.
4. If this process fails to lead to a resolution of the problem, refer to Chapter 4, "When and How to Contact IBM."

LAN Requester or OS/2 LAN Server Problems

Information for responding to suspected LAN Requester or OS/2 LAN Server problems follows. General information is provided first, followed by specific responses for LAN Requester or OS/2 LAN Server users to the types of problems listed in "Classifying a Software Problem" on page 2-12.

General Response: If you suspect a LAN Requester or OS/2 LAN Server problem:

- On the PRF you are using to document the problem:
 - Place a check mark (✓) on the Problem Report Form next to LAN Requester (Part A, question 3d).
 - Complete all questions for Part E: LAN Requester-Server Information on page J-10.
- If no error messages are displayed, check the LAN Requester error log.
- Before proceeding to the problem determination procedures for the specific type of failure the user experienced, determine if the problem is related to using an application program on the LAN.
- Determine if:
 - User-written application programs were designed to be used in an OS/2 network environment.
 - All shared programs have been tested and are compatible with LAN Requester and OS/2 LAN Server software and they are compatible with each other.

If this investigation does not lead to a resolution of the problem, refer to the information that follows for specific types of LAN Requester or OS/2 LAN Server failures.

Specific Response by the Type of Problem on a LAN Requester or OS/2 LAN Server: LAN Requester and OS/2 LAN Server problems include:

- Installation problems (INSTALL)

Relatively simple problems sometimes occur during installation such as the LAN Requester already running when the attempt to install was completed. Users or network administrators should be able to recover from these types of problems without your assistance.

If, however, more serious problems occur during initial startup, or if the cause is not apparent after reviewing available Help information and other documentation, proceed as follows:

1. Review the information in the following two files:
 - CUSTBLD.HST for customer build errors
 - EEINST.HST for all other errors.
2. Place a check mark (✓) on the Problem Report Form next to INSTALL (Part B, question 1).
3. Ensure that Communications Manager had no errors relating to the LAN Requester when installed.
4. If errors occurred during install, reinstall the LAN Requester and the OS/2 LAN Server.

5. Install the Corrective Service diskette if you have one (refer to “Determining the Level of Corrective Service Currently Loaded on a Workstation” on page 5-2 for additional information) and retry the failing operation. If the operation runs successfully, your problem was corrected.
6. If you are using the command line interface, make sure that **path** and **dpath** are set appropriately.
7. If you get an error while using the menus, try to re-create the problem using the command line interface. This may help in isolating and fixing the problem.
8. **THREADS** should be set to at least 128 for correct operation of the server. (This is a **CONFIG.SYS** parameter.)
9. Make sure that the Communications Manager configuration file is set up correctly for the network and adapter and is used by the **CFG =** parameter on the LAN device driver statements in **CONFIG.SYS**.
10. Make sure that **IBMLAN.INI** parameters and options are set correctly.

If the problem persists, refer to “Advanced Isolation Procedures for LAN Requester or OS/2 LAN Server Problems” on page 2-24.

- Wait or loop

If you suspect this type of problem is associated with a LAN Requester or OS/2 LAN Server problem:

1. Place a check mark (✓) on the Problem Report Form next to **WAIT/LOOP** (Part B, question 1).
2. If appropriate, refer to LAN Requester “Performance Problems” on the following page.
3. Try to isolate the problem to a single application. If the problem can be isolated to a specific application, suspect that application. Use the information supplied with the application to correct the problem.
4. If the problem is occurring in an application that is using the LAN Requester or the OS/2 LAN Server (an application being shared by several requesters or an application using redirected resources), attempt to ensure that the wait or loop has not occurred in the application by determining the statement or command in which the problem occurred.
5. Direct the user to press the Enter key to ensure that the requester is not awaiting input. If the requester does not respond to keyboard input, perform the following steps:

- a. Check the server to see if it is responding to keyboard input. If the server is responding to input, use the **NET SESSIONS** command to check the status of the requester. Then refer to step b.

If the server *is not* responding, stop the server; then restart the server and attempt to determine what program or part of a program is causing the error condition.

- b. Check the status of other requesters accessing the server (if a server has a problem, requesters attached to it can also have problems).

If one or more servers are experiencing problems, determine which of the following server functions are affected by the error:

- 1) File requests: Use a requester to work on a file stored on the server.

- 2) Printer requests: Use a requester to print a file on the server's printer.
- 3) Transferring messages: Send a message from a requester to the server.
- 4) Access to other OS/2 sessions.

If no server functions can be used, stop all servers. Then restart the servers.

If the problem persists, refer to "Advanced Isolation Procedures for LAN Requester or OS/2 LAN Server Problems" on page 2-24.

- Incorrect output
 1. Place a check mark (✓) on the Problem Report Form next to INCORROUT (Part B, question 1).
 2. If the data printed by the program is incorrect, or if data files to which the program writes are incorrect, check the data used as input by the program. Make sure that it should produce output different from what it actually produced.
 3. Attempt to localize the problem to the smallest possible executable program.

If the problem persists, refer to "Advanced Isolation Procedures for LAN Requester or OS/2 LAN Server Problems" on page 2-24.

- Performance problems.
 1. On the Problem Report Form:
 - Place a check mark (✓) next to PERFM (Part B, question 1).
 - In the "Problem Description" (Part B, question 1), include the actual and expected performance, and the reason why this level of performance is expected (such as past experience).
 2. Poor server performance problems can be caused by resource problems; if you have not yet eliminated this possibility, refer to Table 2-1 on page 2-13.
 3. If the hardware or software configuration was altered before this problem occurred, refer to Installation Problems on page 2-21.
 4. Poor server performance problems can be due to heavy network traffic.
 5. Try to isolate the problem to a single application. If this is not possible, try to isolate the set of concurrent applications or the circumstances that lead to the performance section.

Note: Verify that the symptoms are not caused by tuning problems.

6. The IBMLAN.INI file contains parameter values and options settings for running OS/2 LAN Server. These parameters and options should be reviewed with the network administrator and set for optimum server performance. For additional information, refer to the *LAN Server Network Administrator's Guide*.

If the problem persists, refer to "Advanced Isolation Procedures for LAN Requester or OS/2 LAN Server Problems" on page 2-24.

Note: See also the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18.

Database Problems

Advanced Isolation Procedures for LAN Requester or OS/2 LAN Server Problems:

The LAN Requester or OS/2 LAN Server advanced isolation procedures are:

1. If Communications Manager was active at the time the problem occurred, it may have recorded related information. To determine if this is the case, refer to:
 - “Using ACSLAN.LOG for LAN Problems” on page 3-10
 - “Using the Message Log for Communications Problems” on page 3-17
 - “Using Error Log Services for Communications Problems” on page 3-23.

If this does not lead to a resolution of the problem, continue as follows.

2. Determine the minimum number of machines required to produce the problem. Eliminate all of the machines except the one you think is the source of the problem.
3. Attempt to run the program that was running when the problem happened. If the user was using the requester when the problem occurred, direct the user to repeat the task that was being performed.
4. Repeat the task on a similar machine. If the problem does not occur on the similar machine, a hardware problem may exist. Refer to “Determining if Your Hardware is Functioning Properly” on page 2-3. If the problem occurs on both machines, proceed as follows.
5. Reduce the number of active programs and OS/2 sessions.
6. Run the suspected program on the LAN Requester without running the OS/2 LAN Server.

If the problem persists, refer to Chapter 4, “When and How to Contact IBM.”

Database Problems

If you suspect a database problem, place a check mark (✓) on the Problem Report Form next to Database Manager (Part A, question 3d). Then proceed as follows. General information is provided first, followed by specific responses for Database Manager users to the types of problems listed in “Classifying a Software Problem” on page 2-12.

General Response: Before proceeding to the problem determination procedures for the specific type of failure the user experienced, thoroughly check for the following types of user errors:

- Application programming errors

If your problem occurs in an application program, examine the parameters specified on each Structured Query Language (SQL) command to verify that they have been specified correctly.

Refer to the *Database Manager Programming Guide and Reference* for detailed information on the use of SQL with Database Manager and database management environment and utility commands. This guide contains all Database Services messages and SQL return codes, along with related cause and action information. Also, refer to the *Structured Query Language (SQL) Reference* for information to understand and write the syntax and parameters of the SQL statements applicable to Database Manager.

- Query Manager problems.

If your problem occurs when using Query Manager, refer to the *User's Guide, Volume 3: Database Manager* for information on writing a query, generating a report, creating and editing a database, or more advanced procedures such as maintaining your database and creating a customized interface.

Details about common SQL concepts, including supplemental information for constructing SQL statements with Query Manager, are provided in *Structured Query Language (SQL) Concepts*.

If you have determined that your problem is not a usage error, refer to the information that follows.

Note: The following procedures are based upon the assumption that (1) you have completed a description of the problem, and (2) the user has responded as directed to all messages. If these steps have not been completed, refer to the appropriate sections of this chapter:

- “Identifying the Application or Scenario Needed to Re-Create the Problem” on page 2-6
- “Responding to Error Messages” on page 2-8.

Specific Response by the Type of Database Problem: Database problems include:

- Abnormal termination

For abnormal termination signaled by the displaying of the Query Manager Abnormal Termination pop-up or by the displaying of a trap error:

1. Place a check mark (✓) on the Problem Report Form next to ABEND (Part B, question 1).
2. Press the Print Screen (PrtSc) key to capture all displayed information for use in problem diagnosis. If this is not possible, write any information related to the problem that was displayed on the user's screen at the time the failure occurred:
 - For the Query Manager Abnormal Termination panel:
Write the component name, reason code, code segment (CS), instruction pointer (IP), and a description of the problem (the last three items are displayed as hexadecimal characters); record this information in the exact form in which it is displayed on the screen.
 - For trap errors occurring in a session where Database Services or Query Manager is operating:
Write the session title, message text (documenting the type of violation), trap type, CS= value, and IP= value.
3. If any Database Services trace events (events in the range 176 through 191) were active when abnormal termination occurred, use the trace formatter to capture the contents of the trace buffer. If the trace formatter cannot be used, refer to “Recommended Procedure for Performing a Standalone Dump” on page 3-38 to capture the contents of the trace buffer.

4. If the problem can be re-created, gather trace information:
 - a. Refer to the preliminary considerations provided in “Tools for Advanced Problem Determination of the Base Operating System, LAN Requester, and Database Manager” on page 3-31.
 - b. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.
 - c. Activate a trace using one of the following methods:
 - Modify the CONFIG.SYS file to activate trace events 176, 180, 182, 183, and 184 (TRACE=ON 176,180,182,183,184). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.
 - or
 - Use the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34 to activate trace events 176, 180, 182, 183, and 184 from an OS/2 command prompt.

Note: If the problem has been associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command prompt immediately before invoking the failing operation. If this is done from a separate OS/2 session with Database Manager or Query Manager already running, you must also execute the SQLTRSET program prior to returning to the failing operation.

5. Complete *all* relevant sections of the Problem Report Form (leave Part F: Problem Resolution blank until the problem has been resolved).
6. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

Note: An abnormal termination can result from a software compatibility problem or from problems associated with the Personal System/2 hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 to proceed.

- Wait or loop
 1. Place a check mark (✓) on the Problem Report Form next to WAIT/LOOP (Part B, question 1).
 2. If appropriate, investigate the problem as follows:
 - Refer to the *Performance Review* on page 2-28 to verify that the symptoms are not caused by performance tuning problems.
 - If the problem is occurring while using Query Manager, press the Enter key to ensure that the system is not awaiting input.
 - If the problem is occurring in an application that was written using the database API, attempt to ensure that the wait or loop has not occurred in the application by determining the statement or command in which the problem occurs.

- If Database Manager module tracing (trace event 176) was not active when the problem occurred and the problem cannot be re-created, the problem is extremely difficult to diagnose as only external symptoms are available. In this situation, refer to Chapter 4, “When and How to Contact IBM.”

If the problem was experienced with trace event 176 active, format the contents of the trace buffer.

3. If the problem can be re-created, gather trace information:
 - a. Refer to the preliminary considerations provided in “Tools for Advanced Problem Determination of the Base Operating System, LAN Requester, and Database Manager” on page 3-31.
 - b. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.
 - c. Activate a trace using one of the following methods:
 - Modify the CONFIG.SYS file to activate trace events 176, 178, 182, 183, and 184 (TRACE=ON 176,178,182,183,184). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.
 - or
 - Use the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34 to activate trace events 176, 178, 182, 183, and 184 from an OS/2 command line.
- Note:** If the problem has been associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

4. Complete *all* relevant sections of the Problem Report Form (leave Part F: “Problem Resolution” blank until the problem has been resolved).
5. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

- Performance problems.

Many performance problems can be resolved through system tuning. Before reporting a problem to IBM:

1. Place a check mark (✓) on the Problem Report Form next to PERFM (Part B, question 1).
2. Complete a *Performance Review* of Database Manager.

In addition, application programmers should refer to the *Database Manager Programming Guide and Reference* for performance tuning guidelines. Query Manager users should refer to the *User's Guide, Volume 3: Database Manager*.

3. Refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 for additional information.

A performance problem can result from a software compatibility problem or limitations associated with having certain DOS mode programs active while OS/2 components or application programs are running.

Performance Review:

1. Verify that the performance problem is not related to major modifications to a database table. The REORG table utility is used to reorganize a table for more efficient storage and access.

Following table reorganization, the statistics utility (RUNSTATS) must be run to generate current statistics to be used by the system to determine access paths. Since application access plans cannot be valid after running the REORG table utility, these plans should be rebound based on current statistics the next time they are run.

2. Determine whether any indexes were dropped that would extend the execution time.

If a new index is created, the application program must be rebound before the index can be used.

3. If degradation occurs after changing configuration options, verify that options are appropriate.
4. If multiple applications are executing, determine if resources needed by one application are being held by another.

4. If, after taking all recommended corrective actions, the problem persists:

- a. Record the actual and expected performance, along with your reasons for expecting this level of performance (past experience for example).
- b. Complete *all* relevant sections of the Problem Report Form (leave Part F: "Problem Resolution" blank until the problem has been resolved).
- c. Refer to Chapter 4, "When and How to Contact IBM" for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to "Sending Problem Determination Information to IBM" on page 4-6.

- Incorrect output.

This problem can be signaled by:

- Keys that do not function as mapped.
- Incorrect panel, cursor, or mouse interaction or output.
- Inappropriate display of a Database Manager message. If you suspect this problem, refer to "Responding to a Message That Is Displayed at an Inappropriate Time" on page 2-10.
- The failure of a user-written application to perform as expected. This type of problem commonly results from incomplete debugging of an application program. When writing an OS/2 application, programmers should adhere to the writing and debugging guidelines contained in the guides listed in "Application Programming Books" on page vii.

Incorrect output can also be caused by a software compatibility problem or from problems associated with a workstation's hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 to proceed.

If any of these descriptions apply to the problem:

1. On the Problem Report Form:

- a. Place a check mark (✓) next to INCORROUT (Part B, question 1).

Notes:

1) If a message is displayed at an inappropriate time, also place a check mark (✓) next to MSG and record the message identification number and any return or error codes in the space provided. Then refer to the procedure described in “Responding to a Message That Is Displayed at an Inappropriate Time” on page 2-10 (*do not use the following steps*).

2) If this incorrect output occurred after doing something a product publication told you to do, be sure to include document reference in the problem description as it can be in error.

- b. Record actual output, expected output, along with your reasons for expecting different output (past experience for example).

- c. If the incorrect output is associated with a specific Database Services or Query Manager operation, record operation and associated parameters in the problem description.

2. If the problem can be re-created, gather trace information:

- a. Refer to the preliminary considerations provided in “Tools for Advanced Problem Determination of the Base Operating System, LAN Requester, and Database Manager” on page 3-31.

- b. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.

- c. Activate a trace using one of the following methods:

- If you are using Query Manager, modify the CONFIG.SYS file to activate trace event 177 and 178 (TRACE=ON 178 or TRACE=ON 177,178).

If you are using Database Manager plus another application, modify the CONFIG.SYS file to activate trace event 178 only (TRACE=ON 178).

For additional information, refer to “Modifying the CONFIG.SYS File” on page 3-5.

or

- If you are using Query Manager, use the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34 to activate trace event 177 and 178 (TRACE=ON 178 or TRACE=ON 177,178) from an OS/2 command line.

If you are using Database Manager plus another application, use the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34 to activate trace event 178 only (TRACE=ON 178) from an OS/2 command line.

Communications Manager

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

3. Complete *all* relevant sections of the Problem Report Form (leave Part F: “Problem Resolution” blank until the problem has been resolved).
4. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

Communications Problems

If you suspect a communications problem, place a check mark (✓) on the Problem Report Form next to Communications Manager (Part A, question 3d).

Communications problems include:

- Abnormal termination (ABEND)

This problem can be signified while using Communications Manager by:

- A TRAP D error.
- Communications Manager, or one of its functions such as file transfer, cannot be started.
- A function, such as terminal emulation, unexpectedly ended or an active link dropped without a message or return code *and* a remote node did not cause the problem.

An abnormal termination can result:

- From a software compatibility problem or from problems associated with a workstation’s hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 to proceed.
- When a 3270 or distributed function terminal (DFT) dump is attempted while other system activity is in progress. All DFT sessions on that terminal may be reset. Additional restrictions are discussed in “Preliminary Considerations for Using Trace and Dump Services” on page 3-42.

Note: This problem is more likely to occur when connected to a 3174 controller than to a 3274 controller because the 3174 is faster and has stricter response time requirements.

- If you take a dump of an X.25 Interface Co-Processor/2 adapter, any X.25 application verbs that use that adapter will receive an X25_ADAPTER_ERROR and Communications Manager must be stopped and restarted in order to recover use of that specific adapter.

If any of these descriptions apply:

1. Place a check mark (✓) on the Problem Report Form next to ABEND (Part B, question 1).
2. Complete the Problem Report Form.
3. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

- Wait or loop

A communications wait or loop can be signaled by:

- A STOP operation that seems to be taking longer than usual to complete
- A file transfer (TRANS) that did not complete
- A data transmission that did not complete
- A locked keyboard
- A persistent inability to establish a communications link.

If a persistent inability to establish a communications link describes your problem, ensure that the CONFIG.SYS file is correctly configured and that all communications lines are active; contact your system administrator for assistance.

If the problem persists, or if any other of these descriptions apply to the problem:

1. Place a check mark (✓) on the Problem Report Form next to WAIT/LOOP (Part B, question 1).
2. Complete the Problem Report Form.
3. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

- Incorrect output.

When using Communications Manager, this problem can be signaled by:

- Damaged or incomplete data sent or received during a file transfer
- An incorrect emulation screen
- A configuration file that verified correctly, but cannot be used
- An inappropriate displaying of a message
- Keys that do not function as mapped
- Incorrect panel, cursor, or mouse interaction or output
- The failure of a user-written application to perform as expected. This type of problem commonly results from incomplete debugging of an application program. When writing an OS/2 application, programmers should adhere to the writing and debugging guidelines contained in the guides listed in “Application Programming Books” on page vii.

Incorrect output can also be caused by a software compatibility problem or from problems associated with a workstation’s hardware configuration. If you suspect such a problem, place a check mark (✓) next to PERFM (for performance problems) on the Problem Report Form, rather than next to INCORROUT (for incorrect output). Then refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 to proceed.

If any of the preceding descriptions apply to the problem:

1. Place a check mark (✓) on the Problem Report Form next to INCORROUT (Part B, question 1).

Note: If a message is displayed at an inappropriate time, also place a check mark (✓) next to MSG. Then record the message identification number and any return or error codes in the space provided.

2. Complete the Problem Report Form.
 3. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.
- Performance problems.

When using Communications Manager, this problem can be signaled when:

- The transfer of data is not within the published limits.
- There is a resource limitation, such as insufficient memory.
- Performance worsened following changes in host computer support or application programming changes.

Refer to your host personnel or application programming personnel if you suspect that this is the source of the problem.

- There is a problem with a configuration file such as:
 - Performance worsened following a change to a configuration file.
 - A specified request unit (RU) size is too small.

If you suspect the problem is related to a configuration file, contact your system administrator.

A performance problem can result from a software compatibility problem or from problems associated with a workstation’s hardware configuration. If you suspect such a problem, refer to the discussion of the impact that software incompatibility and hardware restrictions may have on performance on page 2-18 to proceed.

If any of these descriptions (other than host or application program related problems) apply:

1. Place a check mark (✓) on the Problem Report Form next to PERFM (Part B, question 1).
2. Complete the Problem Report Form.
3. Refer to Chapter 4, “When and How to Contact IBM” for procedures for contacting IBM. If you are directed by an IBM Support Center representative to submit information to IBM for analysis, refer to “Sending Problem Determination Information to IBM” on page 4-6.

General Information: The PROTOCOL.INI file in the CMLIB subdirectory is used to configure the ETHERAND* Network. The format and contents of the PROTOCOL.INI file are described in the *System Administrator’s Guide*. If you have problems using the ETHERAND Network, see the *System Administrator’s Guide* for recommended values for PROTOCOL.INI.

When using Gateway, configure your X.25 workstations to be negotiable instead of secondary.

If you receive one of the following messages, “Mismatched Parity” or “Mismatched Baudrate,” refer to the *ROLMphone** 244C User’s Manual* for instructions on which commands to use for your CBX model type and configuration.

Chapter 3. Using Diagnostic Tools

Use the *diagnostic tools* described in this chapter to gather and process data that can help identify the cause of a problem.

Once collected, the data can be examined by you, or someone who is familiar with the problem, or provided to IBM for analysis.

When to Use a Diagnostic Tool and Why

These tools are designed to be used as part of the overall problem determination process and should be used *only* upon direction provided in one of the following ways:

- In Chapter 2, “Problem Determination: Getting Started”
- In Appendixes A through H, “Messages That May Require Service Coordinator Intervention”
- By an authorized IBM service representative.

Only procedural information is provided in this chapter; you should not attempt to determine when it is appropriate to use one or more diagnostic tools based solely upon this information.

Brief descriptions of each diagnostic tool follow. Directions for using each are provided later in this chapter.

Notes:

1. Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Procedures for contacting IBM are provided in Chapter 4, “When and How to Contact IBM.”
2. Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user. If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

Types of Diagnostic Tools

As demonstrated in “Responding to Error Messages” on page 2-8, the place to begin the process of identifying the source of most software problems is to examine messages that are displayed on the user’s screen or were saved using one of the message *logging utilities* described as follows. If this information does not help you resolve the problem, it can be appropriate to use one of the *trace* or *dump facilities*.

However, there are exceptions. For this reason, you should rely on the information provided in Chapter 2, “Problem Determination: Getting Started,” the Messages Appendixes, or upon direction provided by an IBM Support Center representative on how to proceed for a given problem.

Logging Utilities

Logging utilities include:

- **OS/2 logging facility**

The OS/2 logging facility is used to provide historic information for problem determination of OS/2 and Database Manager or OS/2 applications. It also provides a formatting function to display or print the contents of the log file.

- **ACSLAN.LOG text file**

If a workstation is configured to run on a local area network (LAN), information about the initialization of your workstation for the LAN is logged in the ACSLAN.LOG text file each time the workstation is started. Procedures for using this tool are provided in "Using ACSLAN.LOG for LAN Problems" on page 3-10.

- **Error log**

LAN Requesters and OS/2 LAN Servers both maintain a disk-based error log on the system in which they are loaded. A LAN Requester or OS/2 LAN Server error log stores a record of problems that occurred during a network operation. Procedures for accessing this log are provided in "Using the LAN Requester or OS/2 LAN Server Error Log for LAN Problems" on page 3-10.

- **Audit trail**

LAN servers maintain a disk-based audit trail on the system in which they are loaded. An audit trail is a file that stores information about how and when network resources are used, and information about the user IDs and passwords used with them.

Information contained in an audit trail can be used for accounting, security, network use analysis, or problem determination purposes. Procedures for using the audit trail are provided in "Using the OS/2 LAN Server Audit Trail for LAN Problems" on page 3-14.

- **Message log**

The message log is used to store, or *log*, certain types of error messages and status information associated with active Communications Manager sessions. Information stored in a message log can be viewed or printed for later analysis in the event of a communications problem. Help is available for each message while viewing the message log. Procedures for viewing the message log can be found in "Using the Message Log for Communications Problems" on page 3-17.

- **Communications Manager error log services**

Communications Manager error log services are used to log detailed information associated with communications errors in a machine-readable format. This information includes Communications and System Management (C & SM) alerts and other status data. Error log entries are sometimes associated with an error message stored in the message log. Procedures for accessing this log are provided in "Using Error Log Services for Communications Problems" on page 3-23. For detailed information on how to interpret the contents of this file, refer to *Advanced Problem Determination for Communications*.

Note: X.25 packet-related C & SM alerts contain packet cause code and network diagnostic codes. For cause and diagnostic code meanings, refer to *Yellow Book, Volume VIII - Fascicle VIII.2, Data Communications Networks Services and Facilities, Terminal Equipment and Interfaces, Recommendations X.1 - X.29* (VIIth Plenary Assembly, Geneva, November 1980)

For X.25 networks conforming to the 1984 recommendations, refer to *Red Book, Volume VIII - Fascicle VIII.3, Data Communications Networks Interfaces, Recommendations X.20 - X.32* (VIIIth Plenary Assembly, Malaga-Torremolinos, October 1984)

- **Import and export message files.**

Import and export message files provide a log of error, warning, and informational messages produced by Database Services during a single execution of the import or export utilities. For Query Manager, the import utility log file is named QRWIMPRT.LOG and the export utility is QRWEXPRT.LOG.

These logs allow you to request additional information on import and export messages by way of the OS/2 program's Help facility. Procedures for accessing help for the import and export messages are provided in "Using Import and Export Message Files" on page 3-30.

Trace Utilities

Trace utilities include:

- **OS/2 system trace utility and system trace formatter**

The system trace utility is used to capture a sequence of system events, function calls, or data for analysis. After the trace data is captured, the system trace formatter is used to retrieve it from the system trace buffer and format the data to your screen, printer, or a file. Database Manager also uses these same trace utilities.

Procedures for using this facility are provided in "Preliminary Considerations for Using the System Trace Utility" on page 3-31.

- **Communications Manager trace services.**

Trace services is a menu-driven Communications Manager utility used to record, or *trace*, the sequence of events related to a communications application programming interface (API) and data regarding a communications link.

Procedures for using this facility are provided in "Tools for Advanced Problem Determination of Communications" on page 3-41.

The Communications Manager trace services can also be used by an application program by way of the Common Services API. (*Refer to the applicable OS/2 Extended Edition API programming reference manual for detailed discussion of the service verbs.*)

Dump Utilities

Dump utilities include:

- **Standalone dump utility**

The standalone dump utility provides an image of all physical memory. This utility, which runs independently of the OS/2 program, should be used to *dump* data only when a problem is very difficult to reproduce, or other methods of problem determination do not solve the problem.

Procedures for using this facility are provided in "Using the Standalone Dump Utility" on page 3-36.

- **Communications Manager dump services.**

Dump services is a menu-driven utility that makes a copy of a portion of memory used by Communications Manager for analysis by IBM.

Procedures for using this facility are provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

The Communications Manager dump services can also be used by an application program by way of the Common Services API. (*Refer to the applicable OS/2 Extended Edition API programming reference manual for detailed discussion of the service verbs.*)

Using Logging Utilities

This section describes how to use the logging utility.

Using the OS/2 Logging Facility for OS/2 Problems

Use the *OS/2 logging facility* to log detailed information associated with OS/2 and Database Manager errors. It also provides a formatting function to display or print the contents of a log file. OS/2 applications use this facility to log historic error information for problem determination.

Note: Throughout this section, the term *error log* refers exclusively to the OS/2 logging facility and should not be confused with the Communications Manager error log services, LAN Requester or OS/2 LAN Server error logs referenced elsewhere in this chapter and guide.

Preliminary Considerations

Read the following information *before* attempting to use the OS/2 logging facility.

Whether to wrap or extend the error log file when it becomes full is specified in the CONFIG.SYS file. If *wrap* is chosen, the file wraps when full, storing new messages at the start of the file. If *extend* is chosen and the file becomes full, the file size is extended and new error messages are appended to the end of the file.

Using OS/2 Logging Facility Commands

Logging is activated by a LOG = statement in the CONFIG.SYS file.

Modifying the CONFIG.SYS File: To enable logging, the LOG = statement must be in the CONFIG.SYS file.

A description and general concepts of the contents of this file are provided in the *User's Guide, Volume 1: Base Operating System*. Considerations for using logging commands follow:

Note: After changing the CONFIG.SYS file, you must restart the system for the changes to take effect.

- Using the equal sign

When it is used in the CONFIG.SYS file, the equal sign (=) cannot be immediately preceded or followed by a blank space.

- Enabling the logging facility

To enable logging, the LOG = ON statement must be in the CONFIG.SYS file. For normal operating circumstances, a LOG = ON statement is recommended; the presence of this statement in the CONFIG.SYS file without the */B:size* parameter allows the log buffer a default size of 4KB.

Note: The following parameters (minimum free space, wrap size, and log buffer size) are all optional.

- Specifying minimum free space

The LOG = statement can be used to specify the minimum free space to be left on the disk when a log file is being extended. The */M:minfree* parameter specifies the minimum free space where *minfree* is the size in KB. The default value is 512KB.

- Specifying wrap size

The LOG = statement can be used to specify the size of the log file before wrapping occurs. The /W:size parameter specifies the size in KB. The default value is 64KB.

Note: The logging facility copies the existing log file as a backup and clears the entries from the existing file. The error log file name is LOG0001.DAT. This file copies to LOG0001.BAK.

- Specifying log buffer size

The LOG = statement can be used to specify the log buffer size. The /B:size parameter allocates the size of the log buffer where size is the size in 1KB increments up to 64KB.

Notes:

1. The /B:size parameter allocates buffer space. It *does not* enable the logging of events. For normal operations, a 4KB log buffer is adequate. To specify this size, include a LOG = ON statement in the CONFIG.SYS file without the /B:size parameter.
 2. The logging facility uses a buffer wrap algorithm when writing data to the log buffer. When the buffer becomes full, additional data written to the buffer overlays an equal or larger amount of the oldest data.
- Once you have added the LOG = ON statement to the CONFIG.SYS file and you restart your system, the logging facility is activated.

SYSLOG Command: The SYSLOG command can be used to suspend and resume logging. It is a menu driven facility that also allows you to display or print the log file.

The SYSLOG command syntax is as follows:

SYSLOG [S] [R]

where *S* is the optional parameter that suspends logging, and where *R* is the optional parameter that resumes logging.

If no parameter is specified, the main menu for the OS/2 logging facility is displayed.

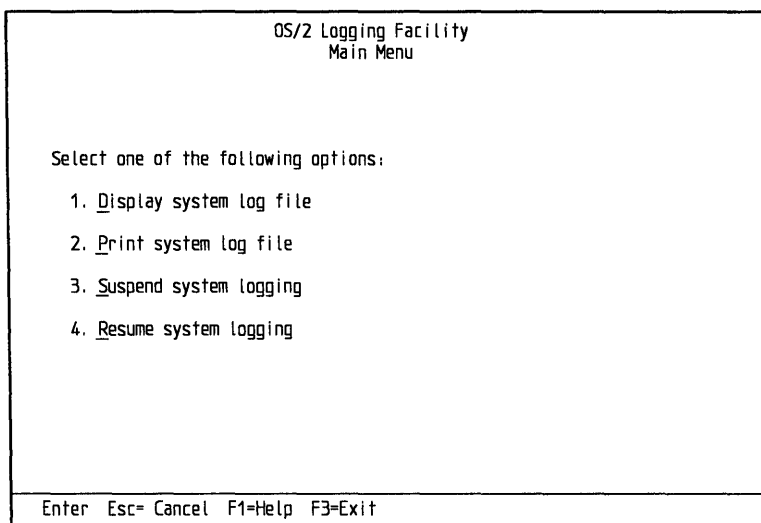


Figure 3-1. OS/2 Logging Facility Main Menu

Displaying the Error Log File

When displaying the log file, you can select the records you want to be displayed. A starting date and time as well as a unique qualifier allow more selectivity in viewing records.

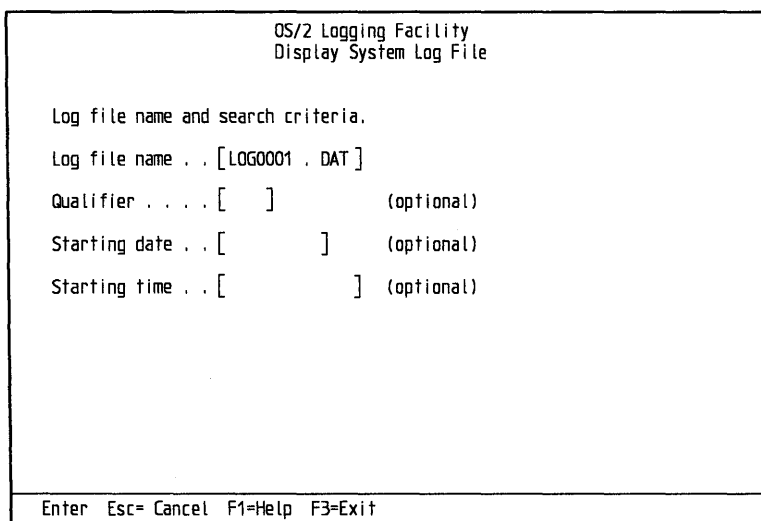


Figure 3-2. Display System Log File Panel

Printing the Contents of an Error Log

To print the contents of an error log, begin by selecting **Print system log file** from the OS/2 Logging Facility Main Menu. The following panel is displayed.

```
OS/2 Logging Facility
Print System Log File

Log file name, print name and search criteria.
Log file name . . [ LOG0001 . DAT ]
Printer name . . [ LPT1 ]
Qualifier . . . . [      ] (optional)
Starting date . . [      ] (optional)
Ending date . . . [      ] (optional)
Starting time . . [      ] (optional)
Ending time . . . [      ] (optional)

Enter Esc= Cancel F1=Help F3=Exit
```

Figure 3-3. Print System Log File Panel

You can specify the name of the log file you want printed, or the current log file name is specified as the default. You can also specify a printer name, or use LPT1 as the default printer.

Following is an example of a standard record entry in the OS/2 error log.

```
OS/2 Logging Facility
Log Record Display

Record ID: 8000          Status: No registration
Date:      08-21-89     Normal completion
Time:      16:07:56.96
Qualifier: 1
Originator: SQL

39 00 00 00 08 00 50 49 44 53 2F 35 36 36 39 33      9 . . . . PIDS/56693
33 36 30 33 20 4C 56 4C 53 2F 31 31 30 20 50 54      3603.LVLS/110.PT
46 53 2F 75 6E 6B 6E 6F 77 6E 30 31 20 52 49 44      FS/unknown01.RID
53 2F 53 51 4C 4F 20 41 44 52 53 2F 34 32 20 52      S/SQLD.ADRS/42.R
03 00 00 06 00 25 F6 10 00      . . . . % . . .

Esc=Cancel F1=Help F3=Exit F7=Next Rec F8=Prev Rec
```

Figure 3-4. Standard Record Entry Example

Following is an example of a generic alert entry in the OS/2 error log.

```
OS/2 Logging Facility
Log Record Display

Record ID: 0002          Status: No registration
Date:      08-21-89      Forwarding failed
Time:      16:07:57.25
Qualifier: 1
Originator: SQL

Component ID = 566933603
Release Level = 110
Software Name = IBM OS/2 Data Base Services
Generic Alert Subvector
0000 01 2000 39016AB1
Probable causes Subvector
1000
Failure causes Subvector
Key 01
1000 0481 0000

00 00 45 98 31 82 00 1E 00 50 49 44 53 2F 35 36      ..E.1....PIDS/56
36 39 33 33 36 30 33 20 4C 56 4C 53 2F 31 31 30      6933603.LVLS/110

Esc=Cancel F1=Help F3=Exit F7=Next Rec F8=Prev Rec
```

Figure 3-5. Generic Alert Entry Example

Using ACSLAN.LOG for LAN Problems

If a workstation is configured to run on a local area network with Communications Manager, information about the initialization of your workstation for the LAN Requester is logged in a text file each time the workstation is started. ACSLAN.LOG is created when the system is started.

Preliminary Considerations

Read the following information before attempting to use ACSLAN.LOG:

- Each time a system is restarted, the LAN device drivers write over the old ACSLAN.LOG file, thereby creating a new file. The information in the new file pertains only to the latest session.
- ACSLAN.LOG is written to the same directory as the configuration file. This directory is specified by the CFG= parameter of the DEVICE= statement for LAN in the CONFIG.SYS file. Normally this will be the C:\CMLIB directory. The following example:

```
DEVICE=C:\CMLIB\TRNETDD.SYS CFG=C:\CMLIB\SAMPLE.CFG
```

would cause ACSLAN.LOG to be written to C:\CMLIB. If no path is specified in the CONFIG.SYS file, ACSLAN.LOG will be written to the root directory of the active drive.

- Most of the messages logged in the ACSLAN.LOG file are simple status messages indicating that the device drivers are:
 - Attempting to install your workstation on a LAN Requester. The following is an example of such a message:
Accessing IBM Token-Ring Local Area Network. Please wait.
or
 - Initializing a particular adapter. The following is an example of such a message:
Adapter 0 is initializing.

However, if your workstation is unable to use LAN communications, error messages can be logged in the ACSLAN.LOG.

Accessing or Printing ACSLAN.LOG

ACSLAN.LOG is an ASCII text file that can be displayed using the OS/2 TYPE command. For systems attached to a printer, this file can be printed using the OS/2 PRINT command.

Using the LAN Requester or OS/2 LAN Server Error Log for LAN Problems

LAN Requesters and OS/2 LAN Servers both maintain a disk-based error log on the workstation in which they are installed. A LAN Requester or OS/2 LAN Server error log stores a record of problems that occur during a network operation.

The procedures that follow are used to display, print, or clear the LAN Requester or OS/2 LAN Server error messages. There is also an option to increase the size of the error log.

Preliminary Considerations

Read the following information before attempting to use a LAN Requester or OS/2 LAN Server error log:

- Only procedures for accessing and printing the contents of a LAN Requester or OS/2 LAN Server error log are presented in this guide. Additional information, including procedures for clearing or changing the size of the error log and reversing the order of log entries, is provided in the *LAN Server Network Administrator's Guide*.
- User errors are not recorded in the error log. Only system and network errors are logged.
- Each entry in the error log contains the following information:
 - Program field** The name of the program or service that reported the error.
 - Message field** The error message number.
 - Date field** The date the error was logged.
 - Time field** The time the error was logged.
 - Description field** A description of the error.
- The size of the error log is specified by the MAXERRORLOG parameter in the IBMLAN.INI file. Once the error log is full, any subsequent errors that occur are not written to the error log file. To ensure that the latest error messages get written to the error log, you can either delete the entries in the error log or increase the size of the error log.

Accessing the LAN Requester or OS/2 LAN Server Error Log

The LAN Requester or OS/2 LAN Server error log can be accessed from either an OS/2 command prompt or from the LAN Requester or OS/2 LAN Server Main Panel.

To access the LAN Requester or OS/2 LAN Server error log from an OS/2

command prompt: Use the NET ERROR command. Select parameters to use with NET ERROR from the following:

- /C:n** Lists the specified number of entries in the error log (*n* is the number of entries that you specified).
- /R** Lists the error log in reverse order so that the last entry made into the log is listed first and the first entry is listed last. You can use */C:n* with */R* to identify the number of error log entries you want listed.
- /D** Clears the error log.

When you type NET ERROR and press the Enter key without parameters, the entire error log is displayed (Figure 3-6 on page 3-12). A description of the types of items that are displayed follows Figure 3-6.

Program	Message	Date	Time
SERVER	3176	09-17-88	12:52:18
NET3176:The Server could not find an AT Schedule file so it created one.			
LAN	2625	09-17-88	12:53:19
NET2625:Unable to share start-of-day serial device PLOTTERA due to LAN Serv			
LAN	2625	09-17-88	12:53:21
NET2625:Unable to share start-of-day serial device PLOTTERA due to LAN Serv			
LAN	2771	09-17-88	12:53:24
NET2771:DCDB has user ID TESTER1 in group but this name is not known here			
LAN	2753	09-17-88	12:53:29
NET2753:DCDB has user ID TESTER1 in a profile but this name is not known he			

Figure 3-6. Sample of the Contents of the LAN Error Log

Definitions for the column headings are as follows:

Program The name of the network program or service (for example, SERVER) that reported the error.

Message The error message number.

Date The date when the error was logged.

Time The time when the error was logged.

The message text explaining the error is displayed on the second line of each entry. This text can also be hex data.

To scroll through the error log, press the Page Up (PgUp) and Page Down (PgDn) keys.

To access the LAN Requester or OS/2 LAN Server error log from the LAN Requester or OS/2 LAN Server Main Panel:

1. Select **Actions** from the LAN Requester or OS/2 LAN Server Main Panel.

Actions	Definitions	Utilities	Exit	F1=Help
Main Panel				
Date			09-19-89	
Time			18:03	
Machine name			USING	
User ID.			ADMIN	
User type.			Administrator	
Domain name.				
Domain logon status.			Enabled	
Preselected server				

Figure 3-7. Main Panel

2. Select **Statistics and Logs** to display the Statistics and Logs pop-up.

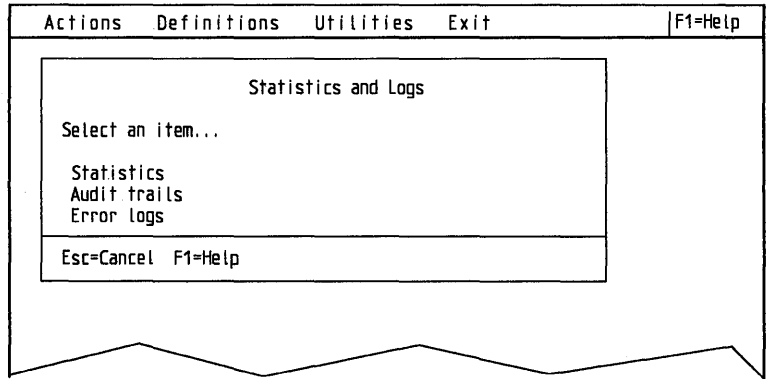


Figure 3-8. Statistics and Logs Pop-Up

3. Select **Error Logs** to display the error log.

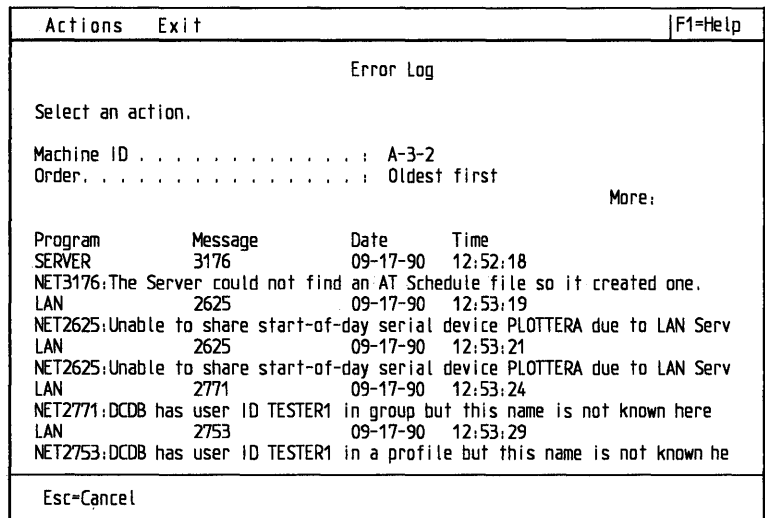


Figure 3-9. Error Log Example

In addition to the items that are displayed when the LAN error log is accessed from the DOS command prompt, the following items are included in the error log panel that is accessed by way of the LAN Requester or OS/2 LAN Server Main Panel:

- Machine ID** The name of the machine whose error log is being viewed.
- Order** The order in which the error log is displayed, with either the oldest entry (chronological order) or newest entry (reverse chronological order) listed first. The default is oldest.

To print the contents of a LAN Requester or OS/2 LAN Server error log:

1. Select **Actions** from the Error Log Panel.
2. Select **Print** from the Actions pull down.

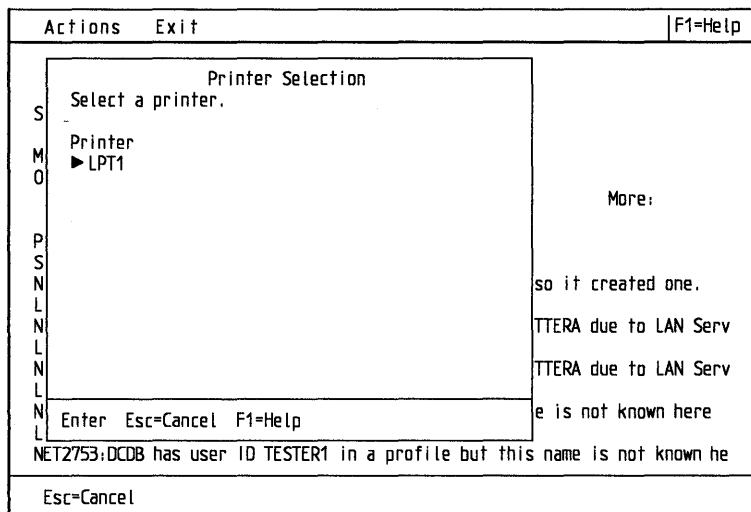


Figure 3-10. Printer Selection Pop-Up

3. Select the printer on which you want the error log to be printed.

Using the OS/2 LAN Server Audit Trail for LAN Problems

The OS/2 LAN Server audit trail contains information about resource use and security that can be useful for accounting, security, network use analysis, or problem determination purposes.

The following procedures are used to display, print, or clear the OS/2 LAN Server audit trail. There is also an option to increase the size of the audit trail.

Preliminary Considerations

Read the following information before attempting to use the OS/2 LAN Server audit trail facility:

- Only procedures for *accessing and printing* the contents of an OS/2 LAN Server audit trail are presented in this guide. Additional information about LAN commands, including procedures for clearing or changing the size of the audit trail and reversing the order of trail entries, is provided in the *LAN Server Network Administrator's Guide*.
- The audit trail contains the following information:
 - Start and stop status of the server
 - Logons with user type indicated
 - Logoff with reasons for disconnection
 - Start and stop of resource access with reason
 - Start and stop of NET USE
 - Resource access with resource name and operation
 - Access permission violations.
- Auditing is affected by two parameters in the IBMLAN.INI file:

MAXAUDITLOG Sets the size of the audit log.

AUDITING Specifies whether resource auditing should be performed.

The auditing parameter must be set to yes to allow resource auditing. When the audit trail is filled beyond capacity (the size of the audit log file exceeds the specified size of the MAXAUDITLOG), any subsequent entries are not written

to the audit trail file. To ensure that the latest entries get written to the audit trail, you can either delete the entries in the audit trail or increase the size of the audit trail.

- The auditing function starts when the computer is started if the /AUD:YES parameter is used with the NET START SRV command or if AUDITING = YES is in the IBMLAN.INI file.

Accessing the LAN Requester or OS/2 LAN Server Audit Trail

The LAN Requester or OS/2 LAN Server audit trail can be accessed from either an OS/2 command prompt or from the LAN Requester or OS/2 LAN Server Main Panel.

To access an audit trail from an OS/2 command prompt: Type NET AUDIT. When you type NET AUDIT without parameters, the contents of the audit trail are listed on the screen.

You can use the following parameters with NET AUDIT:

- /C:n** Lists the specified number of entries in the audit trail (*n* is the number of entries that you specified).
- /R** Lists the entries in reverse chronological order so that the most recent entry is listed first and the oldest entry is listed last.
- If you type /R following /C:n, the *n* most recent entries are displayed in the audit trail in reverse order.
- /D** Clears the audit log.

Descriptions of the types of items that are displayed follow.

- User ID** The system ID of the person using the resource, if applicable.
- Type** The type of activity being recorded: server operation, user session, share, resource access, or access denied.
- Date** The date when the use of the resource started.
- Time** The time when the use of the resource started.
- Duration** The length of time the resource was in use.

To scroll through the audit trail, press the Page Up (PgUp) and Page Down (PgDn) keys.

To access an audit trail from the LAN Requester or OS/2 LAN Server Main Panel:

1. Select **Actions** from the LAN Requester or OS/2 LAN Server Main Panel.

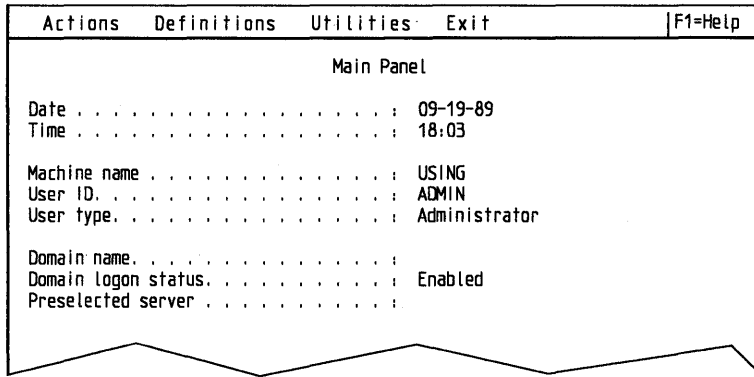


Figure 3-11. Main Panel

2. Select **Statistics and Logs** to display the Statistics and Logs pop-up.

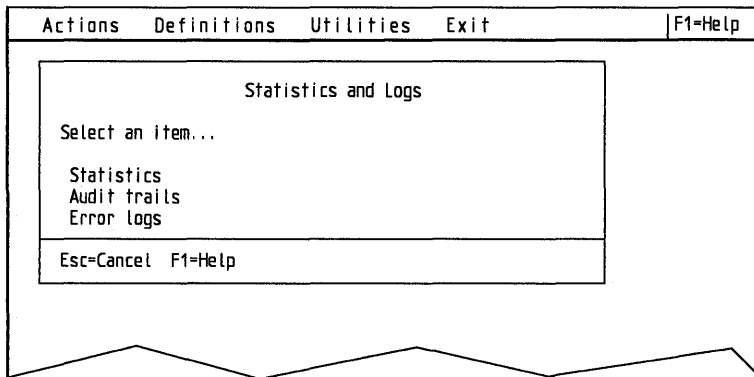


Figure 3-12. Statistics and Logs Pop-Up

3. Select **Audit Trail** to display the Audit Trail pop-up.

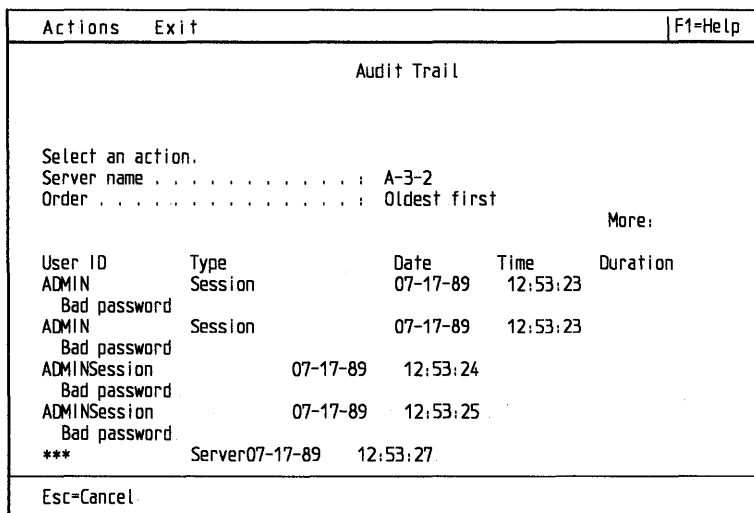


Figure 3-13. Audit Trail Example Pop-Up

In addition to the items that are displayed when the audit trail is accessed from the OS/2 command prompt, the following items are included in the audit trail panel accessed by way of the LAN Requester or OS/2 LAN Server Main Panel.

Server name The name of the machine whose audit trail is being viewed.

Order The order in which the error log is displayed, with either the oldest entry (chronological order) or newest entry (reverse chronological order) listed first. The default is oldest.

To print the contents of an OS/2 LAN Server audit trail:

1. Select **Actions** from the Audit Trail pop-up.
2. Select **Print** from the Actions pull down to display the Printer Selection pop-up.

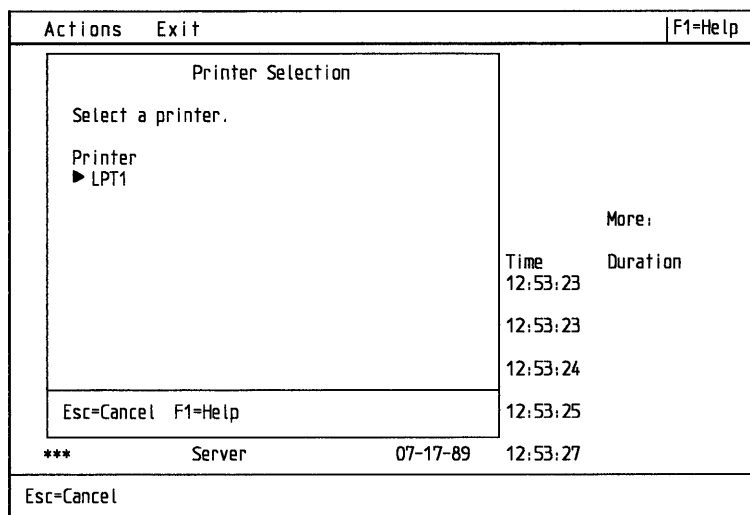


Figure 3-14. Print Selection Pop-Up

3. Select the printer on which you want the error log to be printed.

Using the Message Log for Communications Problems

Communications Manager message log is used to:

- Save Communications Manager messages (and related Help information) for later reference when the messages are:
 - Not associated with the current application, screen, or panel
 - Produced by Communications Manager applications that (a) generate multiple messages or (b) require a record of messages that have been generated.
- Store messages associated with user-written applications that contain the LOG_MESSAGE verb.

For your purposes, this record can be useful in the event of a problem or malfunction because it can provide a sequence of events or errors that led to a particular event.

Preliminary Considerations

Read the following information *before* attempting to use the message log:

- All messages logged to a message log file are in a fixed-length ASCII format, which allows them to be printed using the OS/2 PRINT command.
- Whether to wrap or extend the message log file when it becomes full is specified in each configuration file. If *wrap* is chosen, the file wraps when full, storing new messages at the start of the file. If *extend* is chosen and the file becomes full, the file size is extended and new error messages are appended to the end of the file.
- This message log is only available while Communications Manager is active.

Accessing the Message Log

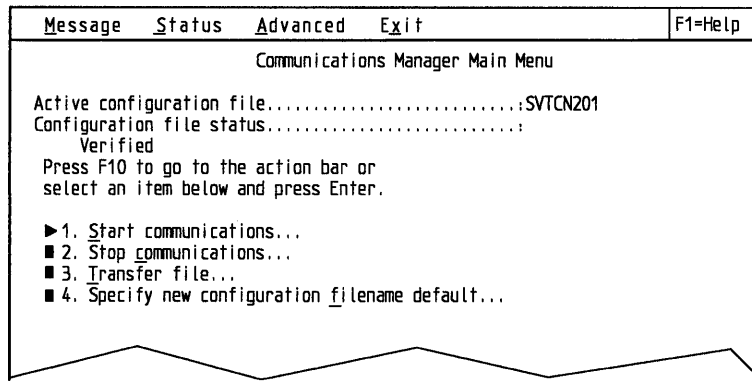


Figure 3-15. Communications Manager Main Menu

To access the message log:

Select **Message** from the action bar in the Communications Manager Main Menu (illustrated in Figure 3-15) to display the Display Messages pull-down.

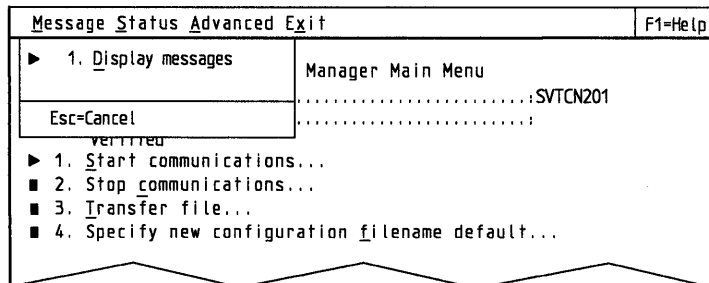


Figure 3-16. Display Messages Pull-Down

Type 1 or D, or select Enter to access the Display Messages menu. From this menu you can specify criteria for the messages you want to be displayed.

```
Display Messages

To view all messages in the current log, press Enter.

To view messages in another log or only certain messages in any log,
type in your choices and press Enter.

Message log name. . . . .
[MESSAGE.DAT ]
Message date. . . . . [06]-[21]-[89]
Message time. . . . . [15]:[22]

Type the name of an originator, leave blank for all originators, or
press F4=List to select a name from a list.

Originator. . . . . [ ]
```

Figure 3-17. Display Messages Example

Complete the Display Messages menu by leaving all fields blank and selecting Enter. The last message entered in the log will be displayed on the Message Log Display panel as shown in Figure 3-18 on page 3-22. You can then use the F7 = Backward and F8 = Forward keys to browse the message log.

If you know the originator and the approximate date and time, you can use these in the selection criteria to locate a specific message log. When you specify an originator, the message log only displays those messages logged by that originator.

Definitions for the Display Messages menu selection criteria are presented on the following page.

Display Messages Selection Criteria:

- **Message log name** — Enter the path and file name (maximum 64 characters) of the message log file you want to be displayed. The default is the name of the message log specified in the configuration file used to start Communications Manager.

Note: You can view a copy of a message log from a diskette. If you choose to do so, the name would include the specified drive; for example:

A:MESSAGE.DAT

If you choose to view the log on the user's system, the specified file name would include the directory and subdirectory; for example:

C:\CMLIB\MESSAGE.DAT

If no file name is specified, the file name specified in the Communications Manager configuration file is used.

- **Message date and time** — If a message date or time is specified, the first message to be displayed is the one entered at or following that date or time. All other logged messages are also available for viewing *unless* an *originator* is specified.

For problem determination purposes, specifying either or both a message time and message date allows you to identify messages logged at or near the time a user's problem occurred (users are directed elsewhere to note the time and date when the problem occurred and related messages that were displayed or logged).

Also, since an error log entry is sometimes made at the same time a message enters the message log, you can identify which error log entries correspond to messages that are associated with the problem.

- **Originator** — The originator is the Communications Manager function or user-written application that generated the message. If no originator is specified, all messages meeting the conditions of the other selection criteria are displayed.

If an originator is specified, only the messages logged by that originator are displayed. If a time or date is also specified, the first message that is displayed is the one logged by the specified originator at or following that date or time. All other messages logged by the specified originator are also available for viewing.

A list of Communications Manager originators is presented on the following page.

- **Originator** — To access the following list of originators, select F4=List. For user-written applications, specify the originator used by the application to log messages.

Originator	Associated Component
3270EM	3270 Emulation
5250WSF	5250 Work Station Feature
ACDI	Asynchronous Communications Device Interface
APPC	SNA Communications Services
ASCIEMU	ASCII Terminal Emulation
CONFIG	Configuration
COPYPROF	Copy Profile
DFTDLC	DFT DLC
EHLAPI	Emulator High-Level Language API
ETHERAND	ETHERAND Network
EZERROR	Dialog Services Error Handler
FILEXFER	File Transfer
HOSTGRAF	3270 Host Graphics
IBMPCNET	PC Network
IBMTRNET	Token-Ring Network
INDEX	Index
INSTALL	Install
KBREMAP	Keyboard Remap
KEYLOCK	Keylock
LRECSVCS	Logical Record Services
LUA_RUI	LU_Application Request Unit Interface
LUA_SLI	LU_Application Session Level Interface
MAINTASK	Main Task
MSGSVCS	Message Services
OTHERLAN	802.2 Extension (LAN only option)
PROFSVCS	Profile Services
RAS	Problem Determination
SDLC	SDLC DLC
SERVICES	Common Services Utility
SNAGATE	SNA Gateway
SRPI	Server-Requester Programming Interface
SUBSYSM	Subsystem Management
TWINAX	Twinaxial DLC
UPGRADE	Configuration File Upgrade
VERIFY	Verify and Convert
VPDMGR	Vital Products Data Manager
WRITNAME	Write Profile Names to Report File
X25API	X.25 API
X25DLC	X.25 DLC.

To view the messages in the message log configured for a user's workstation, select Enter and any messages meeting the date, time, and **Originator** criteria are displayed. To scroll through the message log, press the F7 and F8 keys.

Understanding the Message Log Display Panel

Information to help understand the Message Log Display panel follows.

```
Message Log Display

Log name . . . . . :
MESSAGE.DAT
Activated. . . . . : 06-21-89 15:22

To get help information for a message, place the cursor on
the message number and press F1.

Message number. . . . . XACS0011W"
The session for LU name TPSTART , partner LU name RCVALLC and
mode name TMODE1 has been deactivated.

Date/Time . . . . . : 06-19-89 16:30:20
Originator. . . . . : SUBSYSM

Esc=Cancel F1=Help F7=Backward F8=Forward
```

Figure 3-18. Message Log Display Panel Example

Message Log Display panel items include:

- | | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activated | The date and time that Communications Manager was last activated. |
| Message number | The message identification number of the displayed message; to access the Help panel for the particular message, press the Help (F1) key. |
| Message text | The text of the message is displayed on the line directly below the message number (in Figure 3-18 the text for the displayed messages begins with the words "The session for LU name..." and ends with the word "deactivated"). |
| Date/Time | The date and time that this message was recorded. |
| Originator | The Communications Manager function or user-written application that generated the message. |

To print or display the contents of a message log: The message log associated with a Communications Manager session can be displayed or printed using either an ASCII editor or the OS/2 TYPE or PRINT commands.

These commands cannot be used to access a message log associated with an active Communications Manager session. Such logs can be viewed by way of the preceding menus.

Locating 5250 Work Station Feature (WSF) Job Logs

5250 WSF will report problems in the message log if it is unable to start a session on the host system. In many cases, the problem must be resolved at the host, rather than at the workstation. The host problem resolution requires someone to look at the host system job log entry that corresponds to your workstation message log entry.

The following section tells you how to find the host system job log that will further explain the problem.

On a System/36, use the history file to find information about possible problems occurring when 5250 WSF starts a session. Use the HISTORY command to access it.

On an IBM Applications System/400*, use message queues to find information about when 5250 WSF starts a session. When 5250 WSF starts a session, an entry is logged whether the operation is successful or not. One job log exists for each display or printer session started. When the session start is unsuccessful, the job log helps you analyze the cause of the failure. You can read the AS/400* job log as follows:

- If display station pass-through cannot be started by the work station feature, a message is logged in the QSYSOPR message queue. This message queue tells you if your workstation was able to start communications from the workstation to the host system or from the workstation to the pass-through program. Use the DSPMSG QSYSOPR command to display the message queue for the operator.
- After display station pass-through (DSPT) is started by the work station feature, DSPT puts status and error messages in the job log, a spooled output file on the AS/400 system. Use either the WRKOUTQ QSYSPRT or WRKSPLF QUSER command to get a list of job logs.
- You can now locate your job log by finding the session according to the location name, date, and time you tried to start the session.

Using Error Log Services for Communications Problems

Use *error log services* to display or print the Communications Manager error log. Record selection criteria can be specified to obtain selected error log entries.

Note: Throughout this section, the term *error log* refers exclusively to Communications Manager error log services and should not be confused with LAN Requester or OS/2 LAN Server error logs referenced elsewhere in this chapter and guide.

Preliminary Considerations

Read the following information *before* attempting to use error log services:

- All error log records are stored in a file. The name of each error log file is specified at the time each configuration file is created, usually by the system administrator for your system.
- Whether to wrap or extend the message log file when it becomes full is also specified in each configuration file. If *wrap* is chosen, the file wraps when full, storing new messages at the start of the file. If *extend* is chosen and the file becomes full, the file size is extended and new error messages are appended to the end of the file.

Accessing the Error Log Services Menu

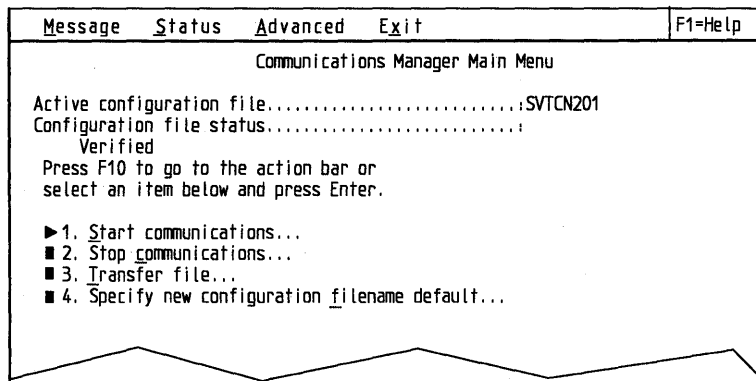


Figure 3-19. Communications Manager Main Menu

To use error log services:

1. Select **Advanced** from the action bar in the Communications Manager Main Menu to display the Advanced pull-down.

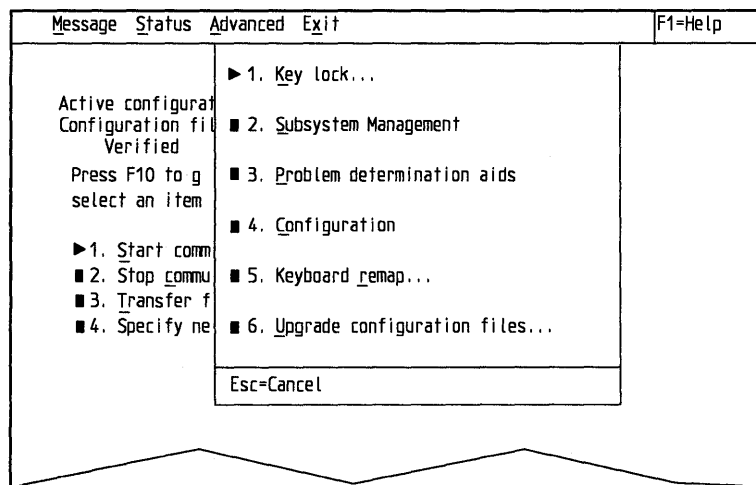


Figure 3-20. Advanced Pull-Down

2. Select **Problem determination aids** to display the Problem Determination Aids menu.

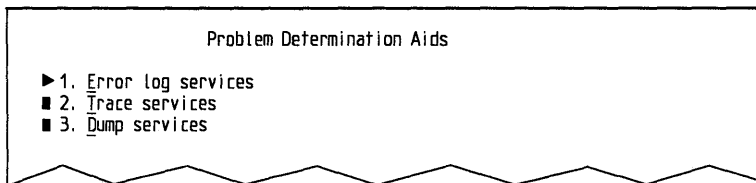


Figure 3-21. Problem Determination Aids Menu

3. Select **Error log services** from the Problem Determination Aids menu.

Using the Error Log Services Menu

Select **Error log services** to display the Error Log Services menu.

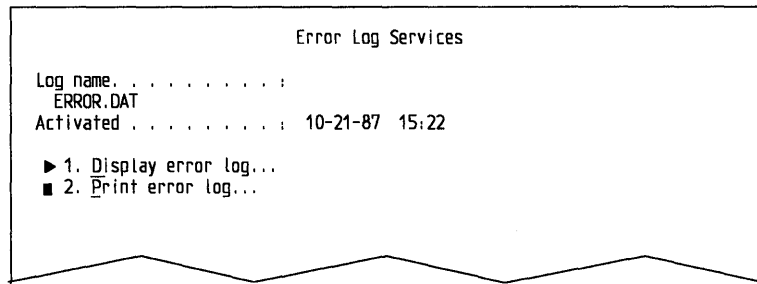


Figure 3-22. Error Log Services Menu Example

This menu shows the name of the error log specified in the configuration file that was used to start Communications Manager, and the date and time Communications Manager was activated.

Select **Display error log** to display the Error Log Display Criteria pop-up.

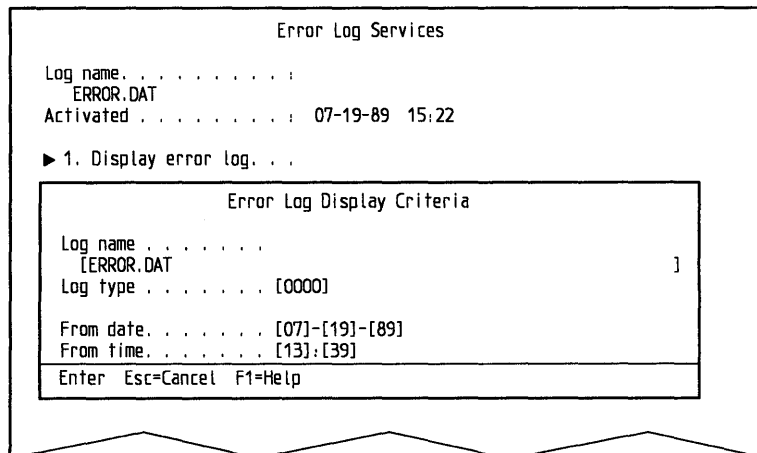


Figure 3-23. Error Log Display Criteria Pop-Up Example

This menu allows you to provide specific criteria for selecting the error log records to be displayed. A description of these criteria follows.

Error Log Display Criteria: You can specify error log display criteria including the error log name (if different from the one displayed) and the other criteria, described below, associated with the record:

- **Log name** – The name of the error log you want to be displayed.

Note: You can view a copy of an error log from a diskette. If you choose to do so, the name would include the specified drive; for example:

A:ERROR.DAT

If you choose to view the log on the user's system, the specified name would include the directory and subdirectory; for example:

C:\CMLIB\ERROR.DAT

If no file name is specified, the file name specified in the Communications Manager configuration file is used.

- **Log type** – Error log entries are classified by *log type*. You can specify the type of error log entries you want to be displayed. Information about log types and subtypes is provided in *Advanced Problem Determination for Communications*. This field cannot be left blank.

When the Error Log Display Criteria menu is displayed, the default log type (0000) is displayed in this field. If you leave the default, when you press the Enter key, all error log types are displayed based upon other specified criteria such as the date and time.

- **From date** – If a date is specified, the first error log record that meets the **Log type** criteria, starting with the specified date (and time if specified), is displayed. If **From date** is not specified, the date the current Communications Manager session was started is used.
- **From time** – If a time is specified, all error log records that meet the **Log type** criteria, starting with the specified time and date are displayed. All other entries are available for viewing unless a *type* is also specified.

If no time is specified, the time that the current Communications Manager session was started is used.

Select Enter from the Error Log Display Criteria menu (Figure 3-23 on page 3-25) to display the Error Log Display panel, see Figure 3-24.

To scroll through the error log, press the F7 and F8 keys.

Information Presented in the Error Log Display Panel: The items in the Error Log Display panel are described in the following text. Additional information is provided in *Advanced Problem Determination for Communications*.

```

Error Log Display

Log name . . . . . :
ERROR.DAT

Type . . . . . : 0017
Subtype . . . . . : 00000003
Date/Time . . . . . : 10-21-87 15:23:49
Originator . . . . . : SDLC
Conversation ID . . . . . : 00000000
Process ID . . . . . : 0D00
Error data . . . . . :
41038D0000000000000690025659A0300150AC3070F163A47002200000000022000000
0000B501B401010000000000000000000000000000000000000000000000000000000022
000000000022000000000000B501B4010100000000000000000000000000000000000000
000000000000002020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020
202020202020202020202020202020202020202020202020202020202020202020202020

Esc=Cancel F1=Help F7=Backward F8=Forward

```

Figure 3-24. Error Log Display Panel Example

A description of the items in the Error Log Display panel follows:

- **Log name** – The name of the error log file being displayed.
- **Type** – The error log record type in hexadecimal.
- **Subtype** – The error log record subtype in hexadecimal.
- **Date** – The date this error was logged into this file.

- **Time** – The time in hours, minutes, and seconds this error was logged into this file.
- **Originator** – A Communications Manager function or user-written application that generated the error log entry. For user-written applications, the originator that logged the entry is displayed in the error log.
- **Conversation ID** – The conversation ID from the error log record in hexadecimal.
- **Process ID** – The process ID from the error log record in hexadecimal.
- **Error data** – Additional problem-related data in the error log is displayed in hexadecimal format, such as network management vectors passed to the error logging utility by the issuer when the log type is 0017.
- **Originator List** – A list of originators follows:

Originator	Associated Component
3270EM	3270 Emulation
5250WSF	5250 Work Station Feature
ACDI	Asynchronous Communications Device Interface
APPC	SNA Communications Services
ASCIEMU	ASCII Terminal Emulation
CONFIG	Configuration
COPYPROF	Copy Profile
DFTDLC	DFT DLC
EHLAPI	Emulator High-Level Language API
ETHERAND	ETHERAND Network
EZERROR	Dialog Services Error Handler
FILEXFER	File Transfer
HOSTGRAF	3270 Host Graphics
IBMPCNET	PC Network
IBMTRNET	Token-Ring Network
INDEX	Index
INSTALL	Install
KBREMAP	Keyboard Remap
KEYLOCK	Keylock
LRECSVCS	Logical Record Services
LUA_RUI	LU_Application Request Unit Interface
LUA_SLI	LU_Application Session Level Interface
MAINTASK	Main Task
MSGSVCS	Message Services
OTHERLAN	802.2 Extension (LAN only option)
PROFSVCS	Profile Services
RAS	Problem Determination
SDLC	SDLC DLC
SERVICES	Common Services Utility
SNAGATE	SNA Gateway
SRPI	Server-Requester Programming Interface
SUBSYSM	Subsystem Management
TWINAX	Twinaxial DLC
UPGRADE	Configuration File Upgrade
VERIFY	Verify and Convert
VPDMGR	Vital Products Data Manager
WRITNAME	Write Profile Names to Report File
X25API	X.25 API
X25DLC	X.25 DLC.

Printing the Contents of an Error Log

Communications Manager must be used to print the contents of an error log. To print the contents of an error log, begin by selecting **Print error log** from the Error Log Services menu. The following is displayed.

```

Error Log Services
Log name . . . . . :
ERROR.DAT
Activated . . . . . : 07-19-89 13:39

  1. Display error log...
  2. Print error log...

Error Log Print Criteria
Log name . . . . . :
[ERROR.DAT ]
Log type . . . . . : [0000]

From date . . . . . : [07]-[19]-[89]
To date . . . . . : [07]-[19]-[89]

From time . . . . . : [13]:[39]
To time . . . . . : [15]:[39]

Enter Esc=Cancel F1=Help
```

Figure 3-25. Error Log Print Criteria Menu Example

Error Log Print Criteria (Print error log): The criteria for printing the error log is the same as for displaying the log, except for the following two fields that can be specified to print a selected portion of the error log:

- **To date** – When **To date** is specified, all entries up to that date that meet other specified criteria (such as **Originator** or **From date**) are printed. If no date is specified, the error log prints all entries through the latest date an entry was made.
- **To time** – When **To time** is specified, all entries up to that time that meet other specified criteria (such as **To date** or **From time**) are printed. If no time is specified, the error log prints all entries through the latest time an entry was made.

Notes:

1. If a printer is not attached to the workstation where the error log is stored, exit Communications Manager and copy the error log file to diskette. Then, insert the diskette on a Communications Manager workstation that is attached to a printer and use the error log services print facility to print the error log.
2. If wrap is specified during configuration and the error log wraps while printing the log, a message indicating that the file has just wrapped is printed.

Using Import and Export Message Files

Import and export message files are the storage files for Database Manager error, warning, and information messages associated with an export or import utility operation. The file content is available for review upon completion of a utility operation. Messages requiring operator interaction, such as diskette mounting requests, are not logged in the message files.

Additional information is provided in the *User's Guide, Volume 2: Communications Manager and LAN Requester* and the *User's Guide, Volume 3: Database Manager*.

Preliminary Considerations

Read the following information before attempting to use the import and export message files:

- Following operation of import or export utility, the message file contains only messages associated with the last operation.
- Each message in the message file begins a new line and is comprised of the information provided by the Database Services' Message Retrieval facility.
- The file name is input to the utility; Query Manager uses QRWIMPRT.LOG as the file for import messages and QRWEXPRT.LOG as the file for export messages.

Accessing Information

The import and export message files are standard OS/2 files. To print a message file, use the OS/2 PRINT command; to view a file, use an ASCII editor.

Query Manager provides a Help for messages that are logged while data is being imported or exported. To use this Help facility, you must know associated message identifiers. Use the OS/2 PRINT command to print the file contents or make a note of the identifiers of messages in which you are interested.

Use the following steps to access the Help facility from Query Manager:

1. Select F1 = Help.
2. Select F5 = Index while in Help to display the Help Index menu.
3. Select **Import/Export Messages** from the Help Index menu to display a subindex of message identifiers.
4. Position the cursor on the appropriate message identifier and select Enter to display the Help panel.

Tools for Advanced Problem Determination of the Base Operating System, LAN Requester, and Database Manager

Use the *system trace utility* to record system events. Use the *system trace formatter* to format the information in the trace buffer. Use the *standalone dump utility* to record the contents of all physical memory.

This part of the guide is organized as follows:

- “Preliminary Considerations for Using the System Trace Utility”
 - Describes the system trace and trace formatter and explains related options and other preliminary considerations and preparations
 - Provides a recommended procedure for collecting and formatting system trace information.
- “Using the Standalone Dump Utility” on page 3-36
- “Recommended Procedure for Performing a Standalone Dump” on page 3-38.

Preliminary Considerations for Using the System Trace Utility

Read the information that follows *before* attempting to use the system trace utility:

- The system trace utility should be used only as directed in this book or by an IBM Support Center representative.
- System performance can be affected if you attempt to trace *all* system events. This utility is most effective when only problem-related event codes are selected for trace.
- Only procedural information is presented in this chapter. Information describing particular problems and suggesting specific event codes to trace is provided in Chapter 2, “Problem Determination: Getting Started”; the Messages Appendixes; or can be communicated by an authorized IBM representative.
- This utility does not analyze information; it collects data into a trace buffer in memory, which can later be retrieved for analysis using the system trace formatter. When you format this data, copy it to a diskette.
- Minimum system activity is recommended when using this utility.
- Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Procedures for contacting IBM are provided in Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6. Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user.
- To trace the LAN device drivers, you must specify the `t=4` parameter on the device driver statement (PCNETDD.SYS or TRNETDD.SYS) in CONFIG.SYS. See the *Commands Reference*.

The major event code for this trace is 164. See “Using System Trace Commands” on page 3-32.

Using System Trace Commands

System tracing is activated either by a `TRACE=` statement in the `CONFIG.SYS` file or from an OS/2 command line. Differences between these techniques are called out in the following discussion.

Modifying the CONFIG.SYS File: To enable system tracing, either the `TRACE=` or `TRACEBUF=` statement must be in the `CONFIG.SYS` file. Directions for editing this file, along with a detailed description of the contents of this file, are provided in the *User's Guide, Volume 1: Base Operating System*. Considerations for using system trace commands follow:

Note: After changing the `CONFIG.SYS` file, you must restart the system for the changes to take effect.

- Using the equal sign (=)

When used in the `CONFIG.SYS` file, the equal sign (=) cannot be immediately preceded or followed by a blank space. The equal sign cannot be used from the OS/2 command line.

- Enabling the system trace utility

To enable system tracing, either the `TRACE=` or `TRACEBUF=` statement must be in the `CONFIG.SYS` file. `TRACE=` can be set to `ON` or `OFF`. For normal operating circumstances, a `TRACE=OFF` statement is recommended; the presence of this statement in the `CONFIG.SYS` file without a `TRACEBUF=` statement allows the trace buffer a default size of 4KB.

Note: Having the `TRACE=ON` statement in the `CONFIG.SYS` file can slow down system performance. To avoid this type of problem, add the `TRACE=ON x` statement only when you need to gather information on problems that occurred during system initialization.

- Specifying trace buffer size

The `TRACEBUF=` statement can be used to specify the system trace buffer size. The `TRACEBUF=x` statement allocates the size of the trace buffer where *x* is the size in 1KB increments up to 63KB.

Notes:

1. THE `TRACEBUF=` statement allocates buffer space. It *does not* enable the tracing of events. For normal operations, a 4KB trace buffer is adequate. To specify this size, include a `TRACE=OFF` statement in the `CONFIG.SYS` file *and* do not include a `TRACEBUF=` statement.
 2. The system trace utility employs a buffer wrap algorithm when writing data to the trace buffer. When the buffer becomes full, additional data written to the buffer overlays an equal or larger amount of the oldest data.
- Specifying major event codes.

To control tracing, you must specify the major event codes you want traced. There are two ways you can specify the codes:

- To activate a system trace from an OS/2 command line, type:

```
TRACE ON x
```

where *x* is the major event codes to be traced (for example, 176). Multiple codes can also be specified (for example, 2,15).

- To activate a system trace using the CONFIG.SYS file, edit the file to specify:

TRACE=ON x,y

In this command syntax example, *x* and *y* are two unique trace selections.

If no event codes are specified, *all* system events are traced. This is likely to slow system performance, so tracing all events is not recommended.

Selectively Stopping a Trace: To selectively stop a trace without affecting other active traces, type:

TRACE OFF x

where *x* is the active traced event you want to stop.

Formatting Trace Records: Use the TRACEFMT command to format the contents of the trace buffer. This external command takes a *snapshot* of the contents of the system trace buffer *at the time the TRACEFMT is requested*, formats each trace record, and sends the formatted data to standard output.

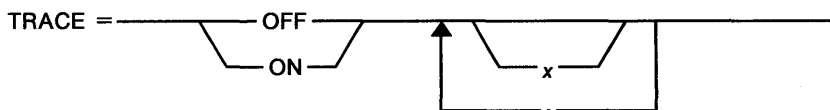
TRACEFMT can be used:

- While a system trace is active
- As many times as required to diagnose a problem without having to restart the system or respecify the major event codes.

Output can be redirected to a file or a printer.

Additional Technical Information about System Trace Commands: Additional technical information about the TRACE, TRACEBUF, and TRACEFMT commands, including graphic representations of associated command syntaxes, follows.

- TRACE command syntax



Parameters

ON Permits system tracing of specified events.

OFF Prevents system tracing of specified events.

x A number from 0 through 255, indicating the major event code to be traced or *not* to be traced. The numbers for these codes are supplied elsewhere in this book or by the IBM Support Center.

Events are traced in both IBM PC DOS and OS/2 modes. If no events are listed after the ON or OFF parameter, ON indicates that all events are traced and OFF indicates that no events are traced.

TRACE statements are processed in the order in which they are listed in the CONFIG.SYS file. Their effects are cumulative. If any part of a statement is incorrect, the statement is ignored.

- TRACEBUF command syntax
Sets the size of the circular trace buffer.

TRACEBUF = _____ x _____

Parameters

x A number from 1 through 63, representing a multiple of 1024 bytes.

For example, to increase the size of the trace buffer to 10KB, include this statement in your CONFIG.SYS file:

TRACEBUF=10

Note: The system must be restarted before this change is activated.

- TRACEFMT command syntax.

_____ TRACEFMT _____
 \ drive / \ path /

In this example, an existing TRACE statement has been tracing system events. To format and print the trace records contained in the buffer, type the following at the OS/2 command prompt:

TRACEFMT >LPT1

Recommended Procedure for Collecting and Formatting System Trace Information

This procedure applies to most cases in which you should use the system trace utility. Exceptions can be specified by an IBM Support Center representative.

The recommended place to start a system trace is from the OS/2 command line. To start a system trace:

1. If you want to change the trace or trace buffer defaults, or clear the buffer, stop and restart your system.
2. Start an OS/2 session and begin the trace; at the OS/2 command line, type:

TRACE ON *x,y*

where *x* and *y* are the numbers of the trace events specified in Chapter 2, "Problem Determination: Getting Started"; the Message Appendixes; or by an authorized IBM representative.

Then, select Enter.

3. Switch to the application that is experiencing or that reported the problem and attempt to re-create the problem.
4. After the problem occurs, switch back to the OS/2 command line where the trace was activated and stop the trace; type:

TRACE OFF

and select Enter.

5. To capture the contents of the trace buffer, type:

```
TRACEFMT
```

at the OS/2 command line and select Enter.

The contents of the trace buffer are displayed. You can redirect it to a printer or a file.

- To direct the output to a printer, type:

```
TRACEFMT > LPT1
```

at the OS/2 command line and select Enter.

Note: Your printer may be defined as LPT1, LPT2, LPT3, or PRN.

- To direct the output to a file on a diskette, type:

```
TRACEFMT > (drive) (filename)
```

at the OS/2 command line and select Enter.

To proceed, refer to the information on the following page. Samples of formatted trace events are provided.

Notes:

1. The TRACEFMT command does not turn off the trace. You can invoke the trace formatter as many times as required to diagnose the problem.
2. If neither a TRACEBUF= nor a TRACE= statement is included in the CONFIG.SYS file, an error message is received when an attempt to start a TRACE is made.

Samples of Formatted Trace Events: Samples of formatted trace events follow.

DosGetProcAddr Post-Invocation

```
Issuing Process ID=000C Protect Mode Kernel Call Time Stamp=57.62  
Procedure Address=0567:001C Return Code=0000
```

Unrecognized Trace Event

```
Issuing Process ID=000B Protect Mode Dynlink Call Time Stamp=57.65  
Major Event Code=B6 Minor Event Code=0002  
Data = 19 02 01 00 00 00 00 00 01 00 00 00
```

When you complete this procedure: If you have been directed to complete other problem determination procedures, refer to directions to complete those procedures.

When you have completed all appropriate procedures:

1. Complete the Problem Report Form (PRF) describing this problem. A blank PRF is provided in Appendix J along with descriptions of the items on the form.
2. Refer to the procedures for contacting IBM in Chapter 4, "When and How to Contact IBM."

Note: Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Also, do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user.

If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

GDDM-OS/2 Link Trace

A trace program is supplied with GDDM-OS/2 LINK to enable detailed internal GDDM-OS/2 LINK tracing for identification of GDDM-OS/2 LINK problems. The trace program is started with the following command:

```
C:\CMLIB\GQFTRACE.EXE
```

The trace program runs as a separate task and is capable of tracing GDDM-OS/2 LINK running concurrently on several logical terminals. The trace output can go to the screen, a disk file, or both, and provides similar facilities to the trace function of GDDM-PCLK 1.1.

Using the Standalone Dump Utility

Use the standalone dump utility to record the contents of all physical memory only when a problem is very difficult to reproduce or other problem determination procedures provided in this guide do not resolve the problem.

Preliminary Considerations

Read the following information *before* attempting to use the stand-alone dump utility:

- When performing a standalone dump, the *first* diskette to which output is directed *must* be *initialized* using the CREATEDD (create dump diskette) command described in “Preparing a Standalone Dump Diskette” on the following page. *Initialization* is the process of formatting the diskette used to begin the standalone dump procedure.

If additional diskettes are necessary for a standalone dump, they must be formatted using the FORMAT command.

IBM recommends formatting additional diskettes for use in case an additional dump is needed, or one of the diskettes is defective.

The storage dump can span several diskettes; thus, you should have a supply of formatted diskettes on hand. If additional diskettes are needed after the dump diskette created with CREATEDD has been used, you are prompted for them.

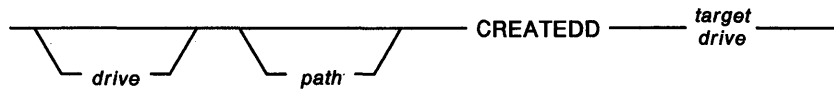
- This utility runs independently of the base operating system and provides an image of all physical memory.
- This utility can produce meaningful data only if the system error did not destroy the storage resident dump code and data.
- Because the system must be restarted after each dump, a standalone dump should be used only when:
 - The problem is very difficult to reproduce, or other methods of problem determination did not solve the problem.
 - You are directed to do so in Chapter 2, “Problem Determination: Getting Started”; the Message Appendixes; or by an IBM Support Center representative.
- Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Procedures for contacting IBM are provided in Chapter 4, “When and How to Contact IBM.”
- Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user. If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

Preparing a Standalone Dump Diskette

Use the **CREATEDD** (create dump diskette) command to optionally format and initialize a standalone dump diskette. If additional diskettes are necessary, they must be formatted using the **FORMAT** command.

Note: The **CREATEDD** command runs only in OS/2 mode and does not work on drives involved with the **SUBST** or **JOIN** command.

CREATEDD command syntax



Parameters

target drive Diskette drive that contains the diskette to be formatted as a dump diskette.

Note: In most cases, the drive and path are not required.

This external command initializes a diskette so that it is usable by the standalone dump facility. The diskette is also made to appear full. This prevents you from accidentally placing data on the diskette. **CREATEDD** uses the **FORMAT** command. Therefore, **FORMAT** must be either in the current directory or along the path defined by the **PATH** command.

Since the **CREATEDD** command creates only one diskette to *start* the storage dump, you should respond by typing **N** for No when you are asked if you want to format another diskette.

Recommended Procedure for Initializing System Dump Diskettes

Note: IBM suggests that at least two diskettes be initialized, using **CREATEDD**, prior to performing a standalone dump in case one or more proves to be defective. If more than one diskette is needed to complete the dump, these diskettes must be formatted using the **FORMAT** command.

To initialize a diskette for use when beginning a standalone dump:

1. Obtain two blank diskettes, or diskettes that contain information you no longer need, for each storage dump taken.
2. Start an OS/2 session.

3. Insert one diskette into drive A and type:

CREATEDD A:

at the OS/2 command line and select Enter.

The following is displayed:

Insert a new diskette in drive A:
and press Enter when ready.

If you are using a system that contains a 1.2MB or 1.44MB diskette drive, one of the following prompts is displayed:

Are you using a 1.2 megabyte diskette in drive A? (Y/N)
Are you using a 1.44 megabyte diskette in drive A? (Y/N)

4. Answer the prompt accordingly. If you answer no, the disk is formatted as a 360KB or 720KB diskette, respectively, in a 1.2MB or a 1.44MB diskette drive.

The initialization process continues. When it completes, the OS/2 command line is displayed.

Recommended Procedure for Performing a Standalone Dump

This procedure applies to most cases in which you should use the standalone dump utility. Exceptions can be specified by an IBM Support Center representative. Do not attempt to complete this procedure before reading "Preliminary Considerations" on page 3-36.

To start the dump:

1. Hold down the Control (Ctrl) and Alternate (Alt) keys and press the Number Lock (NumLock) key twice.

Warning: The key sequence for starting a standalone dump is similar to pressing the Ctrl, Alt, and Delete (Del) keys (the sequence to restart), so *use caution* when starting a system dump. All system activities in progress will stop.

After a few seconds, the screen clears and the following message is displayed:

Insert the dump diskette created by the CREATEDD command
into drive A and press any key to continue.

2. Insert your dump diskette and press any key.

This action initiates the dump process. The following message is displayed:

The storage dump is being performed...

When the system dump is complete, or the current dump diskette is full, the following message is displayed:

The storage address ranges on this diskette are:

0 - The number of bytes dumped

Press any key to continue.

3. If there is more information to dump, you are instructed to insert another diskette as follows:

The diskette is full.
Insert another formatted diskette in drive A.

Press any key to continue.

Remember, the *first* diskette that you direct output to must be formatted using the CREATEDD command. If additional diskettes are necessary, they must be formatted using the FORMAT command.

Note: To end a standalone dump before it is completed, reinsert the first dump diskette when you are prompted to insert another diskette. This ends the dump and records a dump summary on the first diskette.

4. When the standalone dump is complete and more than one diskette was needed, you are prompted to do the following:

Insert storage dump diskette number 1 to complete the dump.

This allows the control program to write the dump summary record and end the dump process.

When the process completes, the following confirmation and direction is displayed:

The storage dump has completed. Remove the dump diskette and restart the system.

When you complete this procedure: If you have been directed to complete other problem determination procedures, refer to directions to complete those procedures.

When you have completed all appropriate procedures:

1. Complete the Problem Report Form found in Appendix J, "Problem Report Form." This appendix also contains instructions on how to complete the form.
2. Refer to the procedures for contacting IBM in Chapter 4, "When and How to Contact IBM."

Note: Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Also, do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user.

If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

The PSTAT Utility

The PSTAT Utility will return process status information. This will permit you to determine which threads are running in the system, along with their current status (for example, ready, blocked, and so on) and current priorities. The utility will aid you in determining why a given thread is hung (for example, blocked, waiting on a system event) or why the performance of the thread is sluggish (for example, relatively low priority compared to other threads). PSTAT displays the process ID that has been assigned for tracing on a per process basis.

Using the PSTAT Utility

[d:][Path]PSTAT [/c | /s | /l | /m | /p:pid]

Note: PSTAT without any option displays all information of /c, /s, /l, and /m.

/C This switch displays the current process and thread related information on the system. It returns the following information for each process:

- Process ID
- Parent process ID
- Session ID
- Process module name.

It returns the following information for each thread:

- Thread ID
- Thread priority
- Thread status (ready, block)
- Block ID.

/S This switch displays the following system semaphore information for each thread on the system. It displays the following information for each thread.

- Process module name
- Process ID
- Flag
- Number of references
- Number of requests
- Index
- Name of the system semaphore.

/L This switch displays the run-time libraries that are linked for each process on the system. It returns the following information for each process:

- Process ID
- Session ID
- Process module name
- Library list.

/M This switch displays the named shared memory information for each process on the system.

- Owner handle
- Selector
- Number of references
- Name of the shared memory.

/P:PID Where PID is the hexadecimal ID to be displayed. This switch displays the related information on the specified process. It returns the following information for the process ID specified:

- Process ID
- Parent process ID
- Session ID
- Process module name
- Run-time linked libraries
- Shared memory information.

It returns the following information for each thread of the process ID specified:

- Thread ID
- Thread priority
- Thread status (ready, block)
- Block ID
- Semaphore information formation.

Tools for Advanced Problem Determination of Communications

Trace and dump services are diagnostic tools designed to help identify the source of certain types of communications problems. These services are provided by Communications Manager. A description of each follows:

- *Trace services* is used to diagnose a communications problem with a particular function or user-written application by recording, or *tracing*, a sequence of events.
- *Dump services* is used to make a copy of that portion of memory being used by the communications components selected for a dump.

This part of the guide is divided into two main sections:

- “Preliminary Considerations for Using Trace and Dump Services”
 - Describes the menus associated with trace services and dump services, and explains related options
 - Explains other related preliminary considerations and preparations.

- “Recommended Procedure for a Communications Trace and Dump” on page 3-57 that applies to most cases in which you should use trace services and dump services. Exceptions can be specified by an IBM Support Center representative.

Preliminary Considerations for Using Trace and Dump Services

Read the information that follows *before* attempting to use trace or dump services.

- These tools should be used *only* upon direction provided in Chapter 2, “Problem Determination: Getting Started”; the Messages Appendixes; or by an IBM Support Center representative. Specific trace and dump selections can be provided.
- Trace services and dump services are *menu-driven* utilities, but can also be activated or deactivated by application programs using service verbs (*Refer to the applicable OS/2 Extended Edition API programming reference manual for detailed discussion of the service verbs*). This means that the options for selecting, starting, and stopping dumps and traces and for processing related output data are utilized by way of Communications Manager menus. Procedures for using the trace services menu and dump services menu are described later in this chapter.
- The dump and trace selections you specify should be selected *prior* to recreation of the problem. The selections are saved until Communications Manager is exited.

Also, you should write all selections for trace and dump in the space provided on the Problem Report Form (Part B, question 3).

- Access to trace and dump services is controlled by *Keylock*. This lock must be opened *before* trace and dump services can be used. Refer to “Keylock Considerations” on page 3-43 for related directions.
- Minimum system activity is recommended when using these utilities. Traces can be slowed or otherwise unintentionally affected by other active application programs. The following restrictions should be considered:
 - Traces can be affected by application programs that include a `DEFINE_TRACE` or `DEFINE_DUMP` service verb. (*Refer to the applicable OS/2 Extended Edition API programming reference manual for detailed discussion of the service verbs*)
 - Running a 3270 or DFT dump while other system activity is in progress can result in all DFT sessions being reset.
- Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. Procedures for contacting IBM are provided in Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6. Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user.

Keylock Considerations

Some Communications Manager functions, such as trace services and configuration, can potentially expose information that is confidential. A software security function patterned after the hardware *lock* and *key* is provided to protect this confidential information. When the lock is secure, or closed, the following functions are not available to users:

- Problem determination aids
 - Trace services
 - Dump services.
- Subsystem management
 - Activates
 - Deactivates.
- Configuration
 - Change
 - Create
 - Delete
 - Delete all.

A single lock is defined with only two keys that open the lock: the *master key* and the *service key*. Either key may be used to open or secure the lock. The master and service keys shipped with the Communications Manager component have a null value (all blanks) so the lock can be secured or opened without having to enter any master or service key.

The master key should be owned by the system administrator. The service key can be given to the service coordinator or to individual users, if desired. Additional information about Keylock is provided in the *System Administrator's Guide*.

Note: Access to keyboard remap functions is independent of the state of the lock.

Opening the Keylock:

1. In the Communications Manager Main Menu, select **Advanced** from the action bar.
2. From the Advanced pull-down, select **Key lock** to display the Specify Configuration File Name panel.
3. Press the Enter key to specify the currently running configuration file or specify the configuration file where the Keylock you wish to open has been designated, and then select Enter to display the Keylock Menu.
4. When the Keylock Menu is displayed, select **Open lock** to display the Open Lock panel.
5. Enter either the master or service key that opens the lock.

If you enter a valid key and select Enter, the lock is opened and the Keylock Menu is displayed with a confirmation message.

If you select **Cancel**, you are returned to the Keylock Menu.

Accessing Trace Services

Access the Trace Services menu as follows:

1. From the Communications Manager Main Menu, press the Switch to Action Bar (F10) key to go to the action bar.

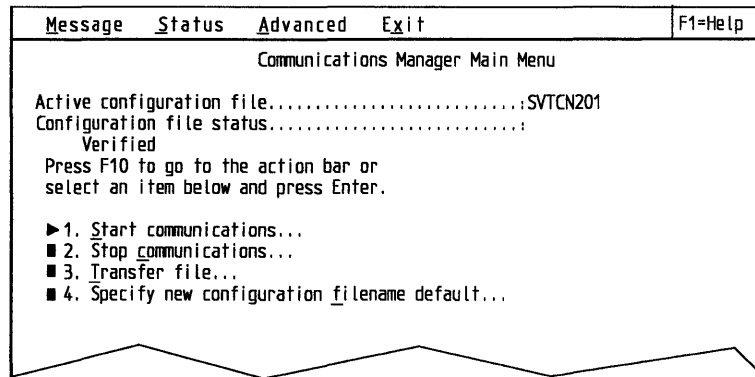


Figure 3-27. Communications Manager Main Menu

2. Select **Advanced** from the Main Menu action bar. The Advanced Options panel is displayed.

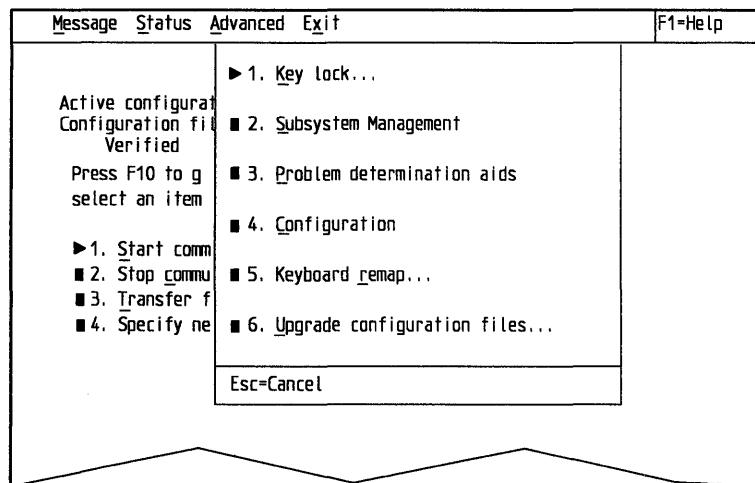


Figure 3-28. Advanced Options Panel

3. Select **Problem determination aids** from the panel. The Problem Determination Aids menu is displayed.

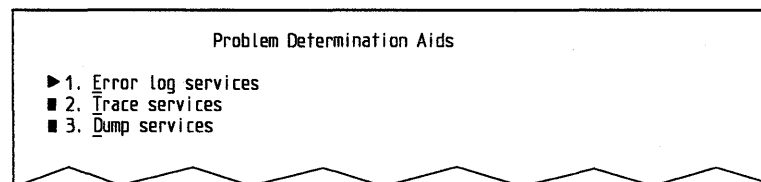


Figure 3-29. Problem Determination Aids Menu

4. Select **Trace services** from the Problem Determination Aids menu. The Trace Services menu is displayed.

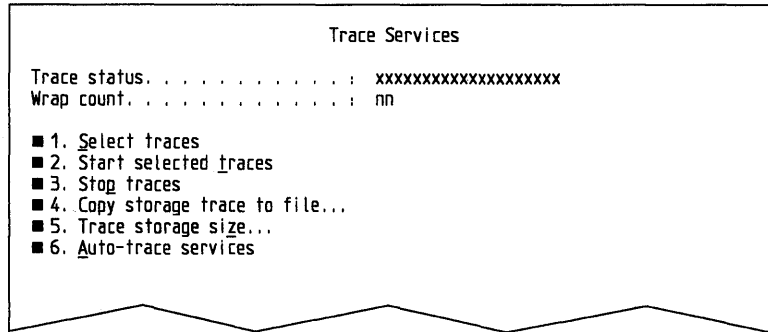


Figure 3-30. Trace Services Menu

5. Select the trace service you wish to use from the Trace Services menu. The next section discusses the use of the Trace Services menu.

Using the Trace Services Menu

When **Trace services** is selected from the Problem Determination Aids menu, the Trace Services menu (Figure 3-31) is displayed.

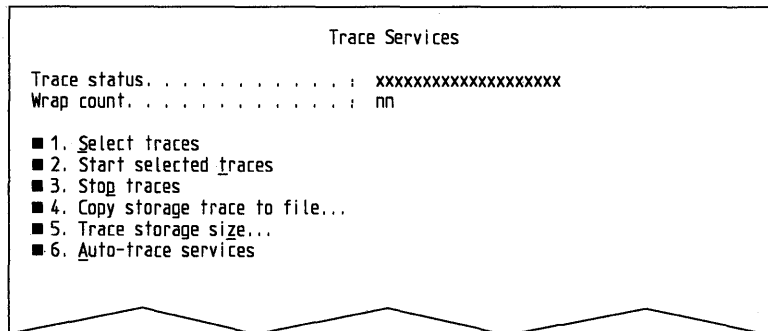


Figure 3-31. Trace Services Menu

The Trace Services menu is the primary menu that allows you to customize the trace environment to your particular needs. From this panel, you can define which traces you wish to obtain. You choose **Select traces** and go through the subsequent panels to indicate exactly which traces you need. Once the traces have been selected, you are returned to the Trace Services menu.

After you re-create the particular trace environment that meets your requirements, you then can activate the selected traces by selecting the **Start selected traces** option. Once you have determined that the environment has been re-created and that the trace data has been gathered, you can select the **Stop traces** option to stop the Communications Manager components from writing the trace data to storage.

After you stop the trace activity, you can have the trace data written to a file by selecting the **Copy Storage Trace to File** option. You can specify any valid file as the destination file for your trace data. If you suspect that you have a very large amount of trace data, you are recommended to have your destination file on a hard disk that has sufficient capacity to contain the trace data.

You can specify the size of the trace storage that Communications Manager uses to store trace information if you require a storage size larger than the default of 64KB. The Trace Services menu includes the **Trace storage size** option that allows you to specify the storage size of the trace in multiples of 64KB segments. You can specify up to a maximum of 16 segments, which is equivalent to 1024KB of storage.

After traces are started, they will be active until you select **Stop traces** at the Trace Services menu or until Communications Manager is stopped. The trace environment is not saved across Communications Manager restarts. Therefore, if the particular environment on which you need to gather trace data is re-creatable only by stopping and restarting Communications Manager, select the **Auto-trace services** option at the Trace Services menu to gather trace data. An example of such an environment is the auto-starting of features performed by Communications Manager during its initialization phase.

The **Auto-trace services** option provides the same selection choices as provided for regular traces. However, in this case, the trace selections will be saved in the current configuration file for use when Communications Manager is restarted. When Communications Manager is restarted, it will automatically start any auto traces that were previously selected if auto traces are enabled.

The Auto Trace Services panel, which is displayed when you select **Auto-trace services**, provides the following options:

- Select and store auto traces
- Enable auto traces
- Disable auto traces
- Specify a trace storage size that will be used when auto traces begin.

Recommended Procedures for Performing a Communications Trace

Two procedures are provided here. The first procedure is for obtaining trace data during normal communications operation. The second is for obtaining trace data during Communications Manager auto start.

Obtaining Trace Data During Normal Communications Operation

The following steps are necessary for performing a normal communications trace:

1. To begin:
 - a. Stop and restart Communications Manager.
 - b. Record the date and time at which the system is started in order that error and message log entries associated with re-creation of this problem can be identified and isolated by time and date.
2. Access the Problem Determination Aids menu:
 - a. Select **Advanced** from the action bar at the top of the Communications Manager Main Menu.
 - b. When the Advanced panel appears, either type 3 or press the P key for **Problem determination aids**.
3. Choose the events that you wish to trace:
 - a. When the Problem Determination Aids menu is displayed, access the Trace Services menu either by typing 2 or by pressing the T key for **Trace services**.

- b. When the Trace Services menu (Figure 3-30 on page 3-45) is displayed, select **Select traces**.
- c. When the Trace Type Selection panel is displayed, select **Trace selection**. Under some circumstances, IBM service personnel may direct you to select **Advanced trace selections** at this point. This choice should be made only under IBM service direction because **Advanced trace selections** are meaningful only to IBM service personnel.

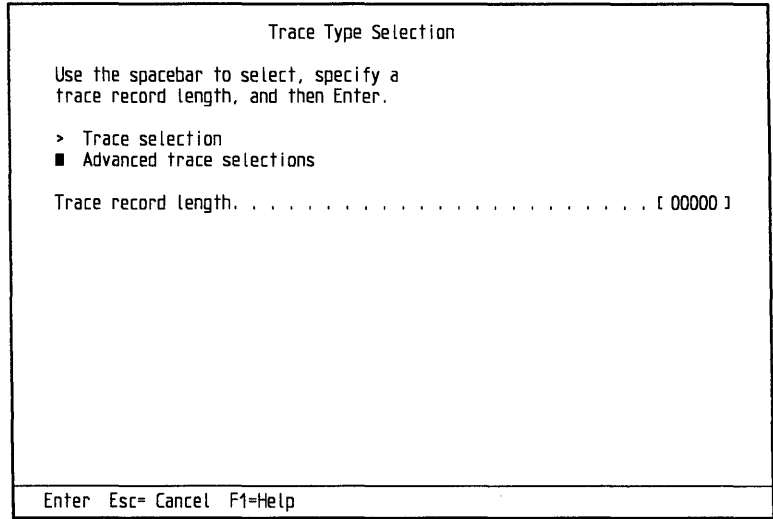


Figure 3-32. Trace Type Selection Panel

- d. The Trace Selections menu (Figure 3-33) is displayed.

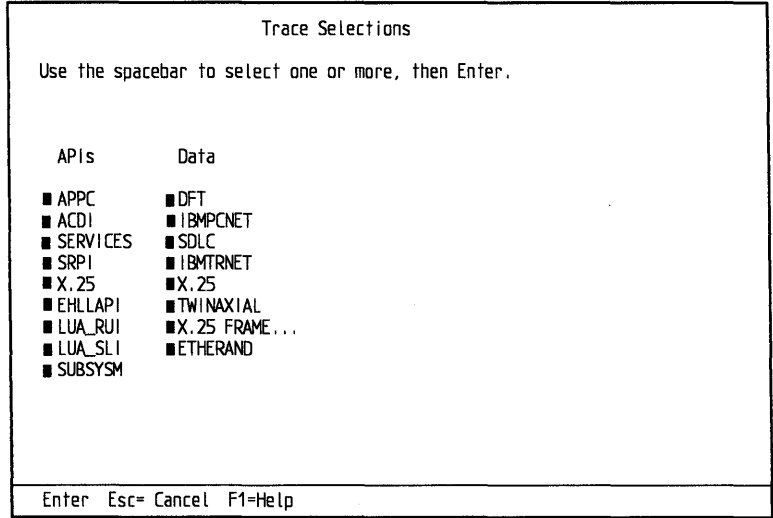


Figure 3-33. Trace Selections Menu

- e. Make selections as required by using the space bar. Then select Enter. The Trace Services menu (Figure 3-34 on page 3-48) is displayed.

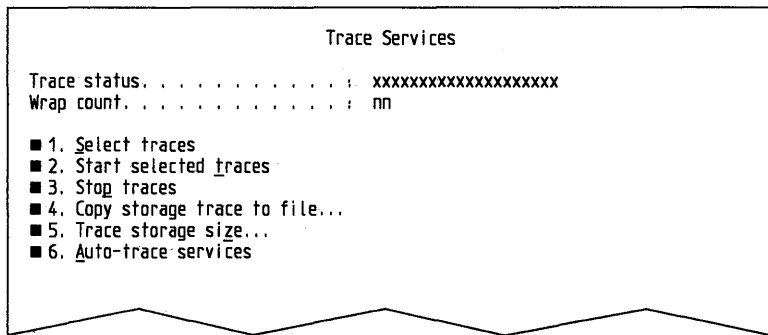


Figure 3-34. Trace Services Menu

4. Start traces:
 - a. From the Trace Services menu, either type 2 or press the T key to start selected traces.
 - b. When the message
Traces have been started.
is displayed, select Esc = Cancel twice to return to the Communications Manager Main Menu.
5. Re-create the problem.
6. Save the data trace:
 - a. Access the Trace Services menu (as directed previously).
 - b. Either type 3 or press the P key to stop traces.
 - c. Copy the storage trace to the file by typing 4 or by pressing the C key. The Copy Storage Trace to File panel (Figure 3-35) is displayed.

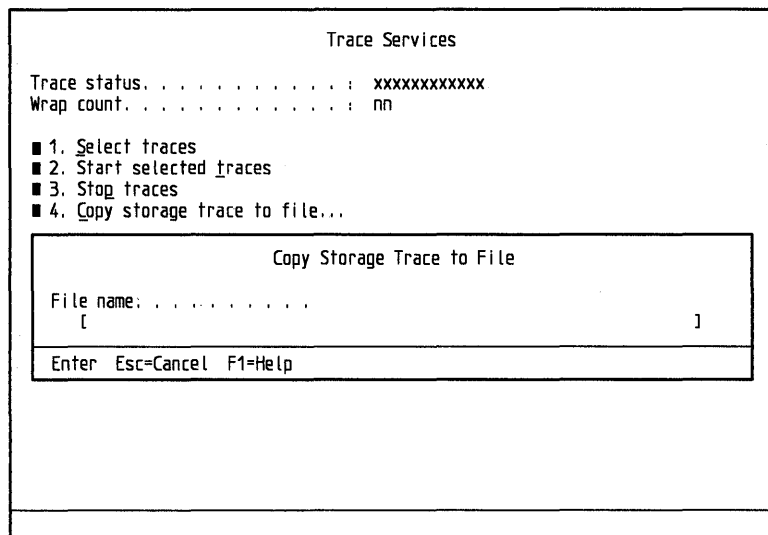


Figure 3-35. Copy Storage Trace to File Panel

- d. Specify a file name for the file that is to contain the trace data, and select Enter.
- e. When the copy completes, select Esc = Cancel twice to return to the Communications Manager Main Menu.

Obtaining Trace Data During Communications Manager Auto-start

The following steps are necessary for performing an auto-start communications trace:

1. To begin:
 - a. Stop and restart Communications Manager.
 - b. Record the date and time at which the system is started in order that error and message log entries associated with re-creation of this problem can be identified and isolated by time and date.
2. Access the Problem Determination Aids menu:
 - a. Select **Advanced** from the action bar at the top of the Communications Manager Main Menu.
 - b. When the Advanced panel appears, either type 3 or press the P key for **Problem determination aids**.
3. Choose the events that you wish to trace:
 - a. When the Problem Determination Aids menu is displayed, access the Trace Services menu either by typing 2 or by pressing the T key for **Trace services**.
 - b. When the Trace Services menu (Figure 3-36) is displayed, select **Auto-Trace services** by either typing 6 or by pressing the A key.

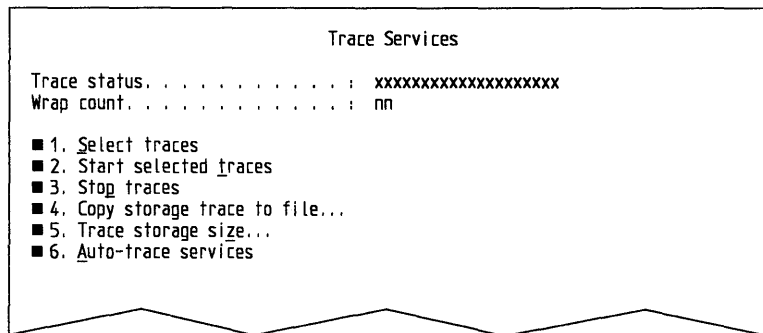


Figure 3-36. Trace Services Menu

- c. When the Auto-trace Services panel (Figure 3-37) is displayed, select **Select and store auto-traces**

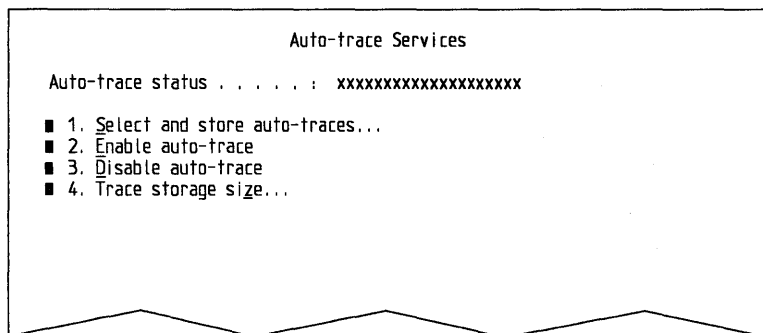


Figure 3-37. Auto-Trace Services Panel

- d. When the Trace Type Selection panel (Figure 3-38 on page 3-50) is displayed, select **Trace selection**. Under some circumstances, IBM service

personnel may direct you to select **Advanced trace selections** at this point. This choice should be made only under IBM service direction because **Advanced trace selections** are meaningful only to IBM service personnel.

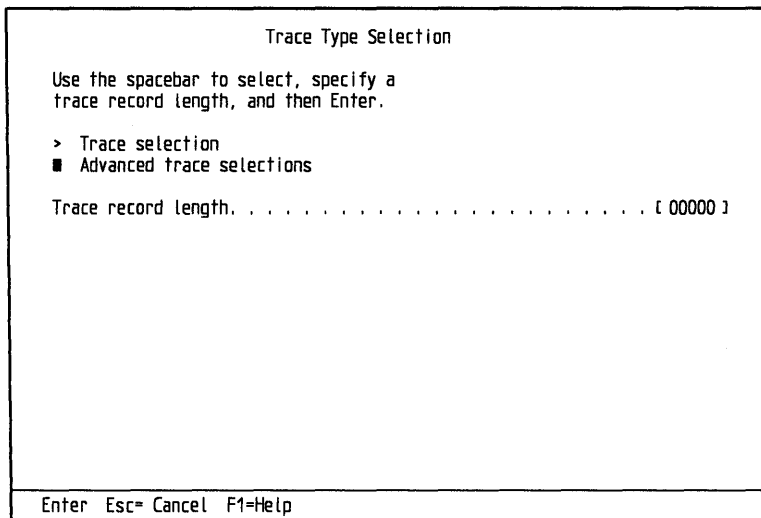


Figure 3-38. Trace Type Selection Panel

e. The Trace Selections menu (Figure 3-39) is displayed. Make selections as required by pressing the space bar. Then select Enter.

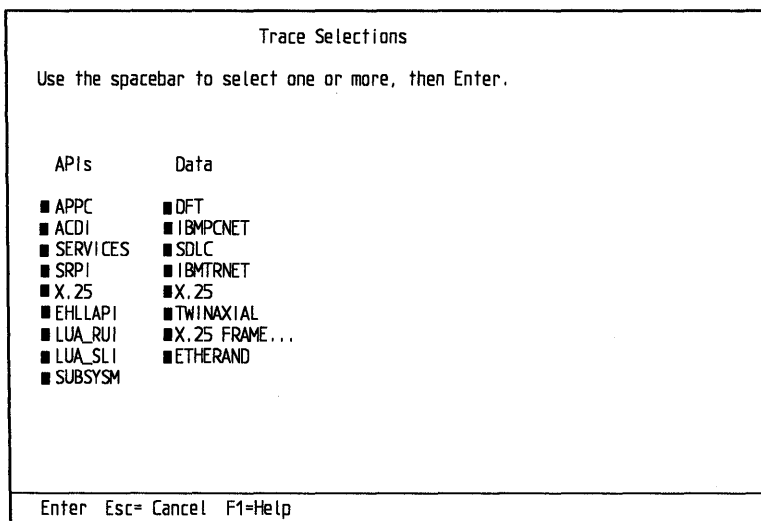


Figure 3-39. Trace Selections Menu

f. The Auto-Trace Services panel (Figure 3-40 on page 3-51) is displayed.

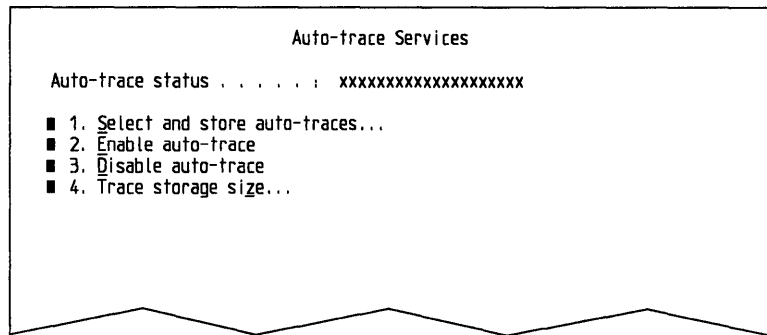


Figure 3-40. Auto-Trace Services Panel

4. Enable traces:
 - a. Either type 2 or press the E key to enable the selected traces.
 - b. Select Esc=Cancel to return to the Trace Services menu.
 - c. Select Esc=Cancel twice to return to the Communications Manager Main Menu.
5. Stop and then restart Communications Manager.
6. Save the data trace:
 - a. Access the Trace Services menu (as directed previously).
 - b. Either type 3 or press the P key to stop traces.
 - c. Copy the storage trace to the file by typing 4 or by pressing the C key. The Copy Storage Trace to File panel (Figure 3-41) is displayed.

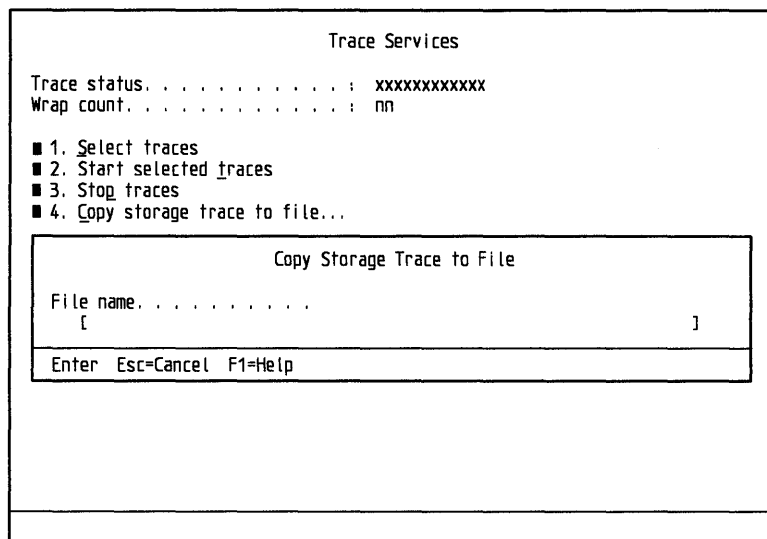


Figure 3-41. Copy Storage Trace to File Panel

- d. Specify a file name for the file that is to contain the trace data, and select Enter.
- e. When the copy completes, select Esc=Cancel twice to return to the Communications Manager Main Menu.

Note: If Communications Manager does not initialize successfully, you will not be able to access the Problem Determination Aids menu as directed in step 2 of the

previous procedure. If this occurs, you may be able to gather trace data by following this procedure:

1. Stop and restart Communications Manager with a configuration file that will allow Communications Manager to initialize successfully.
2. From the Communications Manager Main Menu, press the Switch to Action Bar (F10) key to go to the action bar.
3. Select **Advanced** from the Main Menu action bar. The Advanced Options panel is displayed.
4. Select **Configuration** on the Advanced Options panel. The Specify Configuration File panel is displayed. Specify the configuration file with which Communications Manager is failing to initialize and select Enter.
5. The Communications Configuration Menu is displayed. Select **Workstation Profile** from this panel. The Profile Operations panel is displayed. Select **Change** from this panel.
6. The Change Workstation Profile panel is displayed. Select Enter without modifying anything. The configuration file is now identified as modified and unverified. Exit configuration without verifying the configuration file.
7. Stop and restart Communications Manager with the unverified configuration file. Communications Manager should initialize successfully.
8. Follow steps 2 through 4 of the previous procedure to select and enable auto traces in the unverified configuration file and to return to the Communications Manager Main Menu.
9. Follow steps 2 through 4 of this procedure to get to the the Communications Configuration Menu. Verify the configuration file that has the auto traces enabled. Exit configuration.
10. Stop and restart Communications Manager with the configuration file that now has the auto traces enabled and that was verified in step 9. Communications Manager will again fail to initialize, but the trace data will automatically be written to a file named ACSTRACE.DAT. The trace data can be printed or viewed by using a standard print command or any editor.

Using the Dump Services Menus

Access to dump services is controlled by Keylock. This lock must be opened *before* dump services can be used. Refer to “Keylock Considerations” on page 3-43 for related directions.

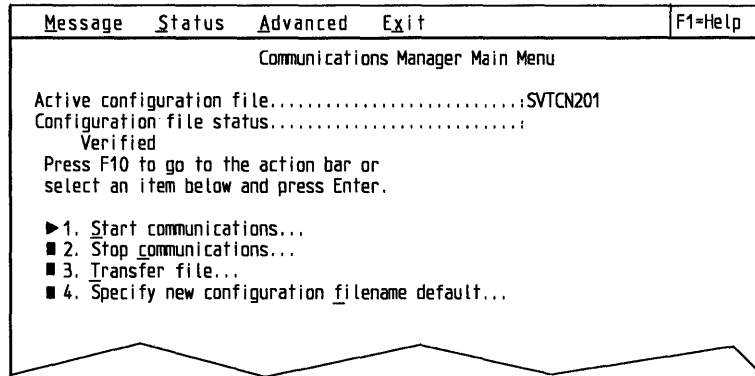


Figure 3-42. Communications Manager Main Menu

1. Select **Advanced** from the action bar in the Communications Manager Main Menu to display the Advanced pull-down.

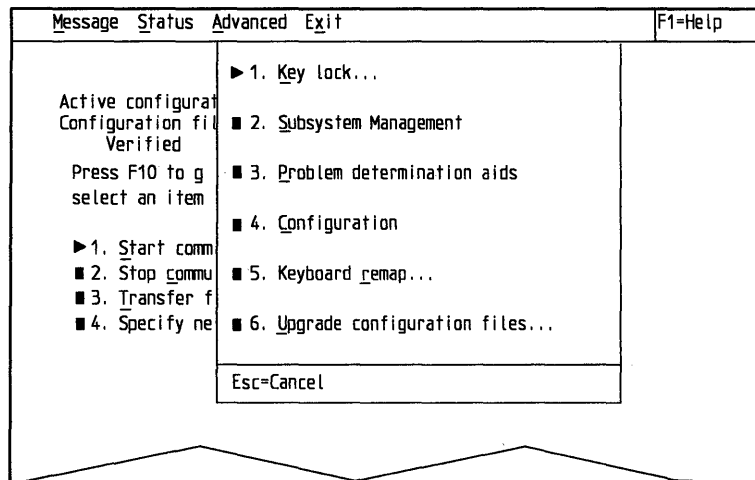


Figure 3-43. Advanced Pull-Down

2. Select **Problem determination aids** to display the Problem Determination Aids menu.

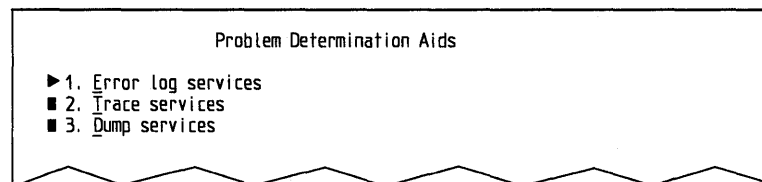


Figure 3-44. Problem Determination Aids Menu

3. Select **Dump services** to display the Dump Services menu.

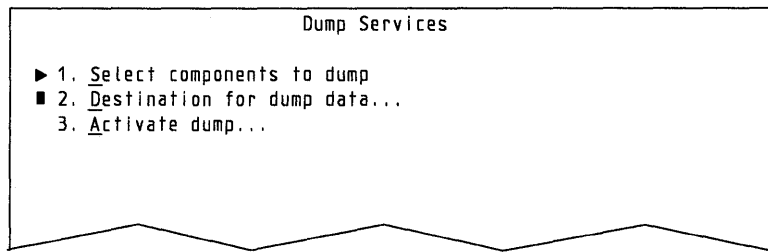


Figure 3-45. Dump Services Menu

Using the Dump Services Menu

Use the Dump Services menu to:

- Select the items you wish to dump
- Name the file to which you want to write the dump data
- Activate the dump.

Select **Select components to dump** to display the Dump Selections menu.

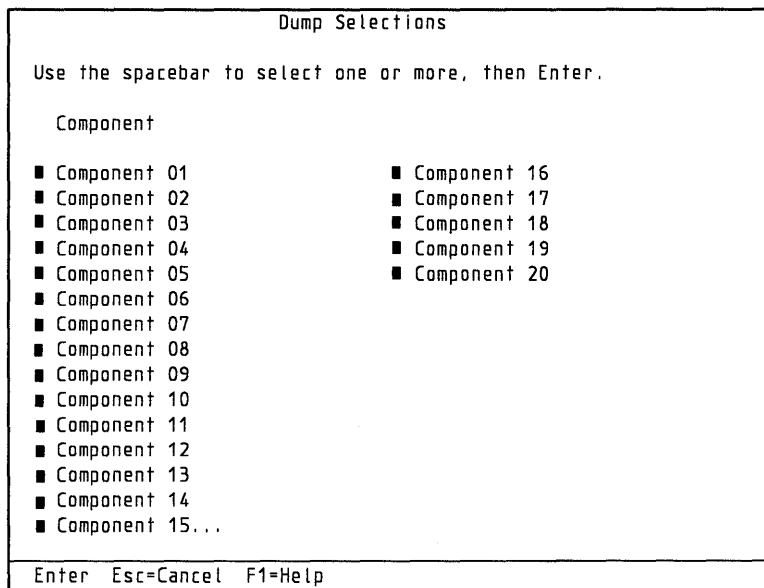


Figure 3-46. Dump Selections Menu

From the menu illustrated in Figure 3-46, you can select the items you want to dump. Specific selections for certain types of problems are provided in the Messages Appendixes, or can be supplied by an IBM Support Center representative.

You can choose one or more valid selections. To select an item, move the cursor to the item and press the Spacebar. Select Enter after making all selections.

Specifying the Destination for Dump Data: Select **Destination for dump data** to display the Dump Destination pop-up.

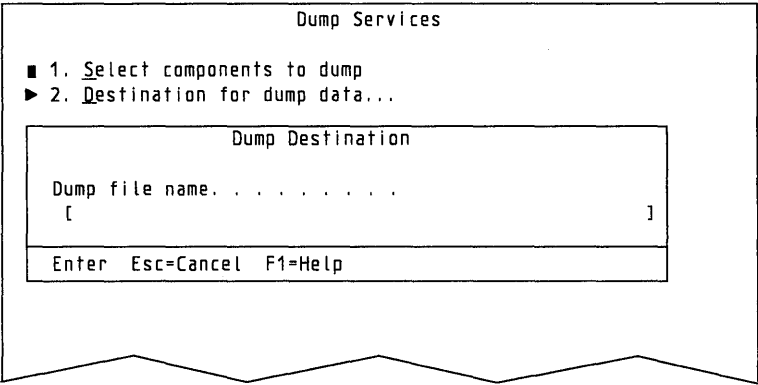


Figure 3-47. Dump Destination Pop-Up Example

You *must* specify a dump destination *before* a dump can be activated. Specify the file name (up to 64 characters) that includes the drive and path to which you want the dump data stored.

Select **Activate dump** to display the Dump Activation Warning pop-up.

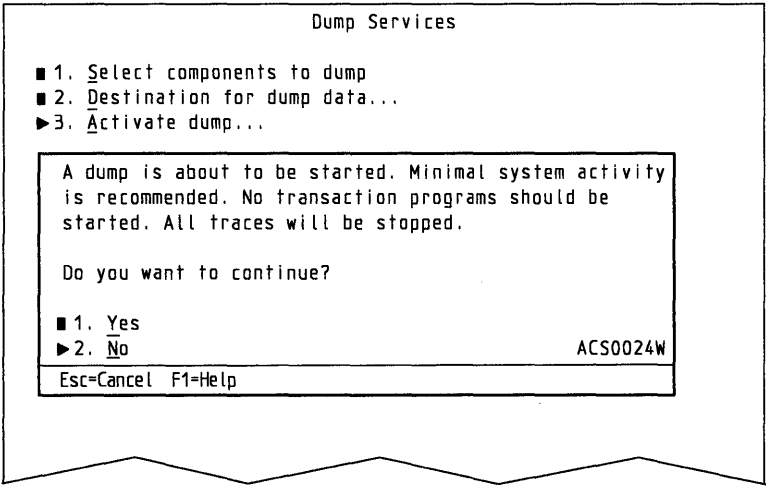


Figure 3-48. Dump Activation Warning Pop-Up Example

Select **No** to remove the menu. Select **Yes** to start the dump and display the dump in process status pop-up.

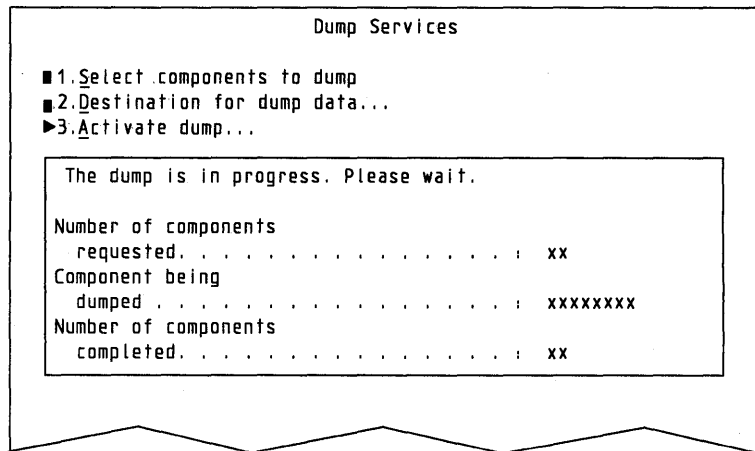


Figure 3-49. Dump in Process Status Pop-Up

Notes:

1. The dump process can take several minutes.
2. When a dump is activated, any active system or communications traces are stopped. The trace data is saved.

Recommended Procedure for a Communications Trace and Dump

Read the “Preliminary Considerations for Using Trace and Dump Services” on page 3-42 *before* attempting to use the following procedure.

This is a comprehensive data collection process for communications problems. Several formatted diskettes can be required to include information from the trace and dump as well as related message log and error log files.

1. To begin:
 - a. Stop and restart Communications Manager (using the same configuration file that was being used when the communications problem occurred).
 - b. Record the time and date the system is started so that error log and message log entries associated with recreation of this problem can be identified and isolated by time and date.
2. Access the Problem Determination Aids menu:
 - a. Select **Advanced** from the action bar in the Communications Manager Main Menu (Figure 3-42 on page 3-53).
 - b. When the Advanced pull-down is displayed, type 3 or P for **Problem determination aids** (Figure 3-43 on page 3-53).
3. Choose the items you want to dump:
 - a. When the Problem Determination Aids menu is displayed, access the Dump Services menu by typing 3 or D for **Dump services** (Figure 3-44 on page 3-53).
 - b. When the Dump Services menu is displayed, type 1 or S for **Select components to dump** (Figure 3-45 on page 3-54).
 - c. Press the Spacebar to select the items you have been directed to dump. After making your selections, select Enter to access the Dump Services menu.
4. Specify a destination where you want the dump data to be recorded:
 - a. Type 2 or D for **Destination for dump data** to display the Dump Destination panel (Figure 3-47 on page 3-55).
 - b. Specify a file name for the file to contain the dump data. Then select Enter (to return to the Dump Services menu), and then select Esc = Cancel to access the Problem Determination Aids menu.

5. Choose the events that you wish to trace:
 - a. Select **Trace services** from the Problem Determination Aids menu. The Trace Services menu is displayed (Figure 3-36 on page 3-49).
 - b. Select **Select traces** from the Trace Services menu. The Trace Type Selection panel (Figure 3-38 on page 3-50) is displayed.
 - c. Select **Trace selection** from the Trace Type Selection panel. The Trace Selections menu (Figure 3-39 on page 3-50) is displayed.

Note: Under some circumstances, IBM service personnel may direct you to select **Advanced trace selections** from the Trace Type Selection panel. This choice should be made only under IBM service direction because **Advanced trace selections** are meaningful only to IBM service personnel.

- d. Make selections as required by pressing the Spacebar. Then select Enter. The Trace Services menu (Figure 3-36 on page 3-49) is displayed.
6. Start traces:
 - a. Select **Start selected traces** from the Trace Services menu. The message Traces have been started is displayed.
 - b. Select Esc=Cancel twice to return to the Communications Manager Main Menu.

7. Re-create the problem.

8. Save the data trace:
 - a. Access the Trace Services menu (as described in step 5).
 - b. Select **Stop traces** from the Trace Services menu.
 - c. Select **Copy the storage trace to the file** from the Trace Services menu. The Copy Storage Trace to File panel (Figure 3-41 on page 3-51) is displayed.
 - d. Attempt to create the problem again.
 - e. When the problem occurs, start the dump:
 - 1) Access the Dump Services menu (as directed previously.)
 - 2) Type 3 or A to **Activate dump**, and select **Yes** when asked if you want to continue.

The following message is displayed:

The dump is in progress. Please wait.

```

Number of components
  requested. . . . . : xx
Component being
  dumped . . . . . : xxxxxxxx
Number of components
  completed. . . . . : xx
  
```

where xxxxxxxx is the name of the component or components you selected to be dumped.

When the dump completes, this message is removed.

- f. To save the trace information:
 - 1) Select Esc=Cancel to access the Problem Determination Aids menu.

- 2) Access the Trace Service menu and type 4 or C for **Copy storage trace to file**.
 - 3) Specify a file name for the file to contain the trace data and select Enter.
- g. When the copy completes, select Esc = Cancel twice to return to the Communications Manager Main Menu.
 - h. If a diskette was *not* specified as the destination for either the trace or dump services data (by way of the **Copy storage trace to file** and **Destination for dump data** options), copy the dump or trace files to a diskette.
 - i. If possible, copy the message log and error log files to the same diskette. If there is not enough space on the diskette, copy the files to a second diskette.

When You Have Completed the Recommended Procedure for a Communications Trace and Dump: If you have been directed to complete other problem determination procedures, refer to directions for those procedures. When you have finished all appropriate procedures, refer to *Advanced Problem Determination for Communications* for additional information.

If you are unable to resolve your problem:

1. Complete the Problem Report Form (PRF) describing this problem.
2. Make copies of all related diskettes and any files listed in the preceding steps.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

Notes:

1. When completing the PRF, be sure to answer all questions under Part D: Host Computer and Network Information on page J-9 (see "How to Use a Problem Report Form" on page J-1 for additional information).
2. Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center.
3. Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user. If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.
4. Information that can help interpret data gathered using trace and dump services is provided in *Advanced Problem Determination for Communications*.

Chapter 4. When and How to Contact IBM

IBM can provide assistance to registered service coordinators for suspected program defects. A description of available services follows. Recommended and required preliminary preparations, along with procedures to use these services, are also provided in this chapter.

Types of Assistance IBM Provides

IBM provides the following types of assistance to *registered* service coordinators:

- **ServiceLine (U.S.A. only)**

As mentioned in the Statement of Service section of your Program License Agreement, IBM provides an electronic database and problem reporting facility called *ServiceLine*. *ServiceLine* is an online electronic database and problem reporting utility, which is available only to IBM registered service coordinators.

Additional information about this utility, including procedures for using it, are provided in "Using ServiceLine (U.S.A. Only)" on page 4-2.

Note: *ServiceLine* is only available to customers in the United States of America (U.S.A.). To determine the types of assistance that are available outside the U.S.A., contact your authorized IBM sales representative.

- **The IBM Support Center.**

The *IBM Support Center* helps you resolve program defects on supported software. IBM Support Center personnel are trained and experienced in resolving users' problems.

Refer to "Using the IBM Support Center" on page 4-4 for more information and related procedures.

Who Should Contact IBM

Only the person *registered with IBM* as the service coordinator is allowed to contact *ServiceLine* or the IBM Support Center.

When to Seek Help

These services are designed to be used as part of an overall problem determination process and should be used *only* after you have:

- Followed a problem path in Chapter 2, "Problem Determination: Getting Started" and were referred to this chapter for procedures to contact IBM
- or
- Responded to an error message as directed in the Appendixes A through H and the last instruction referred you to this chapter for procedures to contact IBM.

By following these procedures, you may resolve most problems without having to call IBM, thereby saving time and reducing work.

Why You Should Contact IBM

ServiceLine (U.S.A. only) or the IBM Support Center can help you resolve OS/2 Extended Edition program software problems. You can choose to use either or both services.

In addition to being able to choose the service that best meets the needs of your users, these services offer:

- Fast response to many problems

You have direct access to an IBM database or representative who can search the database to determine if problems similar to those experienced by users you support have already been reported and resolved.

- 24-hour service.

Both ServiceLine and the IBM Support Center are open for problem reporting 24 hours a day, 7 days a week (except, in the case of ServiceLine, when maintenance is required).

When you contact IBM, you will have direct access to the latest information or be in direct contact with IBM Support Center specialists.

Completing the Problem Report Form

In addition to completing specific problem determination procedures, you should complete a Problem Report Form (PRF) before contacting IBM. There are two reasons why this is recommended:

- To maintain a history of problems that you have been asked to investigate.

A related task is to make several copies of the blank Problem Report Form (PRF) contained in Appendix J, "Problem Report Form" for future use. Then, when a problem is reported, use a copy of the PRF to maintain a history and to report problems to IBM.

- To speed identification of the source of the problem.

The PRF has been designed so that, when it is properly completed, it will include information that corresponds to the IBM ServiceLine and IBM Support Center databases.

The items on the PRF are explained in Appendix J.

Using ServiceLine (U.S.A. Only)

As the registered IBM Operating System/2 Extended Edition Version 1.3 service coordinator, you were provided with a ServiceLine Access diskette. This diskette must be installed prior to using ServiceLine. Additional software requirements follow, along with information you should read *before* attempting to use this service.

Preliminary Considerations

ServiceLine is available only to customers in the United States of America (U.S.A.). To determine what types of assistance are available outside the U.S.A., contact your authorized IBM sales representative.

Software Requirements

To use ServiceLine, you need the following software:

- IBM ServiceLine Access diskette.
- IBM Disk Operating System 3.3 or IBM Operating System/2 Extended Edition Version 1.3 program.

The ServiceLine Access diskette can be run on either IBM DOS 3.3-based or OS/2 Extended Edition-based systems:

- For IBM DOS 3.3-based systems, the ServiceLine program can be run using the IBM ServiceLine Access diskette.
- For OS/2 Extended Edition-based systems, the ServiceLine program must be installed on a fixed disk.

For *both* IBM DOS 3.3-based and OS/2 Extended Edition-based systems, the directions provided in the READ.ME file on the ServiceLine Access diskette *must* be used to install the ServiceLine program.

Installation and Access

The ServiceLine Access diskette contains:

- The communications code necessary for accessing ServiceLine.
- A READ.ME text file of information about the ServiceLine program, including *installation procedures*.

You can view this file with any ASCII editor such as IBM Personal Editor, or the System Editor that comes with the OS/2 program, or by using the OS/2 TYPE command.

- A SERVLIN.REF file containing:
 - A copy of the IBM Customer Agreement
 - ServiceLine hardware and software configuration information
 - Details about the ServiceLine program's start-up parameters
 - ServiceLine problem determination procedures
 - Messages that may be issued by the ServiceLine program.

Hours of Operation

ServiceLine is open for problem reporting 24 hours a day, 7 days a week, except when maintenance is required.

How to Use ServiceLine

After installing the diskette and reviewing the reference file, you should be able to contact ServiceLine:

- If you installed the ServiceLine program on an OS/2 Extended Edition system, by selecting the option **Call ServiceLine** from the OS/2 Program Selector menu.
- If you installed the ServiceLine program on an IBM PC DOS system, by typing:
SERVLIN
at the DOS command line.

Have the Problem Report Form (PRF) that includes a description of the problem ready when you call ServiceLine. The questions on this form should be answered as completely as possible before you contact IBM (for additional information, see Appendix J).

The following description of the ServiceLine process illustrates how the PRF can be used:

- When you connect with ServiceLine, you are prompted for your *access code* (this is your *IBM customer number*) and your name. Spaces for this information are provided in Part A, question 1 of the PRF. If you do not know your access code, contact your authorized IBM marketing representative.
- After supplying your name and access code, you are connected to a menu-driven system that allows you to search the database. Use other information contained in the completed PRF as appropriate to aid in your search of the database.
- If you do not find the answer in the database, use the problem reporting facility to report a problem. The information on the PRF should also be used as the source of information you enter in the full page problem description section of the ServiceLine problem reporting facility.
- IBM researches the problem based upon the symptoms you report and try to find a solution or help you determine what caused the problem. An IBM Support Center representative returns your call within eight business hours and provides status information about efforts to resolve the problem.
- When the problem is resolved, write the resolution in the space provided on the PRF (Part F).

If you have problems contacting or using ServiceLine: Refer to the reference file (SERVLINE.REF) on the ServiceLine Access diskette. If you cannot resolve the problem, report this problem (along with your original reason for attempting to use ServiceLine) to the IBM Support Center using the procedures that follow in "Using the IBM Support Center."

Using the IBM Support Center

This section describes when you should contact the IBM Support Center, steps you should take before calling the IBM Support Center, and how the IBM Support Center works for you.

When to Contact the IBM Support Center

Remember, you should complete *both* of the following steps before calling IBM:

1. Use the flow charts (and answer the questions) provided in Chapter 2.
2. Complete the Problem Report Form provided in Appendix J.

When you contact the IBM Support Center, be prepared to provide the customer number that has been assigned to your installation. This number is unique to your installation and identifies you as an eligible user of the Support Center. Your customer number is normally given to you by your authorized IBM marketing representative.

In addition, you should gather and have at hand the necessary information, including a completed Problem Report Form, to enable the the IBM Support Center to assist you. When you are ready, contact the Support Center at:

(800) 237-5511

Note: This number should be used only by customers in the United States of America (U.S.A.). To determine the number to dial for purchases made outside the U.S.A., contact your authorized IBM sales representative.

The structure and operations of the IBM Support Center are described in “How the IBM Support Center Works for You.”

How the IBM Support Center Works for You

IBM Support Center procedures are described as follows.

Have the Problem Report Form (PRF) that includes a description of the problem ready when you call the IBM Support Center. The questions on this form should be answered as completely as possible before you contact IBM (for additional information, see “How to Use a Problem Report Form” on page J-1).

The following description of the IBM Support Center process illustrates how the PRF may be used:

- When you call, an IBM Support Center representative asks for the following information that can be recorded on the PRF:
 - Your customer number (Part A, question 1a on the PRF): This is used to verify authorization.
 - The program product on which you are reporting a problem: Operating System/2 Extended Edition.
 - A brief description of your problem: To begin the process of researching previous reports of this problem and determining which Support Center representative can best respond to your problem. (Use the information from Part A, question 5 on the PRF; if necessary, refer also to Part B, questions 1 or 2.)
- The IBM Support Center representative assigns a *Problem Management Record number* to the problem you reported.

Write this number in the space provided on the PRF (Part B, question 2).

- IBM researches the problem based upon the symptoms you report and tries to find a solution or help you determine what caused the problem. An IBM Support Center representative returns your call within eight business hours and provides status information about efforts to resolve the problem.
- If the problem is new and unique, IBM continues to research potential causes and actions. For purposes of IBM internal recording, this process creates an IBM report known as an *Authorized Program Analysis Report (APAR)*.

If an APAR is assigned, write this number in the space provided on the PRF (Part A, question 2).

If you are asked to forward any data to IBM to assist in problem analysis, the APAR number must be written on the mailing label (see “Sending Problem Determination Information to IBM” on page 4-6 and Appendix K, “Authorized Program Analysis Report (APAR) Mailing Labels” for related procedures).

- When a solution to the problem is identified, IBM closes the APAR and documents in writing what the problem cause and solution were.

Write the resolution in the space provided on the PRF (Part F).

Have the PRF available each time you are in contact with IBM regarding that problem.

If you have any questions: Your IBM Support Center representative may be able to answer questions about a reported problem or about the process described in this chapter.

Sending Problem Determination Information to IBM

Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center. If, upon contacting IBM using the procedures provided earlier in this chapter, an IBM Support Center representative requests that you send information to IBM, read the information in this chapter *before* sending the information.

The information in this section describes:

- Your right to privacy
- The types of problem determination information to send to IBM for various types of problems
- Mailing labels you should attach to packages mailed to IBM.

Understanding Your Right to Privacy

Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user. IBM is under no obligation of any kind with regard to information or material submitted by registered service coordinators. IBM reserves the right to publish or disclose such information to third parties.

Notes:

1. Send *only* copies of problem report information to IBM. Originals should be kept for your own records.
2. IBM does not return printouts, diskettes, or other problem determination data received from service coordinators.

A description of the types of problem determination information to send to IBM follows.

Types of Problem Determination Information to Send to IBM

All packages sent to the IBM should include *copies* of the following items:

- The completed Problem Report Form (PRF) describing the problem.

Note: The PRF must include the *Authorized Program Analysis Report (APAR) number* assigned to the problem by the IBM Support Center (see Part A, question 2 on the form).

In addition, the APAR number associated with the problem must be written on the copy of the mailing labels in Appendix K that you use to mail information

to IBM (see also “Mailing Labels for Problem Report Information” on page 4-9).

- The output of any diagnostic procedures (examination of log utilities, traces, and dumps) performed using the procedures provided in Chapter 3, “Using Diagnostic Tools.”
- For certain problems, it may also be appropriate to send diskettes with copies of files containing log, trace or dump information that may be related to the problem. The files you may need to send depends on the nature of the problem and the components being used.

For this reason, it is important to read and follow the proper path provided in Chapter 2, “Problem Determination: Getting Started” to ensure that IBM receives the correct data to identify the source of the problem.

Refer to the following information if you were directed to this section of the guide in Chapter 2 or in Appendixes A through H.

Component	Information You Should Send IBM
For <i>all</i> OS/2 Extended Edition components	<p>For <i>all</i> OS/2 Extended Edition problems, if you have been directed by IBM Support Center personnel to submit information to IBM, include copies of the following files:</p> <ul style="list-style-type: none"> • CONFIG.SYS • AUTOEXEC.BAT • STARTUP.CMD • FIXLOG.OS2.
LAN Requester	<p>For <i>all</i> LAN Requester or OS/2 LAN Server problems, submit the names and a <i>copy</i> on diskettes of the contents of the following files:</p> <ul style="list-style-type: none"> • Server audit trail • Error log for LAN Requester and Server • Configuration file (IBMLAN.INI) • <i>All</i> trace and dump files (if available) • Communications Manager configuration file. <p>Be sure to place a check mark (✓) next to LAN Requester on the PRF (Part A, question 3d).</p> <p>Be sure also to complete all Requester-Server questions on the PRF (see Part E: LAN Requester-Server Information on page J-10).</p>
Communications Manager	<p>For <i>all</i> communications problems, submit the following information:</p> <ul style="list-style-type: none"> • The names and a <i>copy</i> on diskettes of the contents of the following files: message log, error log, Communications Manager configuration files, all trace and dump files (if available), the EEINST.HST (installation history) file, and, for local area network problems or as directed, the ACSLAN.LOG file • The IND\$FILE host program version number (for file transfer problems or as directed) • Remote location information including the link type and associated hardware and software (include version numbers) • Hardware information including the user's machine type and the type of adapter being used. <p>Be sure to place a check mark (✓) next to Communications Manager on the PRF (Part A, question 3d).</p> <p>Be sure also to complete all questions about the type of communications link (see Part D: Host Computer and Network Information on page J-9).</p>
Database Manager	<p>For problems reported by or associated with a message, submit the following information:</p> <ul style="list-style-type: none"> • Specific information about the operations that were being performed when the problem occurred (provide this in your problem description on the PRF (Part B, question 2). • Formatted trace information (if available) • Structured Query Language Communications Area (SQLCA) contents (if available). <p>For abnormal termination (ABEND), submit the following:</p> <ul style="list-style-type: none"> • Descriptive information recorded on screen at time of failure • Formatted trace and stand-alone dump information (if available). <p>Be sure to place a check mark (✓) next to Database Manager on the PRF (Part A, question 3d).</p>
Base operating system	<p>Be sure to place a check mark (✓) next to Operating System on the PRF (Part A, question 3d).</p>

Mailing Labels for Problem Report Information

The *Authorized Program Analysis Report (APAR) mailing labels* provided in Appendix K must be used to mail problem determination information to IBM. IBM suggests that you:

- Make several copies of these labels; keep the original labels in a secure place for future use.
- Read the information in “How to Use an APAR Mailing Label” on page K-2 *before* using an APAR mailing label.

Notes:

1. The APAR number associated with the problem *must* be written on the copy of the mailing label that you use to mail information to IBM.
2. Information should be sent to IBM for analysis *only* upon direction from the IBM Support Center.
3. Only registered service coordinators are authorized to use these mailing labels. Access to them should be restricted accordingly.
4. Service coordinators in countries other than the U.S. should mail all requested information about a problem to the IBM Support Center designated for the country in which they registered with IBM. If necessary, a country’s designated IBM Support Center can forward information to the appropriate site in the United States.

Chapter 5. Installing Program Updates

When you report a problem to IBM, the problem resolution process is expanded to include the resources and expertise that IBM can provide. As described in Chapter 4, "When and How to Contact IBM," initial involvement of IBM in this process involves a search of a problem-reporting database to determine if similar problems have been reported.

Ultimately, the resolution of a problem may involve the development by IBM of a *Corrective Service* diskette. This diskette includes a *program update* designed to resolve the problem.

What is Corrective Service?

A Corrective Service diskette is developed and distributed by IBM to registered service coordinators who report a problem that:

- Resulted from an OS/2 Extended Edition program defect
- and
- Requires a program update to resolve.

Registered service coordinators serve as the focal point for Corrective Service diskettes; if a Corrective Service diskette is required to resolve a problem being experienced by a user you support, your role is to:

- Contact IBM and report the problem
- Receive the Corrective Service diskette from IBM
- Give the diskette to the end user or network or system administrator (the person responsible for OS/2 Extended Edition program installation) and provide installation assistance as necessary (directions for using a Corrective Service diskette follow; additional directions may be provided by IBM).

IBM provides the Corrective Service diskette.

Service coordinators are expected to know which users require the latest level Corrective Service diskette.

How to Install Program Updates

Corrective Service diskettes will include a README.TXT file that provides instructions for loading the diskette.

Printing Installation Directions

To print installation directions:

1. Insert the Corrective Service diskette in drive A.
2. Type the following at a command prompt:

```
COPY A:README.TXT LPT1:
```

The instructions for loading the Corrective Service diskette should print.

Note: If a user decides to use a program feature that was not installed when the OS/2 program was originally installed, the user should ensure the current level of IBM program code for that feature will be used. You can help by:

1. Determining the level of corrective service currently installed on a workstation, or by assisting a user to do so, as directed in the following text.
2. If necessary, instructing a user to load the current level of the IBM Corrective Service diskette *after* installing the feature.

Determining the Level of Corrective Service Currently Loaded on a Workstation

To verify the current level of corrective service installed in a user's OS/2 Extended Edition system, the following should be typed at an OS/2 command line on the user's system:

```
SYSLEVEL
```

The OS/2 Extended Edition version number is displayed along with information about the corrective service level installed on the user's system for each component and their associated features. An explanation of the items that are displayed follows:

EXTENDED EDITION 1.3 Identifies the OS/2 Extended Edition version number
Current CSD level: xxxxxxxx Identifies the current corrective service level
Prior CSD level: xxxxxxxx Identifies the prior corrective service level.

Several panels containing this type of information may be displayed. A sample of the information that may be displayed when a SYSLEVEL request is made is provided in Figure 5-1 on page 5-3.

Note: If no Corrective Service diskettes have been loaded before, the corrective service level is zero (0).

The following information can be printed by pressing the Print Screen (PrtSc) key.

```
C:\OS2\INSTALL\SYSLEVEL.OS2
IBM OS/2 Base Operating System
Extended Edition 1.30 Component ID: 566933601
Current CSD Level: WR00000
Prior CSD Level: WR00000

C:\TOOLKIT\SYSLEVEL.TLK
IBM OS/2 Programming Tools and Information
Extended Edition 1.30 Component ID: 560109301
Current CSD Level: XR00000
Prior CSD Level: XR00000

\IBMLAN\SYSLEVEL.REQ
IBM OS/2 LAN Requester
Extended Edition 1.30 Component ID: 560116401
Current CSD Level: WR00000
Prior CSD Level: WR00000

\IBMLAN\SYSLEVEL.SRV
IBM OS/2 LAN Server - Version 1.3
Extended Edition 1.30 Component ID: 560116201
Current CSD Level: WR00000
Prior CSD Level: WR00000

\CMLIB\SYSLEVEL.ACS
IBM OS/2 Communications Manager - Base
Extended Edition 1.30 Component ID: 566933602
Current CSD Level: WR00000
Prior CSD Level: WR00000

\SQLLIB\SYSLEVEL.SQL
IBM OS/2 Database Services
Extended Edition 1.30 Component ID: 566933603
Current CSD Level: WR00000
Prior CSD Level: WR00000

\SQLLIB\SYSLEVEL.QRW
IBM OS/2 Database Services
Extended Edition 1.30 Component ID: 566933603
Current CSD Level: WR00000
Prior CSD Level: WR00000

\SQLLIB\SYSLEVEL.PDR
IBM OS/2 Database Services
Extended Edition 1.30 Component ID: 566933603
Current CSD Level: WR00000
Prior CSD Level: WR00000

\MUGLIB\SYSLEVEL.MUG
IBM OS/2 User Profile Management
Extended Edition 1.30 Component ID: 566933604
Current CSD Level: WR00000
Prior CSD Level: WR00000
```

Figure 5-1. Sample of Current Level of Corrective Service Display Information

Appendix A. Base Operating System (SYS) Messages

Typically, base operating system users see error messages from the program they are currently working with, plus any of the underlying layers of programs. These error messages may mean that the user personally has done something inappropriate, or the program is in error. It is important to understand the message structure to help differentiate between these two occurrences.

Error messages are handled by various programs as follows:

- Applications

Error message identification varies with the application.

- Presentation Manager Toolkit editors

Error messages are identified by either the `SYSnnnn` or `PMTnnnn` prefix. The `nnnn` indicates a string of numeric digits. These messages are displayed in pop-up windows on the screen.

- OS/2 or DOS command prompt environment

Error messages are identified by the `SYSnnnn` prefix.

- Presentation Manager windowing environment.

Error messages are identified by the `PMVnnnn`, `PMSnnnn` or `SYSnnnn` prefix. All messages are displayed in a message box, the title of which is the Presentation Manager function that detected the error.

The following steps can assist you in problem determination:

1. If the message begins with the prefix `SYS`, help is available for these messages by typing `HELPnnnn`, where `nnnn` is the four-digit number following the `SYS` prefix. Follow the instructions presented to you.
2. For messages beginning with the prefix `PMT`, `PMV`, or `PMS`, help may be available by selecting `F1 = Help`.
3. If the message is displayed while in base operating system mode, but its prefix is not `SYS`, `PMT`, `PMV`, or `PMS`, the message is typically from some other application. Refer to the appropriate application's documentation for further instructions.
4. If the message implies that there is a hardware error, refer to "Determining if Your Hardware is Functioning Properly" on page 2-3.
5. Some base operating system error messages suggest that the user contact the service coordinator when certain error conditions occur. These error messages may describe to the user a course of action that might alleviate the problem before it is necessary to contact you. In other cases, the code has detected internal errors and the user is unable to correct the problem.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message).

If an abbreviation is provided for the originator, use the abbreviation on the PRF.

- The text of the message (only necessary if the message did not include an identification number or code, or if you are directed elsewhere to provide the text).

SYS Messages

SYS1915I The system detected an internal processing error at location *n*.

The system is stopped.

Message Cause: None provided to the user.

User Action: None provided to the user.

Service Coordinator Action: Request that the user restart the system and retry the operation. If the problem persists, record all the information on the screen, note the time and date of this message, and refer to Chapter 4, "When and How to Contact IBM."

SYS2065I The system is stopped.

Correct the preceding error and restart the system.

Message Cause: None provided to the user.

User Action: Respond as directed in the message.

Service Coordinator Action: If possible, determine the nature of the *preceding error* and assist the user to respond accordingly. Then request that the user restart the system and retry the operation.

If you cannot determine the nature of the problem, or if the problem persists after attempting to resolve it, note the time, date, and identification number of this message. Then refer to Chapter 4, "When and How to Contact IBM."

SYS Messages

Appendix B. ACS Messages That May Require Service Coordinator Intervention

This appendix contains a list of ACS messages generated or reported by Communications Manager that can be reported to you. Your response may involve additional investigation to attempt to identify the source of the problem, direct contact with IBM, or both.

When to Use This Appendix

The information and procedures in this appendix are provided as part of the overall problem determination process. To be most beneficial, this information should be used with the information and procedures provided in "Responding to Error Messages" on page 2-8.

Also, *before* referring to the information for a specific message, you should determine if:

- The user received an error message, which is described in the *User's Guide, Volume 2: Communications Manager and LAN Requester*. For additional information on that message, refer to that publication.
- A usage error caused the problem. If the user made an error while using the OS/2 Extended Edition program, and there is no reason to believe there is a program defect, refer the user to the *User's Guide, Volume 2: Communications Manager and LAN Requester*.
- The user received a message or message help that directed them to contact their service coordinator. If yes, use the procedures described in this appendix; otherwise, refer to Chapter 2.

An explanation of how the information is arranged in this appendix follows.

How to Use This Information

Only messages with an ACS prefix generated or reported by Communications Manager are discussed in this appendix. The messages are listed in numeric sequence based upon the numbers that follow the ACS prefix.

Variable parameters such as program names, adapter numbers, and file names are represented by one or more *x*'s.

The source of the message may also indicate the *source of a problem* or it may simply be *reporting a problem that originated elsewhere*, such as at the host computer or an application program. Use the text of the message, along with the information provided for each message, to determine which case applies.

Refer to the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *System Administrator's Guide*, or the online Helps for additional user's messages or additional information about a specific message.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message).

If an abbreviation is provided for the originator, use the abbreviation on the PRF.

- The text of the message (only necessary if the message did not include an identification number or code, or if you are directed elsewhere to provide the text).

Communications Manager (ACS) Messages

ACS0005W The following transaction program failed to deactivate: (program name).

Originator: Subsystem Management (SUBSYSM)

Message Cause: This transaction program was selected for deactivation, but this request could not be completed. Either the program was already deactivated or there is a problem with the SNA communications subsystem. Additional related messages may be logged.

User Action: Access Subsystem Management and check whether the program is still active. If the program is no longer active, the problem was resolved.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-4.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0032	00000001

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace.**

The following table contains the trace selection most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selection	System event 02
--------------------------------	-----------------

2. After completing this procedure, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0012W The session(s) for LU name xxxxxxxx, partner LU name xxxxxxxx, and mode name xxxxxxxx may have failed to deactivate.

Originator: Subsystem Management (SUBSYSM)

Message Cause: Some or all of the sessions were selected for deactivation, but this request could not be completed. Either the session was already deactivated or there is a problem with the SNA communications subsystem. Additional related messages may be logged.

User Action: Access Subsystem Management and check whether any session is still active. If no session is active, the problem was resolved.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-6.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0032	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace.**

The following table contains the trace selection most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selection	System event 02
--------------------------------	-----------------

2. After completing this procedure read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0014W ALS for xxxxxxxxxxxxxxxx DLC failed to deactivate.

Originator: Subsystem Management (SUBSYSM)

Message Cause: This adjacent link station (ALS) could not be deactivated as requested. Either the ALS was already deactivated or there is a problem with the SNA communications subsystem. Additional related messages may be logged.

User Action: Access Subsystem Management and check whether the ALS is still active. If it is no longer active, the problem was resolved.

If other messages indicate an SNA communications subsystem problem, take the corrective action recommended in the Helps for those messages. Then, if possible and necessary, retry this operation.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-8.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0032	00000004

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace.**

The following table contains the trace selection most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selection	System event 02
--------------------------------	-----------------

2. After completing this procedure read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0099C A logical terminal is not configured in the 3270 terminal emulation profile for *xxxx* DLC.

Originator: Configuration (CONFIG)

Message Cause: Connection data was configured for the specified DLC, but a logical terminal that uses that DLC in the 3270 terminal emulation profile was not configured.

User Action: Configure a logical terminal for the specified DLC in the 3270 terminal emulation profile. Retry the operation.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: None

ACS0106C APPC has ended due to an internal error.

Originator: SNA Communications Services (APPC)

Message Cause: An internal error caused APPC to stop.

User Action: Stop all transaction programs. Then exit and restart APPC.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-11.

- **Examine resource allocation.**

One possible cause of this problem is not enough memory. Advise the user to reduce the number of active application programs, and then to stop and restart APPC. If this does not resolve the problem, continue as directed in the following steps.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
FFFF	000000xx

where *xx* is the APPC error type.

If this information does not help you identify the source of the problem, investigate the problem further as follows.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	APPC API, SDLC Data, IBMPCNET Data, IBMTRNET Data, and system events 02, 03, and 04
---------------------------------	-------------------------------------------------------------------------------------

Related Dump Selections	Components 02, 03, 04, 05, 9, 10, 11, and 12
--------------------------------	----------------------------------------------

2. After completing this procedure:
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0107W A system error occurred while running APPC: request code *xxxx*, return code *xxxx*.

Originator: SNA Communications Services (APPC)

Message Cause: An unexpected system error occurred.

User Action: Note the request code, the time, date, identification number, and return code from this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-13.

- **Review information associated with the request code and return code contained in the message.**

Refer to the *Programming Tools and Information*. If this information does not lead to a resolution of the problem, continue as follows.

- **Review information associated with error log entries.**

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0022	0000 <i>xxxx</i>
FFFF	000000 <i>xx</i>

where *xxxx* is the request code.

where *xx* is the APPC error type.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	APPC API, SDLC Data, IBMPCNET Data, IBMTRNET Data, and system events 02, 03, and 04
---------------------------------	-------------------------------------------------------------------------------------

Related Dump Selections	Components 02 and 05
--------------------------------	----------------------

2. After completing this procedure:
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

**ACS0108W A system resource limitation has been reached while running APPC:
request code *xxxx*, return code *xxxx*.**

Originator: SNA Communications Services (APPC)

Message Cause: A system allocation error has occurred.

User Action: Free memory by ending other application programs that are not being used. Ensure that swapping is enabled in CONFIG.SYS. Then restart the system.

If the problem persists, note the request code and return code, the time, date, and identification number of this message, and the names of other active programs; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-15.

- **Review information associated with the request code and return code contained in the message.**

Refer to the *Programming Tools and Information*. If this information does not lead to a resolution of the problem, continue as follows.

- **Examine resource allocation.**

One possible cause of this problem is not enough memory. Advise the user to reduce the number of active application programs, and then to stop and restart APPC. If this does not resolve the problem, continue as directed in the following steps.

- **Review information associated with error log entries.**

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0022	0000 <i>xxxx</i>
FFFF	000000 <i>xx</i>

where *xxxx* is the request code.

where *xx* is the APPC error type.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	APPC API, SDLC Data, IBMPCNET Data, IBMTRNET Data, and system events 02, 03, and 04
Related Dump Selections	Components 02 and 05

2. After completing this procedure:

- Refer to *Advanced Problem Determination for Communications* for explanatory information.

or

- If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0112C Critical file xxxxxxxx was not found or was modified or damaged: error type xxxx.

Originator: SNA Communications Services (APPC)

Message Cause: APPC initiation failed while attempting to load a dynamic link routine. Either the file was not found in the LIBPATH specified in the CONFIG.SYS file, or the file has been modified or damaged.

User Action: Restore this file using a backup copy. If you do not have a backup copy, reinstall Communications Manager.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS0116C LAN support cannot be started due to a hardware error on IBM
Token-Ring adapter *nn*.**

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter initialization failed for one of the following reasons:

- The hardware diagnostics detected a failure.
- A shared RAM failure occurred.
- An initialization timeout occurred.

User Action: Exit Communications Manager.

Refer to the *IBM Guide to Operations* to run adapter diagnostics. Correct any related problems, then retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0119C An SDLC link failure occurred on adapter *m*.

Originator: Synchronous Data Link Control (SDLC) DLC

Message Cause: The SDLC communications link is no longer active. (A non-protocol error originating at the remote node disconnected the communications link.)

User Action: Exit and restart Communications Manager and all related programs.

If the problem persists, note the time, date, and identification number of this message; then contact either your service coordinator or personnel at the remote node.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-19.

- **Use Subsystem Management to deactivate the DLC on this adapter.**

Then activate the DLC again and retry the operation. If the problem persists, continue as follows.

- **Check modem status and related settings in associated configuration files.**

One possible cause of this problem is a mistake in a configuration file. Refer to documentation for the modems being used and ensure that the settings are correct for the type of desired usage. Contact the personnel at the remote node and ensure that their configuration matches the user’s configuration.

If this does not resolve the problem, continue as follows.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data, system events 01, 05, and 11
Related Dump Selection	Component 10

2. After completing this procedure:
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

**ACS0120C A communications protocol error caused an SDLC link failure on adapter
nn.**

Originator: Synchronous Data Link Control (SDLC) DLC

Message Cause: The SDLC communications link is no longer active. (A communications protocol error originating at the remote node disconnected the communications link.)

User Action: Exit and restart Communications Manager and all related programs.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If at any point you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-21.

- **Use Subsystem Management to deactivate the DLC on this adapter.**

Then activate the DLC again and retry the operation. If the problem persists, continue as follows.

- **Check the configuration, setup, and software at the remote node.**

One possible cause of this protocol problem is a conflict between the configurations of the local and remote nodes. If the local node is communicating with a host computer, the local node must be configured as a secondary link station and the link-related parameters must be compatible; if both the local and remote nodes are configured as a primary link station, errors occur.

Also, the NRZI option needs to match that of the remote node.

If this does not resolve the problem, continue as follows.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data, system events 01, 05, and 11
Related Dump Selection	Component 10

2. After completing this procedure:

- Refer to *Advanced Problem Determination for Communications* for explanatory information.
- or
- If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0126W SRPI has ended due to a system error.

Originator: Server-Requester Programming Interface (SRPI)

Message Cause: A system error occurred while using SRPI. The configuration file may be damaged.

User Action: Stop all applications using SRPI. Stop and restart the 3270 terminal emulation sessions. Then restart any applications using SRPI.

If the problem persists, restore the configuration file using a backup diskette. If you do not have a backup diskette, contact your system administrator.

If after restoring the configuration file the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action:

- **Review information associated with error log entries.**

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0022	0000xxxx
0030	00000006

where xxxx is the request code.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0130C A system error occurred during initialization. Exit this panel and restart Communications Manager. If the problem persists, note the identification number of this message and the following error information and contact your service coordinator.

Error Code: xxxxyyyyyyyyzzzcccc

Originator: Main Task (MAINTASK)

Message Cause: This error may have resulted from a problem with either the base operating system or Communications Manager. The following conditions may cause this error message:

- Memory Allocation error
- DOSGETMSG error
- Disk I/O error
- Error creating a thread
- Error while initializing message and error log
- Error initializing Communications Manager functions.

User Action: Respond as directed in the message.

Note: Because Communications Manager ended, an online help for the user is not available for this message. The user sees only the words of the preceding message.

However, help information is available for related message log entries.

Service Coordinator Action:

- Refer to *Advanced Problem Determination for Communications*.

Note: Error type is 10 hexadecimal bytes that describes the specific error. A related entry would have been made to the error log if Communications Manager had been able to initialize or was already active.

Error Code: xxxxyyyyyyyyzzzcccc

Type	Subtype	Return Code	Reserved Code
xxxx	yyyyyyyy	zzzz	cccc

or

- If you or your application programming personnel do not understand this information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).

ACS Messages

3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0132C A system error has ended the Communications Manager. Contact your service coordinator.

Originator: Main Task (MAINTASK)

Message Cause: The specific cause of this error should be described in related entries in the message and error logs. This message is not logged.

User Action: Respond as directed in the message.

Note: Because Communications Manager ended, an online help for the user is not available for this message. The user sees only the words of the message above.

However, help information is available for related message log entries.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-26 that follows.

- **Determine if the user responded as directed in help information associated with related messages.**

If not, refer the user to the message log to take any required action. Then the user should try to restart Communications Manager.

If the user reviewed associated messages, but the recommended actions did not resolve the problem, continue as follows.

- **Obtain a copy of the user’s message log and error log files.**

Check the message log for related messages. If the information contained in related Help panels does not lead to a resolution of the problem, note the time, date, and identification numbers of the messages.

- **Review the information provided by the VIEWLOG command.**

Ensure that all of the necessary features are installed. If they are not installed, install Communications Manager again.

- **Ensure that the configuration file has not been damaged.**

Contact the user’s system administrator for assistance. If the configuration file has not been damaged and is verified as correct, continue as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23.

Error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu. Refer to information for error types and subtypes in *Advanced Problem Determination for Communications*.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0133W The selected feature failed to start due to a system error. Message(s) may be logged. Try to start the feature again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Originator: Main Task (MAINTASK)

Message Cause: The specific cause of this error should be described in related entries in the message and error logs. This message is not logged.

User Action: Refer to the message log and take any required action. Try to restart the feature.

If the problem persists, note the time, date, identification number of this message, and the feature that failed to start. (This can be determined from the Display Status panel on the Communications Manager action bar and noting the features whose status is stopped.) Then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-28 that follows.

- **Determine if the user responded as directed in help information associated with related messages.**

If not, refer the user to the message log and take any required action. Then try to restart the feature.

If you or the user reviewed associated messages, but the recommended actions did not resolve the problem, note the following information on the Problem Report Form before proceeding:

- The time, date, identification number of this message.
- The *Originator* of this message as specified (write the abbreviation only on the PRF).
- The feature that failed to start. (This can be determined from the Display Status panel on the Communications Manager Main Menu action bar. Note the features whose status is STOPPED.)

Then continue as follows.

- **Ensure that the configuration file was not damaged.**

Contact the user’s system administrator for assistance. If the configuration file was damaged and is verified as correct, continue as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23.

Error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu. Refer to information for error types and subtypes in *Advanced Problem Determination for Communications*.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0134W One or more features failed to start during auto-start due to a system error. Message(s) may be logged. Try to start the feature(s) again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Originator: Main Task (MAINTASK)

Message Cause: The specific cause of this error should be described in related entries in the message and error logs.

Note: This message is not logged, and there is no help information available for this message; the user sees *only* the previous message (and possibly related messages that may have helps in the message log).

User Action: Users should review logged messages and respond as directed by help information for related messages. Users should restart their systems and retry starting the features that failed. If the problem persists, the user should note the time, date, and identification number of this message and contact you.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” that follows.

- **Determine if the user has responded as directed in help information associated with related messages.**

If the user has, but the recommended actions did not resolve the problem, continue as follows.

- **Ensure that the configuration file was not damaged.**

Contact the user’s system administrator for assistance. If the configuration file has not been damaged and is verified as correct, continue as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23.

Error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu. Refer to information for error types and subtypes in *Advanced Problem Determination for Communications*.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).

ACS Messages

- c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0148C The function in progress ended due to a system error. Message(s) may be logged. Try to start the function again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Originator: Main Task (MAINTASK)

Message Cause: The specific cause of this error should be described in related entries in the message and error logs. This message is not logged.

User Action: Refer to the message log and take any required action. Try to restart the function.

If the problem persists, note the time, date, and identification number of this message, and the function that stopped. (This can be determined from the Display Status panel on the Communications Manager action bar and noting the functions whose status is stopped.) Then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-32.

- **Determine if the user responded as directed in help information associated with related messages.**

If the user *has not* done so, refer him to the message log and take any required action. Then try to restart the feature.

If you or the user reviewed associated messages, but the recommended actions did not help you resolve the problem, note the following information on the Problem Report Form before proceeding:

- The time, date, identification number of this message.
- The *Originator* of this message as specified (write the abbreviation only on the PRF).
- The feature that failed to start. (This can be determined from the Display Status panel on the Communications Manager Main Menu action bar. Note the functions whose status is STOPPED.)

Then continue as follows.

- **Ensure that the configuration file was not damaged.**

Contact the user’s system administrator for assistance. If the configuration file was not damaged and is verified as correct, continue as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information about error log entries is provided in *Advanced Problem Determination for Communications*.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0152C The Communications Manager Installation program ended due to a system error.

Note the identification number of this message and the following error information and contact your service coordinator.

Return Code: xxxx
Operation Code: yyyyyyyy
Location Number: zzzz

Originator: Installation (INSTALL)

Message Cause: Any system error will end installation of Communications Manager.

User Action: Respond as directed in the message.

Note: Because Communications Manager is not yet installed at the time this message occurs:

- An online help for the user is not available for this message. The user sees only the words of the preceding message.
- There will be no related entries in the Communications Manager message log or error log.

Service Coordinator Action: Refer to *Advanced Problem Determination for Communications*.

The operation code displayed with the message is the subtype for error log type 0022.

If information in that book does not lead to a resolution of the problem, continue as follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS Messages

ACS0170C Verification of the configuration file is complete.

**Errors were found. No features can be started using this configuration file.
Select Messages from the Communications Manager Main Menu.**

Originator: Verify and Convert (VERIFY)

Message Cause: Verify was selected for the configuration file and the operation completed with inconsistencies. No features can be started.

User Action: Select **Enter** to leave this message and see the message log for details.

Service Coordinator Action: None

ACS0176W A storage trace record is not valid. Part of the trace may have been copied to the target diskette.

Originator: Problem Determination (RAS)

Message Cause: An incorrect record was encountered during the copy of storage trace data to file, thereby causing all future data to be incorrect. The copy was ended and the partial file was closed.

User Action: Retry the operation. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Note: An online help for the user is not available for this message. The user sees only the words of the preceding message.

Service Coordinator Action: Complete the Problem Report Form describing this problem and contact IBM for assistance. Under "Problem Description" on the Problem Report Form, include the following information:

- The names of the trace selections that were active at the time of the failure
- The operations that were performed or tried while the traces were active
- Any other pertinent information; a discussion of the types of information that may be relevant is provided in "Describing a Software Problem" on page 2-5.

Then refer to the following procedures.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0177C A system error ended a Communications Manager function.

Originator: Problem Determination (RAS)

Message Cause: A system error ended a Communications Manager function.

User Action: If possible, retry the functions that failed.

If this is not possible, or if the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” that follows.

- **Determine if the user responded as directed in help information associated with related messages.**

If the user *has not* done so, refer the user to the message log to take any required action. Then the user should try to restart Communications Manager.

If the user reviewed associated messages, but the recommended actions did not resolve the problem, continue as follows.

- **Obtain a copy of the user’s message log and error log files.**

Check the message log for related messages. If the information contained in related Help panels does not lead to a resolution of the problem, note the time, date, and identification number of the messages.

If problem persists, continue as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23.

Error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu. Refer to information for error types and subtypes in *Advanced Problem Determination for Communications*.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.

2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0179W Unable to start transaction program (filename).

Originator: SNA Communications Manager Services (APPC)

Message Cause: An incoming ALLOCATE indicated that this transaction program could not be started because of one of the following problems:

- An incorrect transaction program filespec has been specified in the configuration file.
- The transaction program file was incorrectly created or is damaged.

User Action: Ensure that you have a working copy of the transaction program.

Ensure that the transaction program file name is correctly specified in the configuration file. If the file is not in the specified path, copy it to that path, or change the configuration for this transaction program by specifying the desired path and file name.

If the configuration file is changed to update the transaction program file name, attach manager must be stopped and restarted to use the new file.

If the problem persists, note the file name and error type, in addition to the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Note: The incoming ALLOCATE that initiated the request to load the transaction program was rejected. It must be sent again by the partner node in order to use the updated transaction program file name.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to "Before you call or mail information to IBM" on page B-39.

- **Determine if the user responded as directed in help information associated with related messages.**

If the user has, and the problem persists, continue as follows.

- **Review information associated with error log entries.**

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0020	000000xx
0022	0000xxxx

where xx is the APPC error type.

where xxxx is the request code.

If this information does not help you identify the source of the problem, obtain a copy of the transaction program and its components (including the files with the .EXE and .DEF extensions, program source files, and, if appropriate the program MAKE file). Then refer to the information that follows.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0183C An SDLC failure has occurred on adapter *m*.

Originator: Synchronous Data Link Control (SDLC) DLC

Message Cause: A problem at the local node has disconnected the communications link and caused the SDLC adapter to be closed. The problem may be a communication protocol or software error, or a problem with the SDLC adapter or modem. Additional related messages may be logged.

User Action: Check and secure all cable connections between your computer and the modem. Then access Subsystem Management and activate the data link control for this adapter.

You can refer to the *IBM Guide to Operations* that came with the adapter to determine why it is not working properly.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator or personnel at the remote node.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: This message indicates that any links existing before the problem occurred have been disconnected and the adapter has closed.

There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-41.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	APPC API, SDLC Data, system events 01, 05, and 11
Related Dump Selection	Component 10

2. After completing this procedure:

- Refer to *Advanced Problem Determination for Communications* for explanatory information.
- or
- If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0198C A critical error occurred. ASCII terminal emulation has ended.

Originator: ASCII Terminal Emulation (ASCIEMU)

Message Cause: An error was detected with the interface between ASCII terminal emulation and the Asynchronous Communications Device Interface.

User Action: Try to restart the session. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-43.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	0000xx00

where *xx* is the ACDI request code.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Perform a trace.**

The following table contains the trace selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	ACDI API and system event 06
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2. After completing this procedure:
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0203C ASCII terminal emulation ended due to a system error.

Originator: ASCII Terminal Emulation (ASCIEMU)

Message Cause: A system error was detected by ASCII terminal emulation.

User Action: Restart ASCII terminal emulation. If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0022	0000xxxx

where *xxxx* is the request code.

If this information does not help you identify the source of the problem, refer to "Before you call or mail information to IBM" that follows.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0292C The connection for SDLC adapter *nn* was not established.**Originator:** Synchronous Data Link Control (SDLC) DLC**Message Cause:** The communication link was not established within the data set ready timeout period.

This may have happened because the telephone number was either not correct or not dialed in time, a busy signal was received, a critical computer line was down, or a configuration error occurred.

User Action: Ensure that the correct telephone number was dialed. If the number was correct, but more time is needed to dial, reconfigure to increase the data set ready timeout period, or contact your system administrator.

If the connection is not established, ensure that the communication lines are operating. Then restart the SDLC link for this adapter and redial the telephone number when prompted.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-46.

- **Check modem status and related settings in associated configuration files.**

One possible cause of this problem is a mistake in a configuration file. Refer to documentation for the modems being used and ensure that settings are correct for the type of desired usage. Contact the personnel at the remote node and ensure that their configuration matches the user’s configuration.

If this does not resolve the problem, continue as follows.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	APPC API, SDLC Data, and system events 01 and 11
Related Dump Selection	Component 10

2. After completing this procedure:

- Refer to *Advanced Problem Determination for Communications* for explanatory information.
- or
- If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0316C LAN support cannot be started due to a lobe cable problem on IBM Token-Ring adapter *nn*.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a problem on your local lobe between the adapter and the multistation access unit (MSAU).

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the (MSAU). Correct any related problems and retry the operation.

If there are no related problems, refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems, then retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0317C LAN support has stopped for IBM Token-Ring adapter *m* due to an adapter error.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a hardware or microcode error.

User Action: Exit Communications Manager.

Refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems, then retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

**ACS0318C A remote request has caused your adapter to be removed from the LAN.
Adapter *nn* has been closed.**

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: An action has been taken which caused the LAN adapter to be removed. All links on this adapter are lost.

User Action: Note the time, date and identification number of this message; then contact your service coordinator.

Network Administrator: Exit Communications Manager.

Determine the reason for the remove command. Correct the problem and retry the operation.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0320C LAN support cannot be started for IBM Token-Ring adapter *nn* due to a critical network error.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a beaconing condition on the ring while trying to enter into the network.

User Action: Exit Communications Manager.

Refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems, then retry the operation.

Note: This problem may be caused by your adapter speed being different than the speed at which the LAN is running.

ACSLAN.LOG will log the speed that your adapter is set to run.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding beaconing can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0322C IBM Token-Ring LAN access was denied for adapter *nn* as a result of a remove command.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: While attempting to insert into the ring, a command was received forcing this adapter to remove from the ring.

User Action: Note the time, date, and identification number of this message; then contact your Network Administrator. Associated error log entries may have been logged at the same time and date as this message.

Network Administrator: Determine the reason for the remove command. Correct the problem and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding beaconing can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0323C Adapter *nn* cannot access the IBM Token-Ring LAN due to an error during open: type: *nn*.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: While trying to open the IBM Token-Ring Network adapter, an error was detected. This error may have been caused by a signal loss, the insertion timer expiring, a ring failure, or a parameter request.

User Action: If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0324C LAN support has stopped for IBM Token-Ring adapter *nn* due to a lobe cable problem.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a lobe wire fault.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and retry the operation.

If there are no related problems, refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0325C LAN support has stopped for IBM Token-Ring adapter *nn* due to a hardware error.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected that it has a hardware problem. This caused the adapter to close and remove itself from the LAN.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and retry the operation.

If there are no related problems, refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0326C LAN support has stopped for IBM Token-Ring adapter *nn* due to the receipt of a remove command.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: A command was received forcing this adapter to remove itself from the ring.

User Action: Note the time, date, and identification number of this message; then contact your Network Administrator. Associated error log entries may have been logged at the same time and date as this message.

Network Administrator: Determine the reason for the remove command. Correct the problem and retry the operation.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0327C LAN support has stopped for IBM Token-Ring adapter *nn* due to a critical network error.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: A problem with the IBM Token-Ring Network caused beaconing to continue beyond the time allotted for Automatic Recovery Process, indicating that the ring cannot recover without physical intervention. Because the failing adapter could not be isolated, all adapters on the ring have been closed.

User Action: Note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding beaconing can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0328C LAN support cannot be started due to a hardware error on the IBM PC Network adapter *nn*.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The IBM PC Network adapter failed to detect its own carrier signal while attempting to enter into the network.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the IBM PC Network LAN. For baseband, check that the wrap plug has not been removed. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0330C IBM PC Network access was denied for adapter *nn* as a result of a remove command.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: While attempting to insert into the LAN, a command was received forcing this adapter to remove itself from the LAN.

User Action: Note the time, date, and identification number of this message; then contact your Network Administrator. Associated error log entries may have been logged at the same time and date as this message.

Network Administrator: Determine the reason for the remove command. Correct the problem and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding beaconing can be found in the *IBM Token-Ring Network Problem Determination Guide*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0331C Adapter *nn* cannot access the IBM PC Network due to an error during open: type *hh*.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The IBM PC Network adapter detected an error while trying to insert into the network.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the IBM PC Network LAN. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0332C A hardware error occurred on IBM PC Network nm.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The IBM PC Network adapter detected a hardware error with your adapter.

User Action: Exit Communications Manager.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0333C LAN support has stopped for IBM PC Network adapter *nn* due to a critical network error.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: A problem on the IBM PC Network caused a continuous carrier condition beyond the allotted time for Automatic Recovery Process, indicating that the network cannot recover without physical intervention.

User Action: If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding the continuous carrier condition can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0334C An error has occurred on the IBM PC Network. Adapter *nn* has been closed.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The IBM PC Network adapter failed to detect a carrier signal on the LAN. As a result, LAN communications has ended.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the LAN. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0335C LAN support has stopped for IBM PC Network adapter *nn* due to a hardware error.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: A continuous carrier condition occurred on the IBM PC Network and the problem has been isolated to this adapter. This condition has continued beyond the allotted time indicating that physical intervention is required.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the IBM PC Network LAN. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding the continuous carrier condition may be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0372W 3270 terminal emulation detected an error while using the 3270 DFT device driver.

Originator: 3270 Terminal Emulation (3270EM)

Message Cause: The DFTDD.SYS file has been damaged.

User Action: Exit Communications Manager. Copy the DFTDD.SYS file from a backup diskette and retry. If you do not have a backup, obtain a copy from the user's system administrator. Then restart Communications Manager and retry the operation.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Contact the user's system administrator to determine if the DFTDD.SYS file on the user's system is valid. If it is not, obtain a copy from the system administrator and restore it on the user's system. If, after restoring the DFTDD.SYS file, the problem persists, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: DFTDD.SYS, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0392C Adapter address in IEEE LAN 802.2 and Destination address in partner LU xxxxxxxx for adapter *nn* conflict.

Originator: 3270 Terminal Emulation (3270EM)

Message Cause: The user configured the same address in both the referenced Partner LU and the LAN IEEE 802.2 profiles for the specified adapter.

User Action: Change one of the profiles and reverify before starting Communications Manager.

Associated error log entries may have been logged at the same time and date as this message.

If the problem persists, note the time, date, originator, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0416C A system error has been detected by a Communications Manager function.

Originator: Problem Determination (RAS)

Message Cause: Communications Manager detected a system error.

User Action: Note the time, date, originator, and identification number of this message; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-67.

- **Obtain a copy of the user’s message log and error log files.**

Check the message log for related messages. If the information contained in related Help panels does not lead to a resolution of the problem, note the time, date, identification number of the messages.

- **Review the information provided by the VIEWLOG command.**

Ensure that all of the necessary features are installed. If they are not installed, install Communications Manager again.

- **Review information associated with error log entries.**

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002
0022	0000xxxx

where *xxxx* is the request code.

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Refer to “Describing a Software Problem” on page 2-5.**
- **Write the information you gather and any other pertinent information on the Problem Report Form under “Problem Description” or other appropriate headings as directed.**

If, after following the path in Chapter 2 for software problems, the source of the problem and a solution are still not apparent, refer to the following procedures.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0447W The following file was not found: xxxxxxxx.PAN

Originator: EZVU Mount Panel

Message Cause: A panel is missing. Either configuration was selected and is not installed, or a Communications Manager panel is missing.

User Action: If the configuration function is not installed, the missing file is RCDAADY.PAN. To access the panel, do the following:

- Exit Communications Manager, if necessary.
- Reinstall Communications Manager.

Note: When reinstalling Communications Manager, *do not* run CMDELCFG.CMD. This command file *deletes* the configuration function from your fixed disk.

If the file name is not RCDAADY.PAN, or if the configuration function is installed, do the following:

- Exit Communications Manager, if necessary.
- Erase all .LIB files in the Communications Manager directory (c: cmlib).
- Reinstall Communications Manager.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS0448C A timeout on LAN adapter *nm* occurred for remote address
xxxxxxxxxxxx.**

Originator: LAN Data Link Control (IBMPCNET, IBMTRNET)

Message Cause: A link was lost because the remote station is not responding. A protocol timer on the reporting adapter has expired, causing the remote station to be polled. The remote station does not respond to the poll.

User Action: Note the time, date, and identification number of this message, then contact the personnel at the remote station or report this problem to your LAN personnel.

LAN Personnel Action:

The remote station personnel may wish to:

1. Check and secure all cable connections between the remote station and the LAN. Correct any related problems, then retry the operation.
2. If there were no related problems, check the power to the remote station. Correct any related problems, then retry the operation.
3. If there were no related problems, or the problem still persists, for IBM Token-Ring adapters, refer to the *Guide to Operations* to run adapter diagnostics. Correct any related problems, then retry the operation.

For IBM PC Network adapters, contact your service coordinator.

4. If there were no related problems, or the problem still persists, contact your system administrator.

System Administrator Action:

Access the LAN feature profiles:

1. Increase the Group 1 response timer (T1) in the IEEE 802.2 profile for the type of adapter installed, or decrease the Receive window count in the DLC profiles under SNA feature profiles.
2. Run **Verify**.
3. After **Verify** has successfully completed, exit Communications Manager and retry the operation.

Note: Before altering timer values, please read the corresponding adapter card *Technical Reference* for a complete understanding of the implications.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding the Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0455C A system error occurred. LAN processing has ended.

Originator: LAN Device Driver (IBMPCNET, IBMTRNET)

Message Cause: An error occurred during an OS/2 call to a device driver system service (device help routine).

User Action:

1. Retry the operation.
2. If the problem persists, note the identification number of this message and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0456C Adapter initialization failed.

Originator: LAN Device Driver (IBMPCNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, adapter diagnostics failed.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0457C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPCNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, ROM (ROS) diagnostics failed.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *IBM PC Network Hardware Maintenance and Service Manual* to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0458C Adapter initialization failed.

Originator: LAN Device Driver (IBMPCNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, shared RAM diagnostics failed.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0459C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPCNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, processor instruction testing on this adapter failed.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problems still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0460C Adapter initialization failed.

Originator: LAN Device Driver (IBMPCNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, the adapter encountered a processor interrupt failure.

User Action:

- For IBM Token-Ring Network adapters:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, note the identification number of this message and then contact your service coordinator.
- For IBM PC Network adapters, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0461C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPCNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, shared RAM interface register diagnostics on this adapter failed.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0462C Adapter initialization failed.

Originator: LAN Device Driver (IBMPCNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, protocol handler diagnostics on this adapter failed.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0463C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPCNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, the programmable timer for the PC failed.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0464C Adapter initialization failed.

Originator: LAN Device Driver (IBMPNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, writing to shared RAM failed.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0465C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, the shared RAM write-only area on this adapter indicated an error.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0466C Adapter initialization failed.

Originator: LAN Device Driver (IBMPNET, IBMTRNET)

Message Cause: While preparing your adapter for network communications, the shared RAM write-only area on this adapter failed to indicate an error.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0467C Adapter initialization failed.**Originator:** LAN Device Driver (IBMPCNET, IBMTRNET)**Message Cause:** While preparing your adapter for network communications, a timer expired on this adapter.**User Action:**

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.
- For an IBM PC Network adapter, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0474C Adapter initialization failed.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: While preparing your adapter for network communications, an unexpected bring-up code during adapter initialization occurred.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0475C An open error occurred.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The adapter failed to open due to a process timeout.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems, or the problem still persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Analyze the network traffic to determine the possible cause of the process timeout. If the problem persists, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF)
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0476C An open error occurred.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: While preparing your adapter for network communications, the adapter failed to open.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems, or the problem still persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF)
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0478C A system error occurred. LAN processing has ended.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: An unexpected error occurred on an OS/2 call in the dynamic link routine.

User Action:

1. Retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG file and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0479C Both LAN adapters are set to primary. Reset one to secondary.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: Two LAN adapters are installed in your workstation, and both are set to primary.

User Action: Note the identification number of this message and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0480C Both LAN adapters are set to secondary. Reset one to primary.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: Two LAN adapters are installed in your workstation, and both are set to secondary.

User Action: Note the identification number of this message and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0482C An open error occurred during the lobe media test phase.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a problem on your local lobe between the adapter and the multistation access unit (MSAU).

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems, or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0483C An open error occurred during the physical insertion phase.**Originator:** LAN Device Driver (IBMTRNET)**Message Cause:** The IBM Token-Ring Network adapter encountered one of the following open errors while trying to insert into the LAN:

- Ring failure
- Ring beaconing
- Timeout.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, then print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0484C An open error occurred during the address verification phase.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered one of the following open errors during the address verification phase of the adapter open process:

- Signal loss
- Timeout
- Ring failure
- Ring beaconing
- Duplicate node
- Remove command received.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0485C An open error occurred during the roll call poll.**Originator:** LAN Device Driver (IBMTRNET)**Message Cause:** The IBM Token-Ring Network adapter encountered one of the following open errors during the roll call poll phase of the adapter open process:

- Signal loss
- Timeout
- Ring failure
- Ring beaconing
- Remove command received.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0486C An open error occurred during the request parameter phase.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered one of the following open errors during the request parameter phase of the adapter open process:

- Signal loss
- Timeout
- Ring failure
- Ring beaconing
- Parameter request
- Remove command received.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0487C The open error type is Function failure.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered a lobe media Function failure while trying to open the adapter.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0488C The open error type is Signal loss.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered a signal loss error while trying to open the adapter.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, then print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0489C The open error type is Wire fault.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered a wire fault while trying to open the adapter.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0490C The open error type is Frequency error.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered a frequency error while trying to open the adapter.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG, then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0491C The open error type is Timeout.**Originator:** LAN Device Driver (IBMTRNET)**Message Cause:** The IBM Token-Ring Network adapter encountered an insertion timer expiration while trying to open the adapter. This indicates that the ring may be congested, experiencing a high bit-error rate or losing an abnormally high number of tokens or frames.**User Action:**

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0492C The open error type is Ring failure.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter encountered a ring failure while trying to open the adapter.

User Action:

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG, then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0493C The open error type is Ring beaconing.**Originator:** LAN Device Driver (IBMTRNET)**Message Cause:** The IBM Token-Ring Network adapter has either detected a monitor contention failure or received a beacon frame from the ring while trying to open the adapter.**User Action:**

1. Check and secure all cable connections between your adapter and the multistation access unit (MSAU). Correct any related problems and then retry the operation.
2. If there were no related problems, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG, then contact your service coordinator.

Note: This problem may be caused by your adapter speed (4Mps/16Mps) being different from the speed at which the LAN is running.**Service Coordinator Action:** Refer to the following procedure.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0495C The open error type is **Parameter request**.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected a parameter request error while trying to open the adapter.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0497C The open error type is IMPL force received.

Originator: LAN Device Driver (IBMTRNET)

Message Cause: The IBM Token-Ring Network adapter detected received an IMPL force while trying to open the adapter.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0498C The open error type is No carrier.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: While preparing your adapter for network communications, the IBM PC Network adapter failed to detect its own carrier signal.

User Action:

1. Check and secure all cable connections between your adapter and the IBM PC Network LAN. For baseband, check that the wrap plug has not been removed. Correct any related problems and restart your system.
2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG file and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0499C The open error type is Continuous carrier.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: While preparing your adapter for network communications, the IBM PC Network adapter detected a continuous carrier condition on the network.

User Action:

1. Check and secure all cable connections between your adapter and the IBM PC Network LAN. Correct any related problems and restart your system.
2. If there were no related problems or the problem still persists, print or save the ACSLAN.LOG file and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace anddump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0500C The open error type is Unable to transmit.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: The IBM PC Network adapter failed to transmit a frame due to network congestion.

User Action:

1. Check and secure all cable connections between your adapter and the IBM PC Network LAN. For baseband, check that the wrap plug has not been removed. Correct any related problems and then retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0501C An IBM PC Network error has occurred: xxxxxxxx. Note the error type and identification number of this message.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: While preparing your adapter for network communications, an error of the type displayed occurred on your IBM PC Network adapter.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *IBM PC Network Hardware Maintenance and Service Manual* to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or if the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0502C An IBM PC Network adapter is not properly installed.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: An IBM PC Network adapter has not been installed or has not been installed properly.

User Action:

1. Retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Check to see that the adapter is seated properly and that the switch settings are correct.

If the problem persists, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0508C The PCROS/MMIO switches are set incorrectly. Reset the switch on one of the adapters.

Originator: LAN Device Driver (IBMPNET)

Message Cause: Adapters 1 and 0 have a memory mapped input output (MMIO) conflict with each other.

User Action: Note the identification number of this message and then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0510W Retry. If necessary, run the diagnostics for the IBM PC Network adapter. If the problem persists, contact your service coordinator.

Originator: LAN Device Driver (IBMPCNET)

Message Cause: While preparing your adapter for network communications, an error occurred that may be recoverable.

User Action:

1. Retry the operation.
2. If the problem persists, refer to the *IBM PC Network Hardware Maintenance and Service Manual* to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If there were no related problems or if the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0518W Contact your LAN personnel to have the network serviced.

Originator: LAN Device Driver (IBMPNET)

Message Cause: While preparing your adapter for network communications, an error occurred that may be recoverable.

User Action:

1. Refer to the corresponding error messages logged along with this message.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0540C Either the LAN adapter is not installed or the LAN device driver is not loaded. NETBIOS has ended.

Originator: LAN Device Driver (NETBIOS)

Message Cause: Either the adapter is not installed or the device driver for ETHERAND, IBM PC Network, or IBM Token-Ring Network is not loaded.

User Action:

Note the identification number of this message and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0541C A system error occurred. NETBIOS processing has ended.

Originator: LAN Device Driver (NETBIOS)

Message Cause: An OS/2 error was encountered during the NETBIOS load process.

User Action:

1. Retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0561C A LAN frame from local adapter *nn* caused a link failure at remote address xxxxxxxxxxxx.

Originator: LAN Data Link Control (IBMPCNET, IBMTRNET)

Message Cause: A frame that is either unsupported or not valid was sent by this adapter resulting in the remote station returning a frame reject.

User Action:

- For an IBM Token-Ring Network adapter:
 1. Refer to the *Guide to Operations* that was shipped with your LAN adapter to run adapter diagnostics. Correct any related problems and then retry the operation.
 2. If there were no related problems or the problem still persists, contact your service coordinator.
- For an IBM PC Network adapter, contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS0562C Remote address xxxxxxxxxxxx failed to connect with local LAN adapter
m.**

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: The expected response was not received from the remote address.

User Action: Note the time, date, and identification number of this message, then contact the personnel at the remote station or report this problem to your LAN personnel.

LAN Personnel Action:

The remote station personnel may wish to:

1. Check and secure all cable connections between the remote station and the LAN. Correct any related problems, then retry the operation.
2. If there were no related problems, check the power to the remote station. Correct any related problems, then retry the operation.
3. If there were no related problems or the problem still persists, for IBM Token-Ring adapters, refer to the *IBM Guide to Operations* that was shipped with the adapter to run adapter diagnostics. Correct any related problems, then retry the operation.
4. If there were no related problems or the problem still persists, contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0565C Incoming LAN data was lost on adapter *mn*. The adapter has been closed.

Originator: LAN Data Link Control (IBMTRNET)

Message Cause: A receive overrun failure occurred because no buffers are available in the buffer pool. The LAN was unable to receive incoming data so the adapter was closed.

User Action: Note the identification number of this message and then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0588W Communications Manager installed successfully. However, you may need to add Communications Manager to the Group – Main window.

Originator: Installation (INSTALL)

Message Cause: An error was encountered while trying to add Communications Manager to the Group – Main window or Communications Manager was already there.

User Action:

1. Communications Manager runs successfully from an OS/2 Full Screen command prompt but is not on the Presentation Manager Group – Main window.
2. Use the Add function in the Group – Main window to manually add Communications Manager.
3. If Communications Manager cannot be added manually to the list, contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0608W A System Network Architecture (SNA) error occurred in 5250 Work Station Feature session xx. Session xx stopped.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: A hardware or protocol error was reported from SNA.

User Action: Start the 5250 Work Station Feature again. If the problem persists, contact your service coordinator.

Service Coordinator Action: Check the Communications Manager system error log for an error log entry.

Ensure that all physical connections between the host system and the workstation are secure and that the host system is operating. Look for messages and logs on the host system that will help identify the cause and recovery action.

If the problem persists, note the time, date, and identification number of this message, and refer to the following procedure:

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS0619W Session limit negotiation failed on partner LU xxxxxxxx, mode
xxxxxxxx: CNOS return code xxxx xxxxxxxx.**

Originator: SNA Communications Services (APPC)

Message Cause: The following conditions may cause this error message:

- Your partner changed the session limit.
- Your partner is not configured for parallel sessions.
- The communications line or the partner you are trying to communicate with is not active.

User Action: For return codes:

- 0002-00000151 - No action is required since your partner has already raised the session limits.
- 0003-00000004 and 0003-00000005 - Ensure that both the communications line and your partner are active. Then ensure that the partner LU destination address is correct in your configuration file. Your partner LU profile should also be configured for parallel sessions. Then stop and restart APPC, or activate an APPC session for the indicated mode name.
- 0018-00000156 - No action is required on your part since your partner has set the Maximum negotiable session limit to zero. Your partner should specify a higher session limit.
- 0018-00000157 - Ensure that both partners are configured with appropriate LU names and mode names. Then stop and restart APPC, and restart your transaction program.
- 0018-0000015F - No action is required on your part; APPC is currently processing a request by your partner to change the session limit.

If the problem persists, note the partner LU name, mode, and error type, as well as the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: Check the Communications Manager system error log for an error log entry.

If the problem persists, note the time, date, and identification number of this message, and refer to the following procedure:

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0622W An internal error occurred in 5250 Work Station Feature. 5250 Work Station Feature has ended.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An internal error occurred in the 5250 Work Station Feature.

User Action: Start the 5250 Work Station Feature again. If the problem persists, take the following actions:

1. Check the error log for information about the specific failure.
2. Restart the system and try the operation again.
3. If the problem still persists, contact your service coordinator.

Service Coordinator Action:

1. Check the error log for information about the specific failure.
2. Verify that the configuration file is correct.
3. Request that the user restart the system and try the operation again. If the problem persists, record all of the information on the screen, note the time, date, and identification number of this message, and contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0623W An internal error occurred in 5250 Work Station Feature. 5250 Work Station Feature has ended.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An internal error occurred in the 5250 Work Station Feature. An internal trace of control blocks and data was taken.

User Action: Start the 5250 Work Station Feature again. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. Copy the storage trace to a file.
2. Refer to the following procedure:

Before you call or mail information to IBM:

- a. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
- b. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0624W The *xxxxxxxxxxxxxxxx* logical links/virtual circuits DLC type failed to deactivate.

Originator: X.25 Data Link Control (DLC)

Message Cause: The logical link or virtual circuit failed to deactivate.

User Action: Display either the logical links or virtual circuits. Return to Subsystem Management and retry the operation. If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page B-122.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0032	00000004

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace.**

The following table contains the trace selection most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selection	System event 02
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2. After completing this procedure read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0627W An internal application connected to 5250 Work Station Feature has failed. The application has ended.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An internal error occurred in the 5250 Work Station Feature.

User Action: Try to start the 5250 Work Station Feature again. If the application will not start, stop the 5250 Work Station Feature. If the problem persists, contact your service coordinator.

Service Coordinator Action: Contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0628W An internal error occurred in 5250 Work Station Feature. 5250 Work Station Feature has ended.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An internal OS/2 operation has caused the 5250 Work Station Feature to end.

User Action: Try to start the 5250 Work Station Feature session again. If the problem persists, contact your service coordinator.

Service Coordinator Action: Contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0647W The AS/400 virtual device xxxxxxxx is already in use. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The virtual device name specified is being used by another job on the host system.

User Action:

1. Change the 5250 Work Station Feature session profile to use a different workstation ID. The virtual device name is specified in your terminal or printer profile as the "Workstation ID." If the ID for your session is currently blank, choose a unique ID.
2. Try to start the session again.
3. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: If the 5250 Work Station Feature session profile is correct, check the host system configuration for the virtual device. Also look for messages and logs on the host system that will help identify the cause and recovery action.

ACS0648W The AS/400 virtual device xxxxxxxx is not connected to a virtual controller. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The virtual device name specified is not configured correctly for the 5250 Work Station Feature, or the device already exists on the host system but is not connected to a virtual control unit.

User Action:

1. Change the 5250 Work Station Feature session profile to use a different workstation ID. The virtual device name is specified in your terminal or printer profile as the "Workstation ID." If the ID for your session is currently blank, choose a unique ID.
2. Try to start the session again.
3. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: If the 5250 Work Station Feature session profile is correct, check the host system configuration for the virtual device. Also look for messages and logs on the host system that will help identify the cause and recovery action.

ACS0652W xxxxxxxx is not a virtual workstation controller. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The virtual controller specified is not recognized as a virtual controller on the host system.

User Action: Note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the appropriate virtual controller on the AS/400 exists and is varied on.
2. Check for messages and logs on the AS/400 that will help identify the cause and recovery action.
3. If the recovery actions do not help you solve the problem, contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0653W A communication failure occurred. Session xx did not start.

Originator: 5250 Work Station Feature (WSF)

Message Cause: A communication failure occurred during session start.

User Action: Try to start the 5250 Work Station Feature session again. If the problem persists, contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help identify the cause and recovery action. If the recovery actions do not help you solve the problem, contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0655W The AS/400 virtual device xxxxxxxx is not authorized for use. Session xx did not start.

Originator: 5250 Work Station Feature (WSF)

Message Cause: You are not authorized to the workstation ID (virtual device name) specified in your terminal or printer session profile.

User Action: Contact your service coordinator.

Service Coordinator Action: Obtain proper authority from the host system security officer or from the object owner. Otherwise, change the 5250 session profile to use an authorized workstation ID.

ACS0656W The 5250 Work Station Feature session x at partner LU alias name xxxxxxxx was canceled.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: A host system operator canceled the AS/400 system job that was starting the 5250 Work Station Feature.

User Action: Contact your service coordinator.

Service Coordinator Action: Contact the system operator to find out why the job was cancelled. Have the user start the 5250 Work Station Feature session again after the error has been resolved.

ACS0659W The AS/400 message queue xxxxxxxx was not found. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The message queue specified for printer operational messages could not be found on the host system to which your session is attaching.

User Action: Contact your service coordinator.

Service Coordinator Action: Change the message queue for the printer session, specifying the name of an existing queue. Check the AS/400 configuration to find the names of existing message queues to which the user is authorized.

ACS0660W An AS/400 virtual workstation controller is not available at partner LU alias name xxxxxxxx. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The host system does not have a virtual workstation controller available for your 5250 Work Station Feature session.

User Action: Try the operation again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help you identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0661W The AS/400 virtual device xxxxxxxx could not be created. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The host system was unable to create the virtual device during the 5250 Work Station Feature session start.

User Action: Try the operation again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help you identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0662W The AS/400 virtual device xxxxxxxx could not be changed. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The AS/400 was unable to change the virtual device to match the device description.

User Action: Try the operation again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help you identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0663W The AS/400 virtual device xxxxxxxx could not be varied on. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The host system could not vary on the virtual device for the 5250 Work Station Feature after creating or changing it.

User Action: Try the operation again. If the problem persists, note the time, date, and identification number of this message. Then contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help you identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0664W Unexpected return code occurred while starting the 5250 Work Station Feature. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The host system was unable to prepare the virtual device requested by the 5250 Work Station Feature.

User Action: Contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help you identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0665C A hardware error occurred on a CSMA/CD Network adapter xx.

Originator: LAN Data Link Control (ETHERAND or PCNET)

Message Cause: The CSMA/CD Network adapter detected a hardware error.

User Action: Exit Communications Manager.

Refer to the Guide to Operations that was shipped with your adapter to run adapter diagnostics. Correct any related problems, then retry the operation.

If the problem persists, or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0669W The user ID or password for partner LU alias name xxxxxxxx is not correct. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The user ID or password is not a valid host system user ID or password.

User Action: The user ID and password that is passed to the host system by the 5250 Work Station Feature is the one you entered for the access control system. The user ID and password must be defined on the host system for you to communicate with the host system or conversation security must be turned off at the host system. Contact your service coordinator.

Service Coordinator Action: Start the 5250 Work Station Feature sessions with a different user ID and password or define the current user ID and password on the host system.

ACS0676W Double-Byte Character Set (DBCS) preferred system is not supported. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: A display session attempted to start a DBCS-preferred system. 5250 Work Station Feature is not enabled for support of double-byte characters.

User Action: Contact your service coordinator.

Service Coordinator Action: Configure the session again to connect to non-DBCS preferred systems.

ACS0678W A Data Link Control (DLC) error occurred while starting a session.

Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An error occurred while trying to start a session.

User Action: Contact your service coordinator.

Service Coordinator Action: Run the diagnostic tests for the IBM Token-Ring, twinaxial, SDLC, or X.25 adapter in use. If successful, start the 5250 Work Station Feature again. If the problem persists, note the time, date, and identification number of this message and refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0685W An internal timeout occurred in 5250 Work Station Feature while waiting for an application program to respond.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An application program connected to the 5250 Work Station Feature has caused a timeout. The 5250 Work Station Feature continues to operate, but service to the application by the 5250 Work Station Feature has ended.

User Action: Stop and restart the failing application. If the problem persists, contact your service coordinator.

Service Coordinator Action: Contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0686W Vital Product Data Manager experienced a system error and is now inactive.

Originator: Vital Product Data Manager (VPDMGR)

Message Cause: VP requested a system service and the request failed.

User Action: If Vital Product Data will be requested from this workstation by the host, then take the following actions:

1. Restart the system.
2. If the problem persists, record the time stamp and component ID entry in the Communications Manager Error Log and report this information to the service coordinator.

System operations will continue normally, with the exception that Vital Product Data will not be reported to the host.

Otherwise, this error will not affect the operation of the system and may be ignored.

Service Coordinator Action: If the problem persists, the Communications Manager Error Log entry identifies the specific nature of the system problem and should be reported to your IBM service representative. Contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS0700C The message *nnnnn* could not be not found. A critical file is missing or is damaged. Reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The file containing the specified message was not found. Either the file is missing or damaged, or a software error occurred.

User Action: Restore all Communications Manager .MSG files from backup or erase them and reinstall Communications Manager. Then retry the operation.

If the problem persists, note the identification number (imbedded in the error message) of the message that could not be found, the name of the field where the cursor was located when help was requested, and the time, date, and identification number of the message that reported the problem. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - The identification number (imbedded in the error message that the user reported) of the message that could not be found
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0701C The file for message *nnmmn* could not be found or is damaged. Restore .MSG files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The file containing the specified message was not found. Either the file is missing or damaged, or a software error occurred.

User Action: Restore all Communications Manager .MSG files from backup or erase them and reinstall Communications Manager. Then retry the operation.

If the problem persists, note the identification number (imbedded in the error message) of the message that could not be found, the name of the field where the cursor was located when help was requested, and the time, date, and identification number of the message that reported the problem. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - The identification number (imbedded in the error message that the user reported) of the message that could not be found
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0716W An error occurred reading this Help file. Restore .LIB files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The text file for the help panel could not be read.

User Action: Restore all Communications Manager .LIB files from backup or erase them and reinstall Communications Manager. Then retry the operation.

If the problem persists, note the panel name, the field where the cursor was located when help was requested, and record the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0717C A system error occurred. Restore .CNF files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The originator of this message has run out of stack space.

User Action: Restore ACS.CNF and ACSINST.CNF from backup or erase them and reinstall Communications Manager. Then retry the operation. If a backup is not available, contact your system administrator.

If, after restoring these files, the problem persists, note the time, date, and message number; contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0718W An error occurred using this Help file. Restore .LIB files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The text file for the help panel could not be closed.

User Action: Note the message number, the panel name, and the description of the field where the cursor was located when help was requested. Restore all Communications Manager .LIB files from backup or erase them and reinstall Communications Manager. Retry the operation. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0721W An error occurred while reading this Help file. Restore .LIB files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The text file for the help panel could not be opened.

User Action: Use the Full Function mode associated with the Communications Manager installation program to reinstall the Help files. Then retry the operation.

If the problem persists, note the panel name and the field where the cursor was located when help was requested, and record the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0722W An internal formatting error occurred. Note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An internal error occurred while displaying a panel.

User Action: Note the name of the panel where the error occurred and current contents of the fields on that panel, along with the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0724W An error occurred freeing memory. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An error occurred freeing memory. This can occur when ending Communications Manager or when returning back from a key or index Help.

User Action: Retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0725W An error occurred freeing memory. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An error occurred freeing memory.

User Action: Retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0726C A system error occurred. Restore .CNF files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: The panel stack is not large enough. The stack size is controlled by the .CNF file. This failure could be caused by a software error or by an error in the .CNF file.

User Action: Restore ACS.CNF and ACSINST.CNF from backup or erase them and reinstall Communications Manager. Then retry the operation. If a backup is not available, contact your system administrator.

If, after restoring these files, the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0731C A system error occurred. Restore .CNF files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An internal error occurred or the .CNF file was damaged.

User Action: Restore ACS.CNF and ACSINST.CNF from backup or erase them and reinstall Communications Manager. Then retry the operation. If a backup is not available, contact your system administrator.

If, after restoring these files, the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0732C A system error occurred. Note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An internal command failed.

User Action: Note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0733C A system error occurred. Note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: An internal command failed.

User Action: Note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0735C A system error occurred. Restore .CNF files from a backup copy or reinstall Communications Manager. If the problem persists, note the message number and contact your service coordinator.

Originator: Dialog Services Error Handler (EZERROR)

Message Cause: A .CNF or .LIB has been damaged.

User Action: Restore ACS.CNF, ACSINST.CNF and all .LIB files from a backup or erase them and reinstall Communications Manager. Then retry the operation. If a backup is not available, contact your system administrator.

If, after restoring these files, the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0760N The operation has ended due to an error.

Originator: Copy profiles, Write profile names, Upgrade (Copyprof, Upgrade, Writname)

Message Cause: The operation has ended due to a system error.

User Action: Restart Communications Manager and retry the operation. If the operation still ends, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Operations used (COPY SELECTED, COPY ALL, and so on)
 - If COPY SELECTED was used, indicate profile type
 - Time, date, and identification number of message.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0774W An X.25 application program issued X25Listen for a routing table entry name which was already in use.

Originator: X.25 API (X25API)

Message Cause: There is an X.25 resource conflict between the failing program and another concurrently executing X.25 application program. The failing program requested to be notified of X.25 calls for which another program was already “listening.”

User Action: Examine your procedures for running the combination of X.25 programs that caused the problem.

If you cannot resolve the problem, note the time, date, and identification number of this message, and the names of other X.25 application programs executing; then contact your service coordinator.

Service Coordinator Action:

1. The user is running more than one X.25 application requesting the same routing table entry name. Examine the user’s procedures and resolve any conflicts.
2. Ensure that the X.25 application programs are not in error and are configured correctly. Refer to the installation and configuration information (if any) supplied with the application programs.

If necessary, report the problem to the supplier of the application program.

3. Review information associated with error log entries.

The error log contains an alert entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

This error log entry contains the name of the routing table entry over which there is a conflict.

Type	Subtype
0046	00000007

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Event 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part C: “Communications Problems.”
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0776W The X.25 Network has sent diagnostic information for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: A diagnostic packet indicating a protocol violation on the part of the local DTE or diagnostic information about the X.25 network was received by the DTE.

User Action:

1. Ensure that any local X.25 switching or other equipment is properly installed and configured.
2. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the local X.25 equipment or X.25 network, or the network provider.
3. Rerun or restart any X.25 programs that failed because of this error.
4. If the problem persists, note the time, date, and identification number of this message, and contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and has not been corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0776W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred
 - Details of any local X.25 switching or other equipment
 - Details of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0777W The X.25 API detected a time-out packet level failure for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: An X.25 time limit expired prior to receipt of one of the following packets:

- Restart confirmation
- Call connected or Call accepted
- Reset confirmation
- Clear confirmation.

All retry attempts have failed, resulting in an X.25 packet level failure.

User Action:

1. Ensure that any local X.25 switching or other equipment is properly installed and configured.
2. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the local X.25 equipment or X.25 network, or the network provider.
3. Restart the link.
4. If the problem persists, note the time, date, and identification number of this message, and contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and has not been corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0777W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Note details of any local X.25 switching or other equipment and of the X.25 network subscription.
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0778W The X.25 API detected a packet level failure for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause:

1. A clear packet has resulted in one virtual circuit being cleared or reset.
2. A reset packet has resulted in one virtual circuit being reset.
3. A restart packet has resulted in all virtual circuits being restarted.

User Action:

1. Ensure that any local X.25 switching or other equipment is properly installed and configured.
2. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the local X.25 equipment or X.25 network, or the network provider.
3. Rerun or restart any X.25 application programs that failed because of the error.
4. If the problem persists, note the time, date, and identification number of this message, and contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
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Related Dump Selections	Component 15, select adapter name given in message ACS0778W
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Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Note details of any local X.25 switching or other equipment and of the X.25 network subscription.
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0779W The X.25 API detected a Link Access Protocol Balanced (LAPB) failure for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: A communication protocol error indicated by a frame reject response originating at the local or remote DCE has caused the link to disconnect.

User Action:

1. Ensure that any local X.25 switching or other equipment is properly installed and configured.
2. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the local X.25 equipment or X.25 network, or the network provider.
3. Restart the link.
4. If the problem persists, note the time, date, and identification number of this message, and contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0779W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Note details of any local X.25 switching or other equipment and of the X.25 network subscription.
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0780C The X.25 API detected a link failure for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: One of the following X.25 link error conditions has been detected by the X.25 adapter:

- A command frame has been sent N2 times without receiving the appropriate response (where N2 is the frame transmission attempt count as specified in the X.25 Link Profile panel)
- An unexpected disconnect frame has been received
- A request to initialize the link has been denied.

User Action:

1. Ensure that any local switching or other equipment is properly installed and configured.
2. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the local X.25 equipment or X.25 network, or the network provider.
3. Restart the link.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscription. Correct any errors.
3. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0780W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

5. After completing this procedure, refer to the following before calling IBM.***Before you call or mail information to IBM:***

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred
 - Details of any local X.25 switching network or other equipment and also of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0781C The X.25 API detected an error on the local X.21 leased line facility for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: An error relating to an X.21 attachment caused the X.25 link to be disconnected (if connected), or there was a failure to establish a call because the local DCE was not ready.

User Action:

1. Ensure that the X.21 cable is attached correctly; if not, correct and retry the operation.
2. If the X.21 network attachment cable is installed and functioning properly, verify that the adapter is installed correctly.
3. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun Verify.
4. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
5. Ensure that the X.25 adapters are installed and functioning properly.
Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter cards.
6. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the X.25 network or the network provider.
7. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0781W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

3. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred
 - Details of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0782W The X.25 API detected an error on the local Transpac VX32 modem for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: An error relating to the Transpac VX32 modem caused the X.25 link to disconnect (if connected), or a failure to successfully establish a call.

User Action:

1. Ensure that the modem is powered on; if not, correct and retry.
2. Ensure that the modem cable is attached properly; if not, correct and retry.
3. If the modem is failing to establish a call, verify the X.25 subscription number and link parameters. Then retry.
4. If the modem and cable are installed and functioning properly, verify that the adapter is installed properly. Then retry.
5. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file.
6. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
7. Ensure that the X.25 adapters are installed and functioning properly.
Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter cards.
8. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the X.25 network, or the network provider.
9. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0782W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

3. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred
 - Details of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0783W The X.25 API detected an error on the local Transpac VX32 modem for link xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: An error relating to the Transpac VX32 modem caused the X.25 link to disconnect (if connected), or a failure to successfully establish a call.

User Action:

1. Ensure that the modem is powered on and is functioning properly. If not, then correct and retry.
2. Ensure that the modem cable is attached properly. The correct cable matches the type of X.25 link connection and modem. If not, then correct and retry.
3. If the modem and cable are installed and functioning properly, verify that the adapter is installed properly. Then retry.
4. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun Verify.
5. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
6. Ensure that the X.25 adapters are installed and functioning properly.

Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter cards.

7. Ensure that the X.25 network to which the link is connected is functional. If necessary, contact the person responsible for the X.25 network, or the network provider.
8. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0783W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

3. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred
 - Details of any local X.25 switching network or other equipment and also of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0786C The X.25 API detected an error on adapter xxxxxxxx in slot xx.

Originator: X.25 API (X25API)

Message Cause: The X.25 adapter failed due to an unknown hardware or software error, or the information in the configuration file relating to the adapter or a link on the adapter is incorrect.

The adapter cannot be reused until Communications Manager is restarted.

User Action:

1. Ensure that the X.25 adapters are installed and functioning properly.
 Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter cards.
2. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. Verify that there are no programs other than the X.25 API accessing the X.25 adapter directly or through the device driver.
4. **Review information associated with error log entries.**

The error log contains entries with some of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002
0046	0000000A

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

5. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, X.25 Frame, Events 19, 23, 24.
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Related Dump Selections	Component 15, select adapter name given in message ACS0786C
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Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

6. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0787C The X.25 API detected a configuration error on adapter xxxxxxxx in slot xx.

Originator: X.25 API (X25API)

Message Cause: The information in the configuration file relating to the X.25 adapter or to a link on the X.25 adapter is incorrect.

The adapter cannot be reused until the Communications Manager is restarted.

User Action:

1. Verify that the configuration information is correct; if not, then correct and retry.
2. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun Verify and Convert.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. Verify that there are no programs other than the X.25 API accessing the X.25 adapter directly or through the device driver.
4. **Review information associated with error log entries.**

The error log contains entries with some of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002
0046	0000000A

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

5. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	Events 23, 24.
Related Dump Selections	Component 15, select adapter name given in message ACS0787C

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

6. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0788C The X.25 API detected a software error on adapter xxxxxxxx in slot xx.

Originator: X.25 API (X25API)

Message Cause: The X.25 adapter failed due to a software error.

You can continue to use other adapters, but the failing adapter cannot be used until Communications Manager is restarted.

User Action: If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains entries with some of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002
0046	0000000A

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

2. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, X.25 Frame, Events 19, 23, 24.
Related Dump Selections	Component 15, select adapter name given in message ACS0788C

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:

a. Include in the description of the problem (Part B, question 2):

- Any message identification numbers that are displayed on the screen
- The name of the panel and a description of the field where the cursor was located when Help was requested

- The names of any other programs that were active when the problem occurred.
- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used and all trace and dump files (if available).
 3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0789C The X.25 API cannot initialize due to insufficient system resources.

Originator: X.25 API (X25API)

Message Cause: The OS/2 program was unable to provide the necessary resources to support the X.25 API (threads, memory storage, or semaphore limits reached). Other concurrently active programs may be using too many OS/2 program resources, or there may not be enough threads defined in CONFIG.SYS.

User Action:

1. Ensure that CONFIG.SYS defines enough threads. If not, correct and retry.
2. Reduce the number of concurrently active programs and retry.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: This problem can be caused by one of the following:

- Insufficient memory
- Too many system semaphores or threads being used by other concurrent programs.

1. Review information associated with error log entries.

The error log contains an alert with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

2. Perform a trace.

The following table contains the trace selections most likely to help identify the source of the problem.

Related Trace Selections	Events 23, 24.
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Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

3. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0790C The X.25 API has ended due to a software program error.

Originator: X.25 API (X25API)

Message Cause: The X.25 API detected an internal program error and has ended.

User Action: If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun Verify and Convert.
2. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors.
3. Verify that there are no programs other than the X.25 API accessing the X.25 adapter directly or through the device driver.

a. Review information associated with error log entries.

The error log contains entries with some of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002
0046	00000008
0046	0000000D
0046	0000000E

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

b. Perform a trace.

The following table contains the trace selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	X.25 API, X.25 Frame, Events 19, 23, 24.
---------------------------------	------------------------------------------

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0791C An error occurred accessing the X.25 adapter device driver.

Originator: X.25 API (X25API)

Message Cause: The X.25 API device driver gave an error return code. The X.25 API has ended.

User Action:

1. Ensure that the device driver is loaded correctly.
2. Ensure that the X.25 adapter is installed and functioning properly.
Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter card.
3. If the device driver is loading correctly and the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that there are no programs except the X.25 API accessing the X.25 adapter directly or through the device driver.
2. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem, refer to the directions that follow.

3. **Perform a trace.**

The following table contains the trace selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	X.25 API, X.25 Frame, Events 19, 23, 24.
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After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0792C The X.25 API detected a hardware error on adapter xxxxxxxx in slot xx.

Originator: X.25 API (X25API)

Message Cause: The X.25 adapter failed due to a hardware error. You can continue to use other adapters, but the failing adapter cannot be used until Communications Manager is restarted.

User Action:

1. Ensure that the X.25 adapters are installed and functioning properly.
Refer to the installation instructions and the procedures for hardware check-out of the X.25 adapter card.
2. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, X.25 Frame, Events 19, 23, 24.
Related Dump Selections	Component 15, select adapter name given in message ACS0792C

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0793W The X.25 application cannot initiate because the maximum number of active applications has been reached.

Originator: X.25 API (X25API)

Message Cause: There were already 40 X.25 applications active when the failing program tried to start X.25 communications.

User Action:

Reduce the number of X.25 application programs running concurrently.

If there were less than 40 applications active, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000005

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Events 19, 23, 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested

- The names of any other programs that were active when the problem occurred.
- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
 3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0794W The X.25 application has ended without issuing X25AppTerm.

Originator: X.25 API (X25API)

Message Cause: An X.25 application program ended normally or abnormally without issuing the **X25AppTerm** verb to the X.25 API.

User Action: Follow the problem determination procedures supplied with the failing application program.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the failing program was installed and configured correctly. Refer to the installation and configuration information (if any) supplied with the application program. If necessary, report the problem to the supplier of the application program.
2. **Review information associated with error log entries.**

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000003

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

3. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	X.25 API, Events 19, 23, 24.
Related Dump Selections	Component 15, no adapter selections.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS0795W An X.25 application issued X25PVCAAlloc for Permanent Virtual Circuit
xxxxxxx, which is already in use.**

Originator: X.25 API (X25API)

Message Cause: There is an X.25 resource conflict between the failing program and another concurrently executing X.25 application program. The failing program tried to allocate a Permanent Virtual Circuit which another program had already allocated.

User Action: Examine your procedures for running the combination of X.25 programs that caused the problem.

If you cannot resolve the problem, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's procedures and resolve any conflicts.
2. Ensure that the failing program was installed and configured correctly. Refer to the installation and configuration information (if any) supplied with the application program. If necessary, report the problem to the supplier of the application program.
3. **Review information associated with error log entries.**

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000007

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

4. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41.

Related Trace Selections	X.25 API, Events 19, 23, 24.
Related Dump Selections	Component 15, no adapter selections.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0796C Twinaxial DLC received a Terminate Link command unexpectedly.

Originator: Twinaxial DLC (TWINAX)

Message Cause: The Twinaxial DLC received a host request to terminate the link.

User Action:

1. Determine if the host system is active.
2. If active, restart the link.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's actions.
2. See the related entry in the error log for additional information.
3. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0797C An unexpected software program error occurred in the Twinaxial DLC.

Originator: Twinaxial DLC (TWINAX)

Message Cause: An internal program error occurred.

User Action: Note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0800C Link station closed because a command that is not valid or unsupported was received by Twinaxial DLC.

Originator: Twinaxial DLC (TWINAX)

Message Cause: A command or response was received from the host which the Twinaxial DLC cannot recognize.

User Action: Note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's actions.
2. Ensure that the proper host software is installed on the host.
3. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

- a. Complete the Problem Report Form describing this problem:
 - 1) Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - 2) Answer all questions under Part D: Host Computer and Network Information on page J-9.
- b. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
- c. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0801C Twinaxial Adapter check occurred.**Originator:** Twinaxial DLC (TWINAX)**Message Cause:** The Twinaxial adapter is not seated properly or it has had an internal failure.**User Action:**

1. Exit Communications Manager.
2. Power off your workstation.
3. Disconnect all electrical connections.
4. Reconnect all electrical connections.
5. Power on your workstation.
6. Restart Communications Manager and retry the operation.
7. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's actions.
2. Run diagnostics and correct any related problems.
3. Replace or repair the adapter.
4. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0802C A Twinaxial link failure occurred.

Originator: Twinaxial DLC (TWINAX)

Message Cause: The Twinaxial cable is loose or defective.

User Action:

1. Inspect the Twinaxial connection to your workstation.
2. Ensure a proper connection and retry the operation.
3. If the problem persists, try a different physical Twinaxial connector and retry the operation.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's actions.
2. Run host diagnostics, if available, and correct any related problems.
3. Replace or repair the Twinaxial connector.
4. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0804C The Controller address configured for the Twinaxial DLC is already in use.

Originator: Twinaxial DLC (TWINAX)

Message Cause: The Workstation address specified in the Twinaxial DLC configuration was already in use. Two users have incorrectly configured to the same workstation address. Initialization was not completed.

User Action:

1. Ensure that the Workstation address was configured correctly.
2. Correct any errors and retry bringing up the Twinaxial link.
3. If the address is correct, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user's actions.
2. Ensure that the adapter address was not assigned to another user.
3. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0813W The System/36 workstation ID is already in use. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The workstation ID that was initially given for the session is now in use by another session. If the session in error is a printer session, the problem may be one of the following:

- A user configured a convenience printer with a specific workstation ID rather than letting the printer ID be created by System/36.
- A user configured a network printer with a printer ID that is already assigned.

If the session in error is a display session, the user configured a workstation ID that is already in use by another session, or the user forgot to sign off the workstation before stopping Communications Manager.

User Action: For convenience printers, the configured printer ID might become available after the current user of the ID stops the session. At that time, start the 5250 Work Station Feature again. For network printers, try a new printer ID.

If you need the printer session immediately, the 5250 Work Station Feature should be started again with a printer session that has a workstation ID not currently in use. For display sessions, change the workstation ID to one that is not in use on the System/36 to which you are attaching. Ensure that you have responded to all System/36 console messages.

Service Coordinator Action: Check for messages and logs on the host system that will help identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0814W The AS/400 virtual device xxxxxxxxxx was not accessed. Session xx did not start.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The virtual device on the AS/400 associated with your workstation was not allocated.

User Action: Contact your service coordinator.

Service Coordinator Action: Check for messages and logs on the host system that will help identify the cause and recovery actions. If the recovery actions do not help you solve the problem, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0828W Initialization error occurred loading IBM Realtime Interface Co-Processor OS/2 Support on the X.25 adapter in slot *n*.

Originator: Main Task (MAINTASK)

Message Cause: Loading IBM Realtime Interface Co-Processor on the specified adapter failed and cannot be used for communications. Possible cause for the error is an adapter malfunction.

User Action:

1. Run diagnostics on the specified adapter.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If necessary, reinstall Communications Manager.
5. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Check the related error log entry.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested, if applicable
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0829W Initialization failure occurred loading IBM Realtime Interface Co-Processor OS/2 Support on the X.25 adapter in slot *n*. See the error log for secondary status information.

Originator: Main Task (MAINTASK)

Message Cause: Loading IBM Realtime Interface Co-Processor on the specified adapter failed and cannot be used for communications. Possible cause for the error is an adapter malfunction.

User Action:

1. Run diagnostics on the specified adapter.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If necessary, reinstall Communications Manager.
5. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Check the related error log entry.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested, if applicable
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0830W Initialization error occurred loading the X.25 Adapter Driver on the X.25 adapter in slot *n*.

Originator: Main Task (MAINTASK)

Message Cause: Loading the X.25 Adapter Driver on the specified adapter failed and cannot be used for communications. Possible cause for the error is an adapter malfunction.

User Action:

1. Run diagnostics on the specified adapter.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If necessary, reinstall Communications Manager.
5. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested, if applicable
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0831W Initialization failure occurred loading the X.25 Adapter Driver on the X.25 adapter in slot *n*. See the error log for secondary status information.

Originator: Main Task (MAINTASK)

Message Cause: Loading the X.25 Adapter Driver on the specified adapter failed and cannot be used for communications. Possible cause for the error is an adapter malfunction.

User Action:

1. Run diagnostics on the specified adapter.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If necessary, reinstall Communications Manager.
5. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Check the related error log entry.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested, if applicable
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0840W The X.25 API tried to write to an application's queue, but found that the queue had been closed.

Originator: X.25 API (X25API)

Message Cause: The program requested that notification of X.25 verb completion events be done using an OS/2 queue. The X.25 API was unable to notify the application of a verb completion event because the queue no longer existed. An X.25 application program should not close a verb completion queue until X.25 communications have ended.

User Action:

1. Correct the application program and retry the operation.
2. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000006

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Event 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0877C ASCII terminal emulator ended due to a critical Presentation Manager error.

Originator: ASCII Terminal Emulation (ASCIEMU)

Message Cause: An error was detected with the interface between the Async Emulator and Presentation Manager.

User Action: Retry the operation. If the problem persists, end all other application programs and restart. If the problem still persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0044	0000xxxx

where *xxxx* is the request code.

If this information does not help you identify the source of the problem, refer to “Before you call or mail information to IBM” that follows.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0878W An OS/2 Information Presentation Facility interface error has been detected and logged.**Originator:** ASCII Terminal Emulation (ASCIEMU)**Message Cause:** An error was detected and logged during one of the following operations:

- Stop or start Information Presentation Facility
- Initialization or termination of a Information Presentation Facility instance
- A request for a specific help panel
- User interaction with the help facility, such as sizing a help panel window.

These Information Presentation Facility interface errors are not considered critical since the emulation can still function, even though your ability to obtain help information may be impaired.

User Action: Retry the operation. If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0044	0000xxxx

where *xxxx* is the PM code or the error message type.

If this information does not help you identify the source of the problem, refer to “Before you call or mail information to IBM” that follows.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0942W The X.25 API tried to write to an X.25 API application's queue but no queue space was available.

Originator: X.25 API (X25API)

Message Cause: The program requested that notification of X.25 verb completion events be done using an OS/2 queue. The X.25 API was unable to notify the application of a verb completion event because there was no OS/2 queue space available.

User Action: OS/2 system queue space is a shared resource. Try running less concurrent application programs. If the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. This problem may be caused by too many queues or queue elements being used by this application or other concurrent programs.

Execute the program on its own. If the problem recurs, it is probably an error in the application program.

2. It may be that a program or programs are in error or have been configured incorrectly. Refer to the installation and configuration information (if any) supplied with the application programs.

If the program uses queues for notification of verb completion, then a full queue condition can be caused by the program failing to remove elements from one or more queues.

If necessary, report the problem to the supplier of the application program.

3. **Review information associated with error log entries.**

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000006

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow:

4. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Event 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0943W An application tried to issue an X.25 API verb but the maximum number of memory segments was reached.

Originator: X.25 API (X25API)

Message Cause: There is a maximum number of memory segments that the X.25 API can manage at one time. The application program or one or more other concurrently executing programs tried to pass more verb and buffer memory segments or both to the X.25 API than it could handle.

User Action: If there were more than one concurrently running X.25 applications, reduce the number and retry the operation. If the program was the only X.25 application program running or the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. It may be that a program or programs are in error or have been configured incorrectly. Refer to the installation and configuration information (if any) supplied with the application program. If necessary, report the problem to the supplier of the application program.

2. **Review information associated with error log entries.**

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000005

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow:

3. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Event 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0944W An application tried to issue an X.25 API verb but the maximum number of verbs has already been queued.

Originator: X.25 API (X25API)

Message Cause: One of the following occurred:

- The application program issued one too many concurrent X.25 verbs.
- Other concurrently executing X.25 applications had issued the maximum number of verbs that the X.25 API could handle.
- One too many verbs were queued to an X.25 adapter.

User Action: If there were more than one concurrently running X.25 application programs, reduce the number and try again. If the program was the only X.25 application program executing, or the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	000000096

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

It may be that the program is in error or has been configured incorrectly. Refer to the installation and configuration information (if any) supplied with the application program. If necessary, report the problem to the supplier of the application program.

2. If you cannot identify the source of the problem and you suspect a software error, refer to the directions that follow:
3. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Event 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0945W The X.25 API detected a software error and ended a connection on link
 xxxxxxxx, adapter xxxxxxxx, in slot xx.

Originator: X.25 API (X25API)

Message Cause: The X.25 API detected an internal error isolated to a single virtual circuit. The connection using the circuit was ended and the application program was informed.

User Action: If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

If this information does not help you identify the source of the problem and you suspect a software error, refer to the directions that follow.

2. Perform a trace and dump.

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 Frame
Related Dump Selections	Component 15, select adapter name given in message ACS0945W

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

3. After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - Details of any local X.25 switching network or other equipment and also of the X.25 network subscription.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0946W There is insufficient memory to process a verb issued by an X.25 application.

Originator: X.25 API (X25API)

Message Cause: The OS/2 program was unable to supply the memory requested by the X.25 API.

User Action: One or more programs were using all of the memory resources of the OS/2 program. Reduce the number of concurrently active programs. If the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000005

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

2. If an application program is requesting large amounts of memory, get the X.25 application program modified or add more memory.
3. If you cannot identify the source of the problem and you suspect a software error, refer to the directions that follow:
4. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Events 23, 24.
Related Dump Selections	Component 15, no adapter selections.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested

- The names of any other programs that were active when the problem occurred.
- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
 3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0947C The X.25 API failed to initialize due to a configuration error.

Originator: X.25 API (X25API)

Message Cause: An error occurred during X.25 API initialization while processing the X.25 API configuration data.

User Action: Check that the correct configuration file is being used. If the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. **Review information associated with error log entries.**

The error log contains an alert entry with one of the following error log types and subtypes. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0017	00000002
001C	00000002

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

2. Ensure that the configuration file in use is valid and has not been corrupted. If necessary, restore it from a backup file.
3. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors and retry the operation.

If you cannot identify the source of the problem and you suspect a software error, refer to the directions that follow:

4. **Perform a trace.**

The following table contains the trace selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Events 19, 23, 24.
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Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen

- The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
 3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0948W An application tried to obtain an X.25 API connection on link xxxxxxxx, adapter xxxxxxxx, in slot xx but the maximum number of connections was already in use.

Originator: X.25 API (X25API)

Message Cause: An X.25 application program requested a connection by issuing an X25Call or X25PVCAalloc verb. Either the maximum number of connections supported by the X.25 API was already in use, or there were no more virtual circuits available on the link on which the connection was requested.

User Action: Reduce the number of connections requested (perhaps by running fewer X.25 applications concurrently). If the problem persists, note the time, date and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review information associated with error log entries.

The error log contains an entry with the following error log type and subtype. Refer to the error log information in *Advanced Problem Determination for Communications* for a description.

Type	Subtype
0046	00000009

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error log entries should be made at the same time that the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

2. Ensure that the configuration file in use is valid and has not been corrupted. If necessary, restore it from a backup file.
3. Ensure that the X.25 API configuration data matches the physical configuration of the system (adapters, links, modems and cables) and the X.25 network subscriptions. Correct any errors and retry the operation.
4. If there are too few virtual circuits available on a link, increase the number by getting the network subscription changed and the link re-configured.
5. If the X.25 application program requires more connections than are supported or available, get the program changed.

If you cannot identify the source of the problem and you suspect a software error, refer to the directions that follow:

6. **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	X.25 API, Events 19, 24.
Related Dump Selections	Component 15, select adapter name given in message ACS0948W.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

After completing this procedure, refer to the following before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS0963W The X.25 API could not be started because the adapter in slot *n* is not an IBM X.25 Interface Co-Processor/2 adapter.

Originator: Main Task (MAINTASK)

Message Cause: The adapter in the specified slot indicated is not an IBM X.25 Interface Co-Processor/2 adapter and is therefore not supported for the X.25 API.

User Action:

1. Ensure that an IBM X.25 Interface Co-Processor/2 adapter is in the slot indicated by the Communications Manager X.25 adapter profile configuration.
2. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Run diagnostics and correct any related problems.
3. Repair or replace adapters.
4. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0964W The X.25 API could not be started for the X.25 adapter in slot *n* because the adapter is set for LOCAL operation instead of REMOTE.

Originator: Main Task (MAINTASK)

Message Cause: The adapter in the specified slot indicated is improperly set to LOCAL and is therefore not supported.

User Action:

1. Run SETUP and reconfigure the specified X.25 adapter to operate in REMOTE mode.
2. Restart the system and retry the operation.
3. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Run diagnostics and correct any related problems.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0965W The X.25 API could not be started for the X.25 adapter in slot *n* because the adapter is set for DTE operation instead of DCE. See the error log for additional information.

Originator: Main Task (MAINTASK)

Message Cause: The adapter in the specified slot indicated is improperly set to DTE and is therefore not supported.

User Action:

1. Run SETUP and reconfigure the specified X.25 adapter to operate in DCE mode.
2. Restart the system and retry the operation.
3. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Run diagnostics and correct any related problems.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0966W One or more X.25 adapters failed to initialize because an unexpected return code was received from the X.25 device driver. See the error log for additional information.

Originator: Main Task (MAINTASK)

Message Cause:

1. Adapter malfunction.
2. X.25 adapter code is missing.
3. Software failure.

User Action:

1. Ensure that adapters are properly located.
2. Run diagnostics on the X.25 adapter.
3. Replace or repair adapters.
4. Reinstall Communications Manager and retry the operation.
5. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Review information related to associated error log entries.
3. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0967W A critical system file (ICARICDL.DLL) required for X.25 API initialization could not be found.

Originator: Main Task (MAINTASK)

Message Cause: The Communications Manager could not find file ICARICDL.DLL.

User Action:

1. Reinstall Communications Manager and retry the operation.
2. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Review information related to associated error log entries.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0968W The X.25 API could not be started because an error was detected while attempting to initialize the X.25 device driver.

Originator: Main Task (MAINTASK)

Message Cause: Software failure. The Communications Manager received an error from the X.25 device driver while attempting to open the device driver.

User Action:

1. Reinstall Communications Manager and retry the operation.
2. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Review information related to associated error log entries.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0969W The SRPI API could not be initialized because of a software failure. See the error log for additional information.

Originator: Main Task (MAINTASK)

Message Cause: Software failure.

User Action:

1. Reinstall Communications Manager and retry the operation.
2. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Review information related to associated error log entries.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0971W A Power On Self Test (POST) error occurred on the X.25 adapter in slot *n*. See the error log for secondary status information.

Originator: Main Task (MAINTASK)

Message Cause: The specified adapter registered a POST error and cannot be used for communications. Possible cause is an adapter malfunction.

User Action:

1. Run diagnostics.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. Check the related error log entry.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0972W A Power On Self Test (POST) error occurred on the X.25 adapter in slot *n*.

Originator: Main Task (MAINTASK)

Message Cause: The specified adapter registered a POST error and cannot be used for communications. Possible cause is an adapter malfunction.

User Action:

1. Run diagnostics on specified adapter.
2. Repair or replace the specified adapter.
3. Retry the operation.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify user actions.
2. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: ACS.CNF, ACSINST.CNF, message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS0977W The X.25 API could not be started because either no X.25 adapters were found, or the X.25 adapters could not be successfully initialized.

Originator: Main Task (MAINTASK)

Message Cause: The X.25 API could not be initialized due to one or more of the following:

- No X.25 adapters were installed.
- The X.25 adapters are malfunctioning.
- The X.25 device driver (ICARICIO.SYS) is not installed.
- A software failure.

User Action: Check the message log for additional information. Depending on the cause, do one of the following:

1. Install X.25 adapters.
2. Run adapter diagnostics.
3. Update CONFIG.SYS.
4. If the X.25 API is not desired, change the configuration so that it does not load the X.25 API support.
5. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the user actions
2. Check the error log for information about the specific failure.
3. If the problem still persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1052I Twinaxial support failed to initialize. The Twinaxial support was not found at I/O port X'hhhh' or is not functioning properly.

Originator: Twinaxial Device Driver (TWINAX)

Message Cause: The I/O port address is not correct, or the adapter has malfunctioned or is missing.

User Action:

1. Run diagnostics.
2. Check CONFIG.SYS and drop Twinaxial support if it is no longer needed.
3. Check the address. If the address is correct, replace the adapter with switch settings as per the hardware manual.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Verify the address, the address setting on the adapter, and that the adapter is an Enhanced 5250 Emulator Adapter.
2. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1053W Twinaxial support failed to initialize because of a hardware diagnostics failure. Replace the adapter or have it replaced.

Originator: Twinaxial Device Driver (TWINAX)

Message Cause: The adapter has been found but is malfunctioning.

User Action: Contact your service coordinator to replace the adapter.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Retry the operation after replacing or servicing the adapter.

If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1056W Twinaxial support failed to initialize because a critical adapter file was missing or damaged. Reinstall Communications Manager base feature.

Originator: Twinaxial Device Driver (TWINAX)

Message Cause: A Twinaxial critical adapter file has been damaged or is missing.

User Action: Reinstall the Twinaxial device driver files which are part of the Communications Manager base feature.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Reinstall Twinaxial support.

If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1057W Twinaxial support failed to initialize because interrupt xx is already in use. Select another hardware interrupt level and retry the operation.

Originator: Twinaxial Device Driver (TWINAX)

Message Cause: The hardware interrupt level is already in use.

User Action: Configure another interrupt level using the Specify Twinaxial Adapter Setup Pop-up.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: The Enhanced 5250 Emulator Adapter can not share interrupt levels. Select another interrupt, 3 through 7, that is not being used in the system.

If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1058W Twinaxial support failed to initialize because an available Shared RAM location address could not be determined. Select a specific Shared RAM location address in the Twinaxial adapter setup that does not conflict with any other adapter.

Originator: Twinaxial Device Driver (TWINAX)

Message Cause: Use first available address was selected for Shared RAM location and an available address could not be found.

User Action: Select a specific Shared RAM location address and retry the operation.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: A specific Shared RAM location address of AC000, BC000, CC000, DC000, or EC000 must be selected.

If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers that are displayed on the screen
 - The name of the panel and a description of the field where the cursor was located when Help was requested
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1108C The open error type is Unable to transmit.

Originator: LAN Device Driver (ETHERAND)

Message Cause: The ETHERAND Network adapter failed to transmit a frame due to network congestion or adapter failure.

User Action:

1. Check and secure all cable connections between your adapter and the ETHERAND Network. Correct any related problems and then retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1109C An ETHERAND Network error has occurred: xxxxxxxx. Note the error type and identification number of this message.

Originator: LAN Device Driver (ETHERAND)

Message Cause: While preparing your adapter for network communications, an error of the type displayed occurred on your ETHERAND Network adapter.

User Action:

1. Check to see that the ETHERAND Network adapter is properly installed and retry the operation.
2. If there were no related problems, refer to the *IBM PC Network Hardware Maintenance and Service Manual* to run adapter diagnostics. Correct any related problems and then retry the operation.
3. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1110C Retry. If the problem persists, contact your service coordinator.

Originator: LAN Device Driver (ETHERAND)

Message Cause: While preparing your adapter for network communications, an error occurred that may be recoverable.

User Action:

1. Retry the operation.
2. If the problem persists, print or save the ACSLAN.LOG and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1122C A QLLC command or response that is not valid or not supported, was received by the X.25 adapter in slot xx. Permanent virtual circuit number xxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 DLC permanent virtual circuit is no longer active. A Qualified Logical Link Control (QLLC) communications protocol error, originating in the remote DTE, caused the virtual circuit to become inoperative. This error is the result of the local DTE receiving from the remote DTE a command or response that is not valid or not supported.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or retry any application program that failed because of this error.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
 - Check if the remote DTE logged any messages or errors.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.

- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1123C A QLLC command or response that is not valid or not supported, was received by the X.25 adapter in slot xx. The switched virtual circuit for remote address xxxxxxxxxxxxxxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 DLC switched virtual circuit is no longer active. A Qualified Logical Link Control (QLLC) communications protocol error, originating in the remote DTE, caused the virtual circuit to be disconnected. This error is the result of the local DTE receiving a command or response that is not valid or not supported from the remote DTE.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or retry any application program that failed because of this error.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
 - Check if the remote DTE logged any messages or errors.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.

- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1124C A QLLC communications protocol error occurred on permanent virtual circuit number *xxxx* of the X.25 adapter in slot number *xx*. The virtual circuit may no longer be active.

Originator: X.25 DLC (X25DLC)

Message Cause: A Qualified Logical Link Control (QLLC) communications protocol error originating in the remote DTE has occurred. The virtual circuit may no longer be active, depending on the severity of the protocol violation. If this violation was severe enough to bring the virtual circuit down, an alert was sent to the host.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or restart any application program that failed because of this error.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
 - Check if the remote DTE logged any messages or errors.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.

- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1125C A QLLC communications protocol error occurred on the switched virtual circuit for remote address xxxxxxxxxxxxxxxx of the X.25 adapter in slot number xx. The virtual circuit may no longer be active.

Originator: X.25 DLC (X25DLC)

Message Cause: A Qualified Logical Link Control (QLLC) communications protocol error originating in the remote DTE has occurred. The virtual circuit may no longer be active, depending on the severity of the protocol violation. If this violation was severe enough to bring the virtual circuit down, an alert was sent to the host.

User Action:

1. Contact your remote station personnel to determine if an error was logged.
2. Rerun or restart any application program that failed because of this error.
3. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged
 - Ensure that the remote DTE configuration matches the local DTE
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.

- b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1126C A QLLC frame reject response was received by the X.25 adapter in slot xx. Permanent virtual circuit number xxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 DLC virtual circuit is no longer active. The remote DTE sent a frame reject response to the local X.25 DLC.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or restart any application program that failed because of this error.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged
 - Ensure that the remote DTE configuration matches the local DTE
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).

3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1127C A QLLC frame reject response was received by the X.25 adapter in slot xx. The switched virtual circuit for remote address xxxxxxxxxxxxxxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 DLC virtual circuit is no longer active. The remote DTE sent a frame reject response to the local X.25 DLC.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or restart any application program that failed because of this error.
3. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged
 - Ensure that the remote DTE configuration matches the local DTE
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE and the local DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).

3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS1128C The X.25 DLC detected an internal software error and terminated. All of its virtual circuits have either been disconnected or are inoperable.

Originator: X.25 DLC (X25DLC)

Message Cause: The X.25 DLC has found an unrecoverable error condition in its logic.

User Action:

1. Access Subsystem Management to activate the X.25 DLC for each desired link.
2. Rerun or restart any application program that failed because of this error.
3. If your application programs still fail, restart your workstation and Communications Manager.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Restore the configuration file from a backup file and rerun verify and convert.
2. Check that the X.25 configuration data matches the X.25 network subscriptions.
3. See the related entry in the error log for additional information.
4. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
5. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
6. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - A copy of the related error log entry
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1129C An improperly formatted QLLC response was received by the X.25 adapter in slot xx. Permanent virtual circuit number xxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 virtual circuit is no longer active. A problem in either the remote DTE or the X.25 network caused a response to be sent to the X.25 DLC with an information field (I-field). This response should not have an I-field.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or restart any application program that failed because of this error.
3. Check if the remote DTE logged any messages or errors.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the X.25 configuration data matches the X.25 network subscriptions.
2. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged
 - Ensure that the remote DTE configuration matches the local DTE
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
3. See the related entry in the error log for additional information.
4. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
5. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
6. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).

ACS Messages

3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS1130C An improperly formatted QLLC response was received by the X.25 adapter in slot xx. The switched virtual circuit for remote address xxxxxxxxxxxxxxxx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 virtual circuit is no longer active. A problem in either the remote DTE or the X.25 network caused a response to be sent to the X.25 DLC with an information field (I-field). This response should not have an I-field.

User Action:

1. Check the configuration of the remote DTE to ensure that it is compatible with the configuration of the local DTE.
2. Rerun or restart any application program that failed because of this error.
3. Check if the remote DTE logged any messages or errors.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the X.25 configuration data matches the X.25 network subscriptions.
2. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
3. See the related entry in the error log for additional information.
4. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41 to complete a trace and dump.
5. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
6. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).

ACS Messages

3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1131C The X.25 DLC retried a QLLC command the maximum number of times without a response. Permanent virtual circuit number *xxxx* of the X.25 adapter in slot number *xx* is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: Retry count is exhausted. The local DTE has retried a command to the remote DTE the maximum number of times without receiving the appropriate response.

User Action:

1. Check the configuration file of your local DTE, noting the retry count and timeout value configured for the remote.
2. Check if the remote DTE logged any messages or errors.
3. Rerun or retry any application program that failed because of this error.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the X.25 configuration data matches the X.25 network subscriptions.
2. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.

ACS Messages

2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1132C The X.25 DLC retried a QLLC command the maximum number of times without a response. The SVC for remote address xxxxxxxxxxxxxxxx of the X.25 adapter in slot xx is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: Retry count is exhausted. The local DTE has retried a command to the remote DTE the maximum number of times without receiving the appropriate response.

User Action:

1. Check the configuration file of your local DTE, noting the retry count and timeout value configured for the remote.
2. Check if the remote DTE logged any messages or errors.
3. Rerun or retry any application program that failed because of this error.
4. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Check that the X.25 configuration data matches the X.25 network subscriptions.
2. Check that the configuration file in use is valid and was not corrupted. If necessary, restore it from a backup file and rerun verify and convert.
3. Contact the personnel at the remote DTE and do the following:
 - Determine if any errors or messages were logged.
 - Ensure that the remote DTE configuration matches the local DTE.
 - Ensure that the remote DTE configuration matches the X.25 network subscription.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.

ACS Messages

2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**ACS1133C The X.25 DLC detected an operating environment error and terminated.
All of its virtual circuits have been disconnected or are inoperative.**

Originator: X.25 DLC (X25DLC)

Message Cause: The X.25 DLC detected an unexpected error condition while requesting an OS/2 or Communications Manager service.

User Action:

1. Access Subsystem Management to activate the X.25 DLC for each desired link.
2. Rerun or restart any application program that failed because of this error.
3. If the problem persists, restart your workstation and Communications Manager.
4. If the problem still persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Ensure that the CONFIG.SYS file is set up correctly for this environment. Check that the proper device driver is installed and that the threads defined are adequate for Communications Manager.
2. Reduce the number of concurrently active programs and retry.
3. Reduce the total amount of OS/2 resources required by running fewer programs at the same time, or increase the number of threads available, as defined in CONFIG.SYS.
4. See the related entry in the error log for additional information.
5. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
6. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
7. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1134C The remote DTE reset permanent virtual circuit number *xxxx* of the X.25 adapter in slot number *xx*. The virtual circuit is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: The X.25 virtual circuit is inactive. The remote DTE detected a problem and reset the virtual circuit.

User Action:

1. Rerun or restart any application program that failed because of this error.
2. If the problem still persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review the data in the error log for more information. The cause and diagnostic code identify the problem detected by the remote DTE.

For information about the cause and diagnostic codes, refer to the *The X.25 1984 Interface for Attaching IBM SNA Nodes to Packet-Switched Data Networks General Information Manual*.
2. Check if the remote DTE logged any messages or errors.
3. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
4. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
5. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
2. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
- a. Answer all questions under Part D: Host Computer and Network Information on page J-9.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1135C The remote DTE either cleared or reset the switched virtual circuit for remote address xxxxxxxxxxxxxxxx on the X.25 adapter in slot number xx. The virtual circuit is no longer active.

Originator: X.25 DLC (X25DLC)

Message Cause: An X.25 virtual circuit is inactive. The remote DTE detected a problem and either reset or cleared the virtual circuit.

User Action:

1. Rerun or restart any application programs that failed because of this error.
2. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action:

1. Review the data in the error log for more information. The cause and diagnostic code identify the problem detected by the remote DTE.

For information about the cause and diagnostic codes, refer to *The X.25 1984 Interface for Attaching IBM SNA Nodes to Packet-Switched Data Networks General Information Manual*.
2. Check if the remote DTE logged any messages or errors.
3. Refer to the steps provided in "Tools for Advanced Problem Determination of Communications" on page 3-41 to complete a trace and dump.
4. If after completing this procedure, you or your application programming personnel do not understand the trace and dump information, refer to *Advanced Problem Determination for Communications* for explanatory information.
5. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen
 - Details of your X.25 network subscription
 - A copy of any messages or errors generated by the remote DTE
 - Information about the remote DTE you were communicating with.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1138W The request to bypass the AS/400 signon screen was not successful. The signon screen is displayed for session xx.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: The configuration file specified that the sign-on screen be bypassed, but the request was rejected by the host AS/400 system.

User Action: Contact your service coordinator.

Service Coordinator Action:

1. Look for messages and logs on the AS/400 that will help identify the cause and recovery action.
2. Verify that the host is configured to allow the sign-on screen to be bypassed by examining the QRMTSIGN system value. Refer to the Display Station Passthrough information in the *AS/400 Communications: User's Guide* for more information.
3. If the problem persists, refer to the following procedure before calling IBM.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem.
 - a. Include in the description of the problem (Part B, question 2):
 - A copy of this message
 - Any message identification numbers that are displayed on the screen.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

ACS1142C An internal error occurred in 5250 Work Station Feature. 5250 Work Station Feature printer emulation has ended.

Originator: 5250 Work Station Feature (5250WSF)

Message Cause: An internal error occurred in the 5250 Work Station Feature.

User Action: Start the 5250 Work Station Feature printer session again. If the problem persists, take the following actions:

1. Check the error log for information about the specific failure.
2. Restart the system and try the operation again.
3. If the problem still persists, contact your service coordinator.

Service Coordinator Action:

1. Check the error log for information about the specific failure.
2. Verify that the configuration file is correct.
3. Request that the user restart the system and try the operation again. If the problem persists, record all of the information on the screen, note the time, date, and identification number of this message, and contact IBM using the procedure described in Chapter 4, "When and How to Contact IBM."

ACS1206C Adapter *nm* cannot access the CSMA/CD Network due to an error during open: type *hh*.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The CSMA/CD Network adapter detected an error while trying to insert into the network.

User Action: Exit Communications Manager.

Check and secure all cable connections between your adapter and the CSMA/CD Network. Correct any related problems and retry the operation.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

ACS1207C A hardware error occurred on a CSMA/CD Network *nn*.

Originator: LAN Data Link Control (IBMPCNET)

Message Cause: The CSMA/CD Network adapter detected a hardware error with your adapter.

User Action: Exit Communications Manager.

If the problem persists or there were no related problems, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Review information associated with error log entries.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0017	00000002

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in "Using Error Log Services for Communications Problems" on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Additional information regarding Advanced Adapter Diagnostics can be found in the *IBM PC Network Hardware Maintenance and Service Manual*.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write the abbreviation only on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

Appendix C. MACH Messages That May Require Service Coordinator Intervention

This appendix contains a list of MACH messages that can be reported to you. Your response may involve additional investigation to attempt to identify the source of the problem, direct contact with IBM, or both.

These messages are reported by the 3270 terminal emulation originator part of Communications Manager as a result of a hardware and software check for 3270 terminal emulation.

When to Use This Appendix

The information and procedures in this appendix are provided as part of the overall problem determination process. To be most beneficial, this information should be used with the information and procedures provided in “Responding to Error Messages” on page 2-8.

Also, *before* referring to the information for a specific message, you should determine if:

- The user received an error message that is described in the *User's Guide, Volume 2: Communications Manager and LAN Requester*. For additional information on that message, refer to that publication.
- A usage error caused the problem. If the user made an error while using the OS/2 Extended Edition program, and there is no reason to believe there is a program defect, refer the user to the *User's Guide, Volume 2: Communications Manager and LAN Requester*.
- The user received a message or message help that directed them to contact their service coordinator. If yes, use the procedures described in this appendix; otherwise, refer to Chapter 2.

An explanation of how the information is arranged in this appendix follows.

How to Use This Information

The messages described in this appendix have a MACH prefix followed by a 3-digit identification number. The messages are listed in numeric sequence based upon the numbers that follow the prefix.

Variable parameters such as program names, adapter numbers, and file names are represented by one or more *x*'s.

The source of the message may also indicate the *source of a problem* or it may simply be *reporting a problem that originated elsewhere*, such as at the host computer or an application program. Use the text of the message, along with the information provided for each message, to determine which case applies.

Refer to the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *System Administrator's Guide*, or the online Helps for additional user messages or additional information about a specific message.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 7-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message).

If an abbreviation is provided for the originator, use the abbreviation on the PRF.
 - The text of the message (only necessary if the message did not include an identification number or code, or if you are directed elsewhere to provide the text).

MACH640

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-4.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	00000280

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the following information.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1, write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH641

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-6.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	00000281

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH642

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-8.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	00000282

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH660

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-10.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	00000294

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH670

Message Cause: An error was detected while processing a keystroke.

User Action: Retry the operation. If the problem persists, run your hardware diagnostics. If the problem still persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-12.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	0000029E

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH671

Message Cause: An error was detected while processing a keystroke.

User Action: Exit Communications Manager and restore the configuration file using a backup diskette. Then restart Communications Manager. If you have no backup diskette, contact your system administrator.

After copying the backup, retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-14.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	0000029F

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH697

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: The system controller is operating with down level base support micro code. Note the identification number of this message and contact your service coordinator.

Service Coordinator Action: Install the current level of the base support micro code on the system controller.

If the problem persists, note the time, date, and identification number of this message; then refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH698

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-17.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	000002BA

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

MACH699

Message Cause: A system error occurred while using 3270 terminal emulation.

User Action: Stop 3270 terminal emulation and restart. Then retry the operation. If the problem persists, note the time, date, and identification number of this message. Contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each action is distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page C-19.

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0042	000002BB

If this information does not help you identify the source of the problem, refer to the directions that follow.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

- **Complete a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

1. Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	SDLC Data or DFT Data, IBMTRNET Data, and system events 15 and 16
Related Dump Selections	For SDLC: Component 12, for DFT: Component 08

2. After completing this procedure:
 - a. Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - b. If you or your application programming personnel do not understand the trace and dump information, read the information that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 7-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part D: Host Computer and Network Information on page J-9.
2. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

Appendix D. File Transfer (TRANS) Messages That May Require Service Coordinator Intervention

This appendix contains a list of TRANS messages that can be reported to you. Your response may involve additional investigation to attempt to identify the source of the problem, direct contact with IBM, or both.

When to Use This Appendix

The information and procedures in this appendix are provided as part of the overall problem determination process. To be most beneficial, this information should be used with the information and procedures provided in "Responding to Error Messages" on page 2-8.

Also, *before* referring to the information for a specific message, you should determine if:

- The user received an error message that is described in the *User's Guide, Volume 2: Communications Manager and LAN Requester*. For additional information on that message, refer to that publication.
- A usage error caused the problem. If the user made an error while using the OS/2 Extended Edition program, and there is no reason to believe there is a program defect, refer the user to the *User's Guide, Volume 2: Communications Manager and LAN Requester*.
- The user received a message or message help that directed them to contact their service coordinator. If yes, use the procedures described in this appendix; otherwise, refer to Chapter 2.

An explanation of how the information is arranged in this appendix follows.

How to Use This Information

Only messages reported by the File Transfer component of Communications Manager are described in this appendix. The messages are listed in numeric sequence based upon the numbers that follow the TRANS prefix.

Variable parameters such as program names, adapter numbers, and file names are represented by one or more *x*'s.

The source of the message may also indicate the *source of a problem* or it may simply be *reporting a problem that originated elsewhere*, such as at the host computer or an application program. Use the text of the message, along with the information provided for each message, to determine which case applies.

Refer to the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *System Administrator's Guide*, or the online Helps for additional user messages or additional information about a specific message.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message).

If an abbreviation is provided for the originator, use the abbreviation on the PRF.

- The text of the message (only necessary if the message did not include an identification number or code, or if you are directed elsewhere to provide the text).

File Transfer (TRANS) Messages

TRANS000 An error occurred during file transfer. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: The host has detected an error in the file data, or an unidentified system error occurred.

User Action: Retry the file transfer. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulation screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS011 The host connection was lost. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: The host became inactive during the file transfer operation.

User Action: Re-establish the host connection and retry. If the problem persists, go to the emulator screen and record the message on the 25th line and note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow, (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-5.

- **Contact the host computer personnel and report the problem.**

Determine if the problem has been resolved. If it has, retry the file transfer. If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF).

- **Review information associated with error log entries.**

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000004

If this information does not help you identify the source of the problem, investigate the problem further as follows.

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	ACDI API, DFT Data, SDLC Data, IBMTRNET Data, and system events 06, 07, 08, and 16
Related Dump Selections	Components 06, 07, 08, and 12

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

TRANS013 An error occurred sending the file to the host. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: Either the host program detected an error in the file data or the wrong host program version level is being used.

User Action: Retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain the PC file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS014 An error occurred receiving the file from the host. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: The host program has detected an error in the file data during a RECEIVE operation.

User Action: Retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS016 An incorrect request code was detected. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: A parameter that is not valid was sent by the sending or receiving Communications Manager file transfer application.

User Action: Note the time, date, and identification number of this message and the type of session (ASCII or 3270 terminal emulation). Then contact your service coordinator to verify that the current version of the host file transfer program is properly installed on your host computer.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS019 An error occurred while handling the host file. File transfer was canceled.**Originator:** File Transfer (FILEXFER)**Message Cause:** One of the following errors occurred:

- For VM/TSO: There is not enough space available for data on the host.
or
- For CICS: Two possible errors are:
 - On a host GET operation, the file name did not match the name of the current terminal file, or an error occurred while constructing or reading the file.
 - On a host PUT operation, the file could not be stored in the temporary storage for the current file, or an error occurred while the user was reading the file data.

User Action:

- (VM/TSO) If possible, free some space and respond to any host session messages. Then retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.
- (CICS) Check the contents of the current file for this terminal. If the user provided the data for the file, check the user program for program errors and resource constraints. Then retry the file transfer.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).

TRANS Messages

- b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS026 A critical system error occurred. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: An internal error occurred while a file transfer was in progress, resulting in the termination of File Transfer. Specific causes include OS/2 errors and programmed errors. Messages may be logged.

User Action: Retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-12.

- **Obtain a copy of the user’s message log and error log files.**

Check the message log for related messages. If the information contained in the related help panels does not lead to a resolution of the problem, note the time, date, identification number of the messages.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log types and subtypes in *Advanced Problem Determination for Communications*.

Type	Subtype
0022	0000xxxx
0037	00000000
0038	xxxx0002
0038	00000003
0038	00000004
0042	00000003
0042	xxxx0002
0042	00000001

where *xxxx* is the request code.

where *xxxx* is reserved for internal purposes.

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Contact the host computer personnel and report the problem.**

Determine if the problem has been resolved. If it has, retry the file transfer. If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following information requested as possible (where appropriate, write the information on the PRF).

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	ACDI API, DFT Data, SDLC Data, IBMTRNET Data, and system events 07, 08, 14, and 16
Related Dump Selections	Components 06, 07, 08, and 12

- **After completing this procedure:**

- Refer to *Advanced Problem Determination for Communications* for explanatory information.
- or
- If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.

3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS027 The communication sequence with the host was disrupted. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: The PC program detected an error in the protocol data that it received from the host program.

User Action: Access the terminal emulation session. If necessary, bring the emulation screen to its ready state. Then retry the file transfer.

If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-15.

- **Contact the host computer personnel and report the problem.**

Determine if the problem has been resolved. If it has, retry the file transfer. If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following information requested as possible (where appropriate, write the information on the PRF).

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000004

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	ACDI API, DFT Data, SDLC Data, IBMTRNET Data, and system events 07, 08, 14, and 16
Related Dump Selections	Components 06, 07, 08, and 12

- **After completing this procedure:**

- Refer to *Advanced Problem Determination for Communications* for explanatory information.
- or
- If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS099 A host program error occurred: error code xx. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: A host program error occurred.

User Action: Retry the file transfer. If the problem persists, note the time, date, and identification number of this message and contact your service coordinator.

Service Coordinator Action: Contact the host computer personnel and report the problem. Determine if the problem has been resolved. If it has, retry the file transfer.

If the problem has not been resolved, or if the problem persists after retrying, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS101 Transmission errors occurred; data integrity is questionable. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: Too many transmission errors have occurred during XMODEM file transfer. This situation can be caused by a faulty communication line.

User Action: Re-establish the connection and then retry. If the problem persists, note the time, date, and TRANS number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-18.

- **Assess the quality of the communications line.**

If you feel a higher quality line is required, contact the supplier of the current line and request an upgrade. If you do not suspect this problem, or the problem persists after upgrading the line, continue the process as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000003

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	ACDI API and system events 06, 07, and 08
Related Dump Selections	Components 06 and 07

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The session ID used to perform the file transfer (the 3270 session ID or the ASCII terminal emulation profile name).
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

TRANS102 No data was received within the last 90 seconds. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: This message is a result of one of the following:

- The sending system did not initiate the SEND XMODEM operation within 90 seconds after the RECEIVE request was issued.
- An error originating with the sender occurred.

User Action:

1. Check the file that should have received the data. If no data was received, verify that the sender is using a compatible XMODEM protocol. If the sender is not using a compatible protocol, retry using a protocol that is compatible.
2. If the sender is using the correct protocol, take corrective action to ensure that the SEND operation is initiated within 90 seconds after the RECEIVE request.
3. If a transmission error caused only a partial file to be sent, check with the sender to see if there was a temporary problem with that system. If possible, retry when sender error conditions are resolved.
4. If the problem persists, note the time, date, and identification number of this message; then call your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-20.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000003

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	ACDI API and system events 06, 07, and 08
Related Dump Selections	Components 06 and 07

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulation screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The ASCII terminal emulation profile name.
 - The names of any other programs that were active when the problem occurred.
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

TRANS103 The connection was lost or is not active. File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: XMODEM file transfer cannot be started because the communication link is down or was dropped while an XMODEM file transfer was in progress.

User Action: Re-establish the connection. Then retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-22.

- **Assess the quality of the communications line.**

If you feel a higher quality line is required, contact the supplier of the current line and request an upgrade. If you do not suspect this problem, or the problem persists after upgrading the line, continue the process as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000003

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	ACDI API and system events 06, 07, and 08
Related Dump Selections	Components 06 and 07

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The ASCII terminal emulation profile name.
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

TRANS105 The previous block of data was not acknowledged by the receiving system.
File transfer was canceled.

Originator: File Transfer (FILEXFER)

Message Cause: This message results if, during an XMODEM send file transfer, the receiving system did not transmit an acknowledgement for a block of data within 90 seconds of the transmission of the previous block of data.

User Action: Check with the receiver to see if there was a temporary problem with that system and, if possible, take corrective action. Then retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-24.

- **Assess the quality of the communications line.**

If you feel a higher quality line is required, contact the supplier of the current line and request an upgrade. If you do not suspect this problem, or the problem persists after upgrading the line, continue the process as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000003

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Related Trace Selections	ACDI API and system events 06, 07, and 08
Related Dump Selections	Components 06 and 07

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The ASCII terminal emulation profile name.
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

TRANS106 The end of transmission (EOT) was not acknowledged by the receiving system.

Originator: File Transfer (FILEXFER)

Message Cause: This message results if, during an XMODEM send file transfer, the receiving system did not transmit an acknowledgement for the end of transmission (EOT) within 90 seconds of the transmission.

User Action: While the data you transmitted may have been received correctly, the receiving system did not acknowledge the EOT your system sent. Therefore, check with the receiving system to see if there is a problem with that system. If there is, have the receiving system correct the problem and retry the file transfer. If the problem persists, note the time, date, and identification number of this message; then contact your service coordinator.

Service Coordinator Action: There is more than one possible cause of this problem. Different actions follow (each distinguished by a bullet (•)). *These are not sequential steps.* Perform the second action *only* if the first one does not resolve or identify the source of the problem. Likewise, the third bulleted action is necessary only if the second action does not resolve the problem.

Also, these actions are presented in an order of least to most difficult. If, at any point, you or your application programming personnel do not understand a procedure, or data generated by a procedure, refer to “Before you call or mail information to IBM” on page D-26.

- **Assess the quality of the communications line.**

If you feel a higher quality line is required, contact the supplier of the current line and request an upgrade. If you do not suspect this problem, or the problem persists after upgrading the line, continue the process as follows.

- **Review information associated with error log entries.**

Directions for accessing the error log are provided in “Using Error Log Services for Communications Problems” on page 3-23. These error entries should be made at the same time the message is displayed or logged, so specify the time and date associated with this message when completing the Error Log Display Criteria menu.

Refer to information for the following error log type and subtype in *Advanced Problem Determination for Communications*.

Type	Subtype
0038	00000003

If this information does not help you identify the source of the problem, investigate the problem further as follows.

- **Perform a trace and dump.**

The following table contains the trace and dump selections most likely to help identify the source of the problem.

Refer to the steps provided in “Tools for Advanced Problem Determination of Communications” on page 3-41.

Related Trace Selections	
	ACDI API and system events 06, 07, and 08

Related Dump Selections	Components 06 and 07
--------------------------------	----------------------

- **After completing this procedure:**
 - Refer to *Advanced Problem Determination for Communications* for explanatory information.
 - or
 - If you or your programming personnel do not understand the trace and dump information, or if you attempted to resolve the problem but it persists, obtain as much of the following requested information as possible (where appropriate, write the information on the PRF as directed).

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem:
 - a. Include in the description of the problem (Part B, question 2):
 - Any message identification numbers displayed on the emulator screen. If there are no numbers associated with a message, record the text of the message (if the keyboard is not locked, press the Print Screen (PrtSc) key to print a displayed message).
 - The names of any other programs that were active when the problem occurred.
 - The SEND or RECEIVE command typed on the OS/2 command line or the options configured in the file transfer profile selected from the File Transfer menu.
 - The ASCII terminal emulation profile name.
 - The type of operating system running on the host (for example, VM or MVS).
 - b. Answer all questions under Part D: Host Computer and Network Information on page J-9. Be sure to note the IND\$FILE version number.
2. If possible, obtain a communications trace of the host file that caused the error.
3. Copy the following files to diskettes: message log, error log, CONFIG.SYS, the Communications Manager configuration file being used, and all trace and dump files (if available).
4. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

Appendix E. GDDM (ADM) Messages That May Require Service Coordinator Intervention

This appendix contains a list of ADM messages generated by the graphical data display manager (GDDM) host that can be reported to you. Your response may involve additional investigation to attempt to identify the source of the problem, direct contact with IBM, or both.

When to Use This Appendix

The information and procedures in this appendix are provided as part of the overall problem determination process. To be most beneficial, this information should be used with the information and procedures provided in "Responding to Error Messages" on page 2-8.

Also, *before* referring to the information for a specific message, you should determine if:

- The user received an error message that is described in the *User's Guide, Volume 2: Communications Manager and LAN Requester*. For additional information on that message, refer to that publication.
- A usage error caused the problem. If the user made an error while using the OS/2 Extended Edition program, and there is no reason to believe there is a program defect, refer the user to the *User's Guide, Volume 2: Communications Manager and LAN Requester*.
- The user received a message or message help that directed them to contact their service coordinator. If yes, use the procedures described in this appendix; otherwise, refer to Chapter 2.

An explanation of how the information is arranged in this appendix follows.

How to Use This Information

Only messages with an ADM prefix are described in this appendix. The messages are listed in numeric sequence based upon the numbers that follow the ADM prefix.

Variable parameters such as program names, adapter numbers, and file names are represented by one or more *x*'s.

The source of the message may also indicate the *source of a problem* or it may simply be *reporting a problem that originated elsewhere*, such as at the host computer or an application program. Use the text of the message, along with the information provided for each message, to determine which case applies.

Refer to the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *System Administrator's Guide*, or the online Helps for additional user messages or additional information about a specific message.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number.
 - Any return or error codes contained in the message (if applicable).
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message).

If an abbreviation is provided for the originator, use the abbreviation on the PRF.

- The text of the message (only necessary if the message did not include an identification number or code, or if you are directed elsewhere to provide the text).

GDDM (ADM) Messages

ADM0086E INVALID PROCESSING OPTION VALUE **n1** FOR CODE **n2**

Explanation: The processing options list on a DSOPEN call contained an option group, for which the option code **n2** was valid, but the group contained a data value **n1** that was not valid.

System Action: The call is ignored.

Programmer Response: Correct the invalid value or nickname, and run your application program again.

ADM0087E QUERY ERROR: TOKEN 'a', HDR X'lllittqq' OFF X'xx' REASON **n**

Explanation: On trying to open a device, GDDM found that the query reply data, either received from the physical device or contained within the device tokens, was not valid. This error can occur on an explicit DSOPEN or FSOPEN call, or on any call that causes a default primary device to be opened.

TOKEN is the device-token used by GDDM (after any nickname processing).

HDR is the first 4 bytes (the header) of the particular query reply found to be in error. It contains:

lll length of structured field
tt structured field type (should be X'81' = query reply)
qq query reply type (q-code).

OFF is, generally, the offset at which the error was detected within the particular query reply.

REASON defines the cause of the error as follows:

- 1 The query reply header is not complete: the remaining length of the overall query reply data is less than 4 bytes. **OFF** is the offset at which the header is terminated (that is, the remaining length), and **HDR** is shown as X'00' from this offset onwards.
- 2 The length **lll** of the query reply is less than 4 bytes.
- 3 The query reply is truncated by the remaining length of query reply data. **OFF** is the offset at which the query reply is truncated (that is, the remaining length). The length of the reply is given by **lll** in **HDR**.
- 4 The structured field type **tt** is not X'81' (query reply).
- 5 The query reply q-code **qq** is not unique. A previous instance of the same query reply type was processed in the current set of query replies. Multiple instances are only allowed for q-codes X'8F' (OEM auxiliary device) and X'B3' (Port).

- 6 A Null query reply (**qq** = X'FF') is present. A Null query reply should never be presented because GDDM requests (through query-list) supported q-codes only.
- 7 The query reply length **lll** is less than the minimum expected. GDDM expects a minimum length ("fixed part") for each query reply. OFF is the offset of the end of the (expected) fixed-part, that is, the minimum expected value.
- 8 A query reply field of more than 1 byte, or a group of fields, *all* of which must be present if *any* are present, is truncated by the query reply length **lll**. OFF is the offset of the start of the field or group of fields. For example, the Usable Area variable cell size parameters (bytes 23 through 26) must *all* be present if *any* are present.
- 9 An optional query reply field (that is, one that is not in the fixed part of the reply) is required in this case because of other considerations. For example, the Usable Area variable cell size parameters (bytes 23 through 26) are required if variable cells are supported (byte 5 bit 0 = '1'B). OFF is the offset of the start of the (missing) field.
- 10 A self-defining parameter header was truncated by the overall query length **lll**. At least 2 bytes are required. OFF is the offset of the start of the self-defining parameter.
- 11 A self-defining parameter has a length field less than the minimum of 2 bytes. OFF is the offset of the start of the self-defining parameter.
- 12 A self-defining parameter was truncated by the query reply length **lll**. OFF is the offset of the start of the self-defining parameter.
- 13 A self-defining parameter length is less than the minimum expected. GDDM expects a minimum length (fixed part) for each self-defining parameter. OFF is the offset of the end of the (expected) fixed-part.
- 14 A self-defining parameter field of more than 1 byte, or a group of fields that must *all* be present if *any* are present, is truncated by the self-defining parameter length. OFF is the offset of the start of the field or group of fields. For example, the Usable Area "Multiple Usable Area" self-defining parameter cell sizes (bytes 17 and 18) must *all* be present if *any* are present.
- 15 An optional field within a self-defining parameter (that is, one that is not in the fixed part) is required in this case because of other considerations.

For example, the Usable Area "Multiple Usable Area" self-defining parameter cell sizes (bytes 17 and 18) must be present if the screen size is in cells (self-defining parameter byte 3 bit 2 = '0'B). OFF is the offset of the start of the (missing) field.
- 16 A self-defining parameter is missing but is required. For example, the Procedure "Built-in Procedures" self-defining parameter (type X'01') is required if Autostart is supported (query reply byte 4 bit 0 = '0'B).

OFF is the "type" of the missing self-defining parameter. For example, X'1' (= X'01') in the above case, rather than an offset within the query reply.

- 17 A Character Sets query reply (**qq** = X'85') has an incorrect descriptor length. The character-set descriptors contain various fields as determined by the flags in byte 4 of the query reply, but the descriptor length field does not correspond to the expected value determined from these flags. OFF is the offset of the descriptor-length field.
- 18 A Character Sets query reply (**qq** = X'85') has a descriptor that is truncated. The total length of all descriptors (the query reply length **llll** minus X'13') is not exactly divisible by the descriptor length (at query reply offset X'12'). OFF is the offset of the start of the last (truncated) descriptor.
- 19 A Character Sets query reply (**qq** = X'85') has a character set descriptor with a flag byte with bit 2 = '1'B, indicating a 2-byte coded set, but the flag at query reply byte 4 bit 5 = '0'B, indicating there are no 2-byte coded sets. OFF is the offset of the flag byte of the descriptor in error.
- 20 List count error. The query reply, or a self-defining parameter in it, contains a count value giving the number of elements in a following list. This count is not correct either because it is too small (some lists must be non-empty), or because it is too large (the list overflows the end of the query reply, or the self-defining parameter). OFF is the offset of the count value.
- 21 List value missing. The query reply, or a self-defining parameter in it, contains a list of values from which a mandatory value is missing. For example, the Image "Compression Algorithms" self-defining parameter must always contain the "MMR" value. OFF is the offset of the start of the list.
- 22 A Summary query reply (**qq** = X'80') was specified through a device-token. Summary indicates to GDDM that there is additional query reply information to be obtained by means of "query-list" to the device. With a device-token, however, all the query reply information must be contained within the token.
- 23 A Summary query reply (**qq** = X'80') contained an invalid q-code in the list of supported q-codes.
- 24 A Summary query reply (**qq** = X'80') contained a duplicate q-code in the list of supported q-codes. OFF is the offset of the duplicate (second) occurrence.
- 25 A Summary query reply (**qq** = X'80') did not contain the q-code for Summary itself, in the list of supported q-codes. OFF is the offset of the end of the query reply.
- 26 Conflicting query replies have been detected. For example, an LU-1 mode Datastream Type query reply (type = X'A2', Data Streams) was detected at the same time as an LU-0 mode Datastream Type query reply (type = X'9A', 3270 IPDS). OFF is zero.
- 27 An Anomaly Implementation query reply (**qq** = X'9D') for the PCLK (query reply byte 5 = X'02') indicates that the default symbol set is not available but no Graphic Symbol Sets query reply (**qq** = X'B6') was received from the physical device. GDDM requires a Graphic Symbol Sets query reply so that it can send a default symbol set with the correct graphic cell size for the device. OFF is the offset of the image set availability flag.

- 28** An Anomaly Implementation query reply (**qq** = X'9D') has a device-dependent parameter length that is less than the minimum expected. OFF is the offset of the device-dependent parameter length field.
- 29** An Anomaly Implementation query reply (**qq** = X'9D') for the PCLK (query reply byte 5 = X'02') was specified through a device-token. It contains a File Request self-defining parameter or indicates that the default symbol set is not available. It must not contain either of these.

OFF is the offset of the type of the self-defining parameter, or of the image set availability flag.

System Action: The call is ignored.

Programmer Response: Determine whether the query reply came from the physical device (device-token was an asterisk (*), or was defaulted and the device is querable), or from GDDM's device definition tables. In the former case, check that the device is correctly configured, and correctly defined to the subsystem; in the latter case, check that GDDM's device definition tables were not wrongly modified.

ADM0275W GRAPHICS {(IMAGE) }CANNOT BE SHOWN. REASON CODE n

Explanation: A page containing graphics or images is being sent to an output device for which the Load PS function is either not supported or cannot be used, or the device does not have graphics configured or image support for the current host session. This may be because of the device itself, the device configuration, the controller for the device, or the setup for the device under the subsystem in use.

Notes:

1. If the device cannot support image functions, GDDM tries to use graphics functions to display image. In this instance, the message is qualified with the insert *(IMAGE)*.
2. If the physical device can support image functions, the support may not apply to all logical terminals. If a logical terminal is being used that does not support image functions, then note 1 applies.
3. If the device, when so configured, can support graphics without PS support (for example an IBM 3270-PC/G), but the session in use has not been configured for graphics, GDDM tries to use PS to display the graphics.
4. If the device is a PCLK-supported PC, and PCLK is available, the PC user has not started the PCLK GDDM application support.

The reason code **n** is one of the following:

- 0** Graphics are not supported.

The following apply to family-1 devices only:

- 1** System tables or the device-token specify that "Write Structured Field" is not supported.
- 2** No Character Sets query reply, type X'85', in the query reply (from device or token).
- 3** Character Sets query reply (from device or token) is present, but indicates that Load PS is not supported: type X'85', byte 4, bit 2 = '0'B. For image output, see note 2.

- 4 Character Sets query reply (from device or token) shows no loadable PS stores: type X'85', offset X'13' onwards. For image output, see note 2.
- 5 Usable Area query reply (from device or token) shows non-matrix characters: type X'81', byte 5, bit 1 = '1'B.
- 6 On IMS, LU1: Usable Area query reply, from the device token specified by system tables, indicates that "3270DS Structured Field" is not supported: type X'81', byte 4, bit 2 = '0'B.
- 7 On IMS, LU2/LU3: Usable Area query reply, from the device token specified by system tables, indicates that "3270DS Structured Field" is not supported: type X'81', byte 4, bit 2 = '0'B.
- 8 On IMS, LU2: Reply Mode query reply, from the device token specified by system tables, was either not present or did not show "character reply mode" support: type X'88', byte 6 absent.
- 9 The loadable cell size for the device is not supported by the GDDM graphics rastering process.
- 10 The image is too wide to be emulated by graphics; the width of the image must be less than 2040 pixels.
- 11 An attempt was made to start a GDDM graphics application from GDDM-OS/2 LINK on a PS/2 system, where the GDDM-OS/2 LINK host program is not installed.
- 12 An attempt was made to start a GDDM graphics application using GDDM-OS/2 LINK, where host graphics support was disabled when the workstation was set up.

System Action: The construction of the graphics picture, or image, if this is indicated by the message, is suppressed, and the area of the display where the graphics or image should appear remains blank.

Programmer Response: To see the graphics, or image, use a device with Load PS support, or, if the device is one that supports graphics, check that it is configured properly and connected through the correct type of controller, and if it is, check whether the subsystem setup is correct.

If the physical device is one that supports image, and the message indicates that it is image which cannot be shown, check that a logical terminal is being used to which the support applies.

Note: More information on this problem can be found in *GDDM Installation and System Management* that applies to the subsystem in use. This message can occur when you try to display graphics on a PC with the PCLK program available. The reason can be:

- You have not specified the PCLK procopt to GDDM.
- You have specified the PCLK procopt to GDDM but have also specified one of the CICS procopts: BMSCOORD or PSCNVCTL. PCLK is not compatible with these CICS procopts.
- You selected ENTER instead of switching to the PC session and starting the PCLK program, when the PC was opened by the host application program. More information on this problem can be found in the description of message **ADM0873**.

ADM0307E FILE 'a' NOT FOUND

Explanation: The specified function required the GDDM file a to be read from auxiliary storage, but the file cannot be found on auxiliary storage.

For CICS Pseudoconversational mode, if this message occurs on a DSOPEN call, it means that the temporary storage queue, used to hold device query information, has either been deleted between invocations of a pseudoconversation, or a pseudoconversation has been started with the "Continue" processing option rather than the "Start" processing option.

If this message occurs on a DSOPEN call for a PC device, it means that the files required to use the PC device have not been installed.

System Action: The call is ignored.

Programmer Response: Create or install the required file and run your application program again.

ADM0320E UNABLE TO OPEN 'a'. FILE MISSING OR INVALID

Explanation: An error occurred during an attempt to open the GDDM file a. Possible causes are:

- An attempt to open a read-only file for output.
- The file organization was not consistent with that expected.
- A ddname (defined in the current GDDM external defaults) was not assigned (under time-sharing option (TSO)). Refer to the *GDDM Base Programming Reference, Volume 2*.
- The virtual storage access method (VSAM) Cluster was not defined correctly when running in virtual storage extended (VSE) Batch.
- The file was not closed correctly when running in VSE-Batch-VSAM.
- The file was not closed correctly when using GDDM-IMD (under TSO-VSAM).
- The files required to use a PC device have not been installed if this message occurs on a DSOPEN call for the PC device.

System Action: The file operation is not performed.

Programmer Response: Correct the file definition, or issue the VERIFY command under TSO-VSAM, or install the files to run the PC device, and run your application program again.

Appendix F. LAN Requester or OS/2 LAN Server (NET) Messages That May Require Service Coordinator Intervention

This appendix contains a list of NET messages reported by the LAN Requester or OS/2 LAN Server that can be reported to you. Your response may involve additional investigation to attempt to identify the source of the problem, direct contact with IBM, or both.

When to Use This Appendix

The information and procedures in this appendix are provided as part of the overall problem determination process. To be most beneficial, this information should be used with the information and procedures provided in "Responding to Error Messages" on page 2-8.

Also, *before* referring to the information for a specific message, you should determine if:

- The user received an error message, which is described in the *User's Guide, Volume 2: Communications Manager and LAN Requester*. For additional information on that message, refer to that publication.
- A usage error caused the problem. If the user made an error while using the OS/2 Extended Edition program, and there is no reason to believe there is a program defect, refer the user to the *User's Guide, Volume 2: Communications Manager and LAN Requester*.
- The user received a message or message help that directed them to contact their service coordinator. If yes, use the procedures described in this appendix; otherwise, refer to Chapter 2.

An explanation of how the information is arranged in this appendix follows.

How to Use This Information

Only messages with a NET prefix reported by either the LAN Requester or OS/2 LAN Server are described in this appendix.

Variable parameters such as program names, adapter numbers, and file names are represented by one or more *x*'s.

The source of the message may also indicate the *source of a problem* or it may simply be *reporting a problem that originated elsewhere*, such as at the host computer or an application program. Use the text of the message, along with the information provided for each message, to determine which case applies.

Where to Find a Message

The messages are listed in numeric sequence based upon the numbers following the NET prefix.

Notes:

1. This appendix contains *only* messages that direct a user to contact the service coordinator.
2. NET3100E through NET3299E messages are logged in the error log only. They will not be displayed.
3. The text of NET9XXxE messages are not displayed exactly as shown in this appendix.

Refer to the *User's Guide, Volume 2: Communications Manager and LAN Requester*, the *System Administrator's Guide*, or the online Helps for additional user messages or additional information about a specific message.

Using the Problem Report Form

For all problems involving messages, record the following information on the Problem Report Form (PRF) (Part B, question 1):

1. Place a check mark (✓) next to MSG.
2. Then record:
 - The 8-digit alphanumeric message identification number
 - Any return or error codes contained in the message (if applicable)
 - If the message is contained in this appendix or in a message log, note the *Originator* following (if it is specified directly below the text of the message):

If an abbreviation is provided for the originator, use the abbreviation on the PRF.
 - The text of the message (only necessary if the message did not include an identification number or code or if you are directed elsewhere to provide the text).

LAN Requester or OS/2 LAN Server (NET) Messages

NET2104: An internal error occurred. The network cannot access a shared memory segment.

Message Cause: This message refers to an internal software problem.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2134: An internal error occurred when calling the requester driver.

Message Cause: The NETWKSTA.SYS driver had an internal error.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2140: An internal Requester-Server error has occurred.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2143: The event name is poorly formed.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2159: This printer destination request contains an invalid control function.

Message Cause: There was an attempt to control a spooled printer by way of an illegal or unknown operation.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2162: This operation cannot be performed on the print destination in its current state.

Message Cause: The requested change cannot be made because a software error occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2163: This operation cannot be performed on the printer queue in its current state.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2164: This operation cannot be performed on the print job in its current state.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2180: The service does not respond to control actions.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2183: The service does not respond to control actions.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2186: The service is not responding to the control function.

Message Cause: The service cannot run your command at this time.

User Action: Try the command again later.

If the problem continues, report the problem to your network administrator.

Note: Even if the service is not responding to commands such as NET PAUSE and NET CONTINUE, the NET STOP command should still work.

If you are unable to resolve the problem with the assistance of the network administrator, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2187: The service control is busy.

Message Cause: The service is not responding to command requests at this time. Another program may be controlling the service or there could be a software problem.

User Action: If the problem continues, report the problem to your network administrator.

Note: Try to stop the service with the NET STOP command. If this fails, stop all programs currently running on the system and try the NET STOP command again. One of the programs running on the system may be causing the problem.

If you are unable to resolve the problem with the assistance of the network administrator, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2189: The service cannot be controlled in its present state.

Message Cause: The service cannot be controlled in its present state. If the service is starting or stopping, it cannot process further requests. A service that is starting can process requests only when it is fully started.

User Action: Wait and try this operation in a minute or two.

If the problem continues, report the problem to your network administrator.

Note: The service may be stuck in a partially-running state.

If you are unable to resolve the problem with the assistance of the network administrator, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2190: The service ended abnormally.

Message Cause: The service was not running properly and would not respond to a command. The service was terminated.

User Action: Stop the service by typing:

```
net stop service
```

Then restart the service by typing:

```
net start service
```

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2211: The USERPATH entry in the server's IBMLAN.INI file does not list a valid directory.

Message Cause: The USERPATH entry in the server's IBMLAN.INI file does not list a valid directory.

Network Administrator Action: Stop the server and add the correct path of the directory as the value for USERPATH in the IBMLAN.INI file. Start the server and Netlogon services.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2251: This asg_type is not valid.

Message Cause: A software error occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2270: A machine ID has not been configured.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2280: Error in domain message processor.

Message Cause: An error occurred when the requester was receiving or processing a domain-wide message.

User Action: Investigate the requester's error log. Stop and restart the messenger service.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2316: A failure occurred when opening a remote temporary file.

Message Cause: The command failed because it could not open a temporary file on the server.

User Action: Report the problem to your network administrator.

If you are unable to resolve the problem with the assistance of the network administrator, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2319: The server table was initialized incorrectly.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2334: This device name string is not valid.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2335: The queue priority is not valid.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2340: This list of devices is not valid.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2351: This machine ID is not valid.

Message Cause: An internal record of a machine ID was not valid.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2354: The string and prefix specified are too long.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2356: This path component is not valid.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2357: Cannot determine type of input.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2362: The buffer for types is not big enough.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2371: The start offset is out of range.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2383: The source and destination paths are on different servers.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2430: The specified client is already registered for the specified event.

Message Cause: A program requested to be registered for notification by the alerter for a specific event but is already registered for that event.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2432: The alerter service has not been started.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2433: The alerter service recipient is not valid.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2440: The log file does not contain the requested record number.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2458: A password mismatch has been detected.

Message Cause: Your local password no longer matches your password on the server you tried to contact. You may have changed your password since your last logon, or you may have logged on with a password when no password was required.

User Action: Log off and log on again with the correct password.

Service Coordinator Action: None.

NET2460: The server name does not specify a valid server.

Message Cause: There is no server with that server name in the additional server table. Ensure that you are using the correct server name.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2461: The session is not valid. There was no session with that identification in the session table for the specified server.

Message Cause: There is no session with that identification in the session table for the specified server.

User Action: Ensure that you are using the correct server.

Network Administrator Action: The session is the software link between the requester and the server that shares the resources. Verify the link by ensuring that the user has permission for the resources trying to be used. Verify the physical connection between the user's and the server's machines.

Associated error log entries may have been logged at the same time and date as this message.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2462: The connection is not valid.

Message Cause: A connection is a software link between a requester and a shared resource on the server, and that link has not been made.

Network Administrator Action: Associate a local device on the requester with a resource on the server. You can also make a connection by accessing the resource using a network pathname from the command prompt or from an application.

Associated error log entries may have been logged at the same time and date as this message.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET2509: Too many image parameters span disk sectors.

Message Cause: There are too many image parameters spanning the disk sectors.

Network Administrator Action: Regenerate the source disk from which the image was made. Then restart the requester.

Associated error log entries may have been logged at the same time and date as this message.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3055: See the following note.

Note: There are nine different messages and causes for this message number. Find the message that matches the one that you received and take the appropriate action. The service coordinator actions follow the messages.

A problem exists with the system configuration. The domain controller database (DCDB) does not exist on this machine. Either restore the DCDB or change the role of this machine to MEMBER.

Message Cause: The role of this machine was configured as PRIMARY. However, the DCDB does not exist on this machine.

Network Administrator Action: Change the role of the machine from PRIMARY to MEMBER or BACKUP. See the information for NET ACCOUNTS.

Copy a backup version of the DCDB to this server.

A problem exists with the system configuration. The role of the machine cannot be STANDALONE.

Message Cause: The role of this machine cannot be set to STANDALONE.

Network Administrator Action: Change the role of the machine so that it is not STANDALONE. See the information for NET ACCOUNTS.

A problem exists with the system configuration. The domain controller for this domain could not be found.

Message Cause: The server could not locate the domain controller for one of the following reasons:

- The server attempted to locate the domain controller but failed. The NetGetDCName() API returned an error.
- The server attempted to locate the domain controller but the domain controller has not announced that it exists on the network.
- The server has located the domain controller, but failed when trying to synchronize the time and date with the domain controller.

User Action: Verify that the domain controller was started and is physically connected to the same network on which you are located.

Verify that all bridges (if any) are working correctly.

Verify that the server was defined to the domain controller.

A problem exists with the system configuration. The server cannot access the user accounts database (NET.ACC).

Message Cause: The server attempted to obtain information from the UAS. The NetUserModalsGet() API returned an error.

User Action: Retry the operation.

Network Administrator Action: If the problem persists, replace the NET.ACC file with a backup version.

A problem exists with the system configuration. The server is not started.

Message Cause: The server could not be started.

User Action: Verify that the program \IBMLAN\NETPROG\RNS1.EXE exists. If the system is heavily loaded, end sessions or applications and retry the operation.

A problem exists with the system configuration. The user accounts system is not configured correctly.

Message Cause: The server attempted to retrieve information from the UAS. Either the information did not exist, or the NetUserGetInfo() API returned an error.

The server attempted to add a user ID to the user accounts system, but the NetUserAdd() API returned an error.

One of the user ID's expected to be found could not be located in the UAS.

User Action: Retry the operation.

Network Administrator Action: If the problem persists, replace the NET.ACC file with a backup version.

A problem exists with the system configuration. The requester is not configured correctly.

Message Cause: The server attempted to verify its configuration, but it is not an additional server or domain controller.

User Action: Stop and restart the requester.

Network Administrator Action: Verify that the role is correct by running NET ACCOUNTS.

A problem exists with the system configuration. The server could not create the share for \IBMLAN.

Message Cause: The server attempted to add a share of the IBMLAN root and failed. The server may be out of shares.

User Action: If maxshares is set very low in the IBMLAN.INI file, increase maxshares.

Verify that the directory d:\IBMLAN exists, where d: is the drive on which LAN Server was installed.

A problem exists with the system configuration. The server could not create the required access control profiles.

Message Cause: The server attempted to add and verify that all its access control profiles exist. Not all profiles were added successfully. A directory may be missing from the \IBMLAN tree.

User Action: The following access control profiles are created and verified to exist.

If a directory does not exist for one of the access control profiles, create an empty directory with that name and retry the operation.

The following access control profiles are the minimum required to start the server:

- \PIPE\IBMLAN\SERVER.RNS
- *GUESTS:RW
- *USERS:RW

NET Messages

- C:\IBMLAN\DCDB
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\APPS
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\DATA
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\DEVICES
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\FILES
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\IMAGES
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\LISTS
*GUESTS:R *USERS:R
- C:\IBMLAN\DCDB\PRINTERS
*GUESTS:R *USERS:R
- C:\IBMLAN\DOSLAN\DOS
*GUESTS:R *USERS:R
- C:\IBMLAN\DOSLAN\NET
*GUESTS:R *USERS:R
- C:\IBMLAN\NETPROG
*GUESTS:R *USERS:R

If the LAN Server is installed on another drive, replace C: with the appropriate drive letter.

Note: For all of the preceding NET3055: messages, if after taking the appropriate actions and the problem still persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3056: A system error occurred.

Message Cause: A system error has occurred. This may be an internal requester-server error or an unexpected error from the OS/2 program.

User Action: If this error was given an error code in the form "NET####" or "SYS####" (where "####" are numbers) you can use the HELPMSG command to see more information about the specific error message. Type:

```
helpmsg net####
```

or

```
helpmsg sys####
```

(Be sure to specify the actual number in place of ####.)

If no other error number was given, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3057: An internal consistency error has occurred.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3100: The operation failed because a network software error occurred.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**NET3102: The service failed to obtain a long-term lock on the segment for NCBs.
The error code is the data.**

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**NET3103: The service failed to release the long-term lock on the segment for NCBS.
The error code is the data.**

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET3104: There was an error uninstalling service xxxxxxxx. The error code from NetServiceControl is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**NET3105: Initialization failed because of an OS/2 process failure on path xxxxxxxx.
The OS/2 error code is the data.**

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3106: An unexpected NCB was received. The NCB is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3108: DosDevIoctl to the redirector failed. Data is:

DWORD approx CS:IP or of call to ioctl
WORD error code
WORD ioctl number

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3109: Unable to create or open system semaphore xxxxxxxx. The error code is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**NET3110: Initialization failed because of an open/create error on the file xxxxxxxx.
The OS/2 error code is in the data.**

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET3111: An unexpected NETBIOS error occurred. The error code is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3112: An illegal SMB was received. The SMB is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3113: Initialization failed because the requested service xxxxxxxx could not be installed.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3125: A remote API request was halted due to the following invalid description string: xxxxxxxx.

Message Cause: A request to remotely run an API call was received but was not valid. The request may be incorrect, garbled by the network, or made by an incompatible version of the requester-server software.

User Action: Verify that all systems on your local area network are running compatible versions of requester-server program and related software.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3140: The service has stopped due to repeated consecutive occurrences of an NCB error. The NCB is the data.

Message Cause: A software error has occurred.

User Action: Try to restart the service. If the problem persists, contact your network administrator.

Network Administrator Action: Note that the error message displays network control block (NCB) data. Save this information for your service coordinator.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3141: The message server has stopped due to a lock on the message server shared data segment.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3151: Unable to display message due to OS/2 VIO call error. The error code is the data.

Message Cause: The message service was not able to display a message due to an error in creating the message box.

User Action: If message logging was on, the message was still logged to the file and can be viewed by typing or printing the message log file.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3152: An illegal SMB was received. The SMB is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3161: The requester was unable to get the computer name or number.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3162: The requester could not initialize the asynchronous NETBIOS thread. The error code is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3163: The requester could not open the initial shared segment. The error code is the data.

Message Cause: The requester service may have been started without using the NET START command. Do not run WKSTA.EXE directly.

User Action: To start the requester service, type:

```
net start requester
```

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3165: A bad mailslot SMB was received. The SMB is the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3167: The requester encountered an error while responding to an SSI revalidation request. The function code and the error codes are the data.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

**NET3170: There was an error in building the list of names to alert. The error code is
xxxxxxx.**

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3172: There was an error in sending xxxxxxxx the alert message (xxxxxxx).
The error code is xxxxxxxx.

Message Cause: An error occurred when an alert message was sent. The user ID designated to receive the alert may no longer exist.

User Action: Update the ALERTNAMES entry in the server's IBMLAN.INI file. Remove user IDs that no longer exist.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3173: There was an error in creating or reading the alerter mailslot. The error code is xxxxxxxx.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET3190: A NetWksta internal error has occurred: xxxxxxxx.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3192: An SMB error occurred on connection to xxxxxxxx. The SMB header is the data.

Message Cause: There is an error related to a request sent to the specified server. Most likely, the shared resource where the requester was connected is no longer shared.

If the Netpopup service was active, a message box should have been displayed, giving you a chance to connect to and share again the specified resource.

User Action: Ask your network administrator for the server to reshare the resource you are interested in using so that you can reconnect to it.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3193: A virtual circuit error occurred on the session to xxxxxxxx. The NCB command and return code is the data.

Message Cause: The connection between your requester and the server was unexpectedly dropped. The server may have been restarted or there may have been a network problem.

If the server was restarted, retrying the operation should cause the connection to be re-established.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

This message displays the NCB command value of the NETBIOS request and the NCB error returned. Be sure to save this information for your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3195: An unexpected network control block (NCB) error occurred on the session to the specified server.

Message Cause: The server may have been restarted, or a network problem may have occurred.

User Action: Contact your network administrator to see if the server was recently restarted.

This message displays an NCB value and the NCB error that was returned. Save this information for your service coordinator. For more information on NCBs and NCB return codes, refer to the *IBM LAN Technical Reference Manual*. If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3197: Reset of driver xxxxxxxx failed to complete the NCB. The NCB is the data.

Message Cause: The specified NETBIOS driver encountered a problem that required the network adapter card to be reset. When the card was reset, the problem was not remedied.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3198: The amount of resource xxx requested was more than the maximum.

Message Cause: The maximum amount was allocated.

User Action: Contact your network administrator to verify your configuration. The network administrator should note the resource listed in the original message and verify that its value in IBMLAN.INI does not exceed the maximum. If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3202: The Spooler Queue Manager did not handshake with initialization process.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3203: A spooler queue xxxxxxxx configuration error occurred. The xxxxxxxx file cannot be found.

Message Cause: A software error has occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3406: An error occurred when opening network device driver xxxxxxxx.

Message Cause: The device driver listed in the error message could not be installed.

User Action: Contact your network administrator.

Network Administrator Action:

- Verify that the listed entry in the networks section of the IBMLAN.INI file is valid.
- In CONFIG.SYS verify that the DEVICE entry that loads this device driver has the correct entry parameters.
- Verify that the DEVICE entry specifies the correct path for the device driver.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3712: There is an error in the help file syntax.

Message Cause: There was an error reading the help file.

User Action: Report the problem to your network administrator.

Note: You can reinstall the OS/2 LAN Server on the system or copy just the help file.

If you are unable to resolve the problem with the assistance of the network administrator, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET3725: An error occurred when the share was deleted.

Message Cause: An unexpected error occurred when attempting to delete the shared resource.

User Action: Try to delete the shared resource again. If more information on the particular error is displayed, follow those instructions.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5301: Illegal buffer length

Message Cause: The requested buffer length (or invalid buffer selector if using NETBIOS 3.0) is illegal for the NCB.SEND.DATAGRAM, NCB.SEND.BROADCAST, NCB.STATUS, or NCB.SESSION.STATUS command.

User Action: Specify the correct buffer size and try again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5303: Invalid command.

Message Cause: Invalid command.

User Action: Issue the correct command.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5305: Command timed out.

Message Cause: Command timed out.

User Action: Issue the command again or issue another command. If a send timed out, there may not be a receive outstanding from the other name.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5306: Message incomplete.

Message Cause: The application program received part of a message because the specified buffer length was not large enough to receive the full message.

User Action:

- NCB.RECEIVE and NCB.RECEIVE.ANY: Issue another receive to obtain the rest of the message before the remote side times out.
- NCB.STATUS, NCB.SESSION.STATUS, NCB.RECEIVE.DATAGRAM, and NCB.RECEIVE.BROADCAST.DATAGRAM: The remaining data is lost.

Note: If the command was NCB.STATUS, this error code may occur because the remote side could not transmit the entire status update if the data was of greater length than the maximum length UI-frame that may be transmitted.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5307: Data for one or more SEND type NO.ACK commands was not received.

Message Cause: Data sent by a previous NCB.SEND.NO.ACK or NCB.CHAIN.SEND.NO.ACK command was either not received at all or only partially received by the remote application program.

User Action: The application program must initiate any data recovery that is needed.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5308: Illegal local session number.

Message Cause: The session number that was specified is not one of the active sessions.

User Action: Issue the command again with the correct active session number.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5309: No resource available

Message Cause: Attempted to establish a session with a remote application program that has no more room in the session table.

User Action: Issue the command again at a later time.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET5310: Session closed.

Message Cause: The name from the transmitting side closed the session. The session has terminated normally.

User Action: None.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5311: Command canceled.

Message Cause: Command canceled.

User Action: None.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5313: Duplicate name in local name table.

Message Cause: Attempted to specify a name that is currently in the name table.

User Action: Issue the command again and specify another name.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5314: Name table full.

Message Cause: The number of defined names have exceeded the number of names that were defined at initialization (default = 17).

User Action: Wait until a delete name is issued so that an entry will become available.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5315: Command completed, name has active session and is now de-registered.

Message Cause: The name to be deleted is presently active in a session, but is de-registered. When the name is marked as de-registered and has active sessions, this name still occupies a slot in the table. This name cannot be used for any new sessions.

User Action: Close all the sessions that use this name.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5317: Local session table full.

Message Cause: There are no available entries on the session table. (The number of sessions is user-specified in NCB.RESET.)

User Action: Wait until a session closes so that an entry will become available.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET5318: Session open rejected.

Message Cause: No LISTEN command is outstanding on the remote NETBIOS.

User Action: Wait until a LISTEN command is issued on the remote NETBIOS.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5319: Illegal name number.

Message Cause: The name number has been changed or was never specified.

User Action: Use the most recent number that was assigned to the name.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET5320: Cannot find name called or no answer.

Message Cause: No response to the NCB.CALL command was received.

User Action: Attempt the operation again at a later time.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5321: Name not found or cannot specify "*" or null.

Message Cause: The specified name is not in the table, or the first character of the name is either an ASCII asterisk or "00."

User Action: Attempt the operation again using a name that has been verified as correct.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5322: Name in use on remote NETBIOS.

Message Cause: The name was found in another table. Names used in the network are unique and can only be used in one place. The name is already defined on another node.

User Action: Specify another name or have the name changed at the remote end.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5323: Name deleted.

Message Cause: The name has been deleted.

User Action: Add the name to the table and issue the command again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5324: Session ended abnormally.

Message Cause: A send-type NCB probably timed out because no receive command was available in the remote node.

User Action:

- If a send timed out, establish the session again and ensure that the remote node has issued a receive.
- If the session cannot be established again, initiate maintenance procedures for the node in question.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5325: Name conflict detected.

Message Cause: The network protocol has detected two or more identical names on the network.

User Action: Remove identical names from the network.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5333: The NETBIOS interface is busy, or NETBIOS is out of linkstations. The NCB request was refused. The NCB is the data.

Message Cause: Either NETBIOS is experiencing a busy condition or all available linkstations are in use.

User Action: Either try the action again, or free up some linkstations by disconnecting all device redirections to a server. You may also ask your network administrator to verify your NETBIOS configuration and ensure enough linkstation resources are available.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5334: Too many commands outstanding.

Message Cause: Too many commands outstanding.

User Action: Attempt the operation again at a later time.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5335: Invalid number in NCB_LANA_NUM field.

Message Cause: Attempted to specify a value other than "00" or "01," or the adapter is not present.

User Action: Verify that the adapter is present, or correct the value and try the command again. Use "00" for the primary adapter and "01" for the alternate adapter.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5336: Command completed while cancel occurring.

Message Cause: Attempted to cancel a command that had already been completed.

User Action: None.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5338: Command not valid to cancel.

Message Cause: Attempted to cancel a command that cannot be canceled.

User Action: Verify that the cancel command is correct.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5348: Name defined by another environment.

Message Cause: Another environment has already defined the name.

User Action: Choose another name.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET5352: Environment not defined, RESET must be issued.

Message Cause: The environment is not defined.

User Action: Issue the RESET command.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5353: Required operating system resources exhausted, retry later.

Message Cause: Required operating system resources are exhausted.

User Action: Attempt the operation again at a later time.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5354: Maximum applications exceeded.

Message Cause: The maximum number of applications defined at NETBIOS 3.0 load-time are executing.

User Action: Wait until another application terminates.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5355: No SAPs available for NETBIOS.

Message Cause: The adapter has no SAPs available for NETBIOS.

User Action: Wait until an application using SAPs relinquishes the use of a SAP.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET5356: Requested resource(s) not available.

Message Cause: Requested resource(s) not available.

User Action: Operate with the resources available or terminate.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5357: Invalid NCB address or length does not fit in segment.

Message Cause: Invalid NCB address or length does not fit in segment.

User Action: Application error. Correct NCB address and selector length.

Note: In the case of this return code, since the NCB is in doubt, the value is returned only in register AL. No attempt is made to place the return code into the NCB.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5358: RESET may not be issued from a NETBIOS adapter appendage.

Message Cause: The RESET command was issued when the NETBIOS 3.0 adapter was processing a hardware interrupt.

User Action: Application error. Do not issue RESET in this situation.

Note: This return code applies only to the Device Driver (DD) interface.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5359: Invalid NCB_DD_ID value.

Message Cause: The value in NCB_DD_ID is not identical to the value returned by NETBIOS 3.0 in the first RESET issued by the device driver application program. Note that NCB_DD_ID must be X'0000' in the first RESET issued for a given device driver application program.

User Action: Application error. Correct NCB_DD_ID value.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5360: NETBIOS attempted to lock user storage and the lock failed.

Message Cause: NETBIOS attempted to lock user storage and the lock failed.

User Action: Attempt the command again at a later time.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5363: NETBIOS Device Driver open error.

Message Cause: Either the device driver had an actual problem in its open process or the NETBIOS device driver was not loaded.

User Action: Load the appropriate code before executing NETBIOS applications.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5364: OS/2 error detected.

Message Cause: During processing, an unexpected error was indicated by OS/2.

User Action: Issue RESET and start again. If failure continues, notify IBM.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET5378: Network status – one or more of bits 12, 14, or 15 are on for more than 60 seconds.

Message Cause: Network status – one or more of bits 12, 14, or 15 are on for more than 60 seconds.

User Action: Check the extended status last network status code. The only NETBIOS command that may be issued is NCB.R.SET.

Note: This return code is not reported at all if some status bits (8-11) are also on. This return code is reported to the application program only if the status bits 12, 14, or 15 remain on longer than 60 seconds.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.:RR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.:RR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

NET5379: Network status – one or more of bits 8-11 on.

Message Cause: Network status – one or more of bits 8-11 are on.

User Action: Check the extended status last network status code. The only NETBIOS command that may be issued is NCB.R:SET.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.:RR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.:RR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

NET53246: Unexpected error on CCB completion.

Message Cause: This is a NETBIOS 2.X return code that indicates that a CCB has completed with an unexpected bad return code. NETBIOS 1.X returns a X'FA' in these situations.

User Action: The only NETBIOS command that may be issued is NCB.R:SET.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.:RR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.:RR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8001: An internal error has occurred. Retry the operation.

Message Cause: Some of the possible causes for this problem follow:

- The value of the parameter passed was not recognized.
- The action selected by the user was not recognized as a valid action.
- The parameter passed was supposed to be a list field, but it was another type.
- The function tried to update an output list that has no state variable.
- Either the field was not found or it was of the wrong type.
- The field name returned was actually a panel but the panel could not be found on the stack.
- This function is called with a hardcoded parameter specifying which type of resource should be acted upon: a disk, printer, or serial device, depending on the panel from which it was called. If the parameter specifies something other than a valid type, the program presents this error message.

User Action: Retry the operation.

Network Administrator Action: Restart the machine. If the problem persists, reinstall the requester. If the problem still persists, report the method by which the error can be reproduced to the service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8003: An EZVU command has failed; error error x1 <EZVU return code>.

Message Cause: The screen management program has an internal EZVU error.

User Action: Record the command used when the error occurred and retry the operation. If the problem persists, contact your service coordinator.

Service Coordinator Action: Use the EZVU II Development Facility Reference Manual (IBM Personal Computer Software, January, 1986) to investigate the section with dialog manager coding instructions and determine the meaning of the return code. If this does not help you resolve the problem, refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8008: The system software has detected an unrecognizable value.

Message Cause:

- The resource type was not recognized by the Requester-Server. The current resource types are: internal, external DOS only, external OS/2 only, or both external OS/2 and DOS.
- An unrecognizable value has been returned by system software.

User Action: Stop and restart the network software to eliminate machine error as a cause. If the error persists, stop and restart the machine.

Network Administrator Action:

- Look at the resource types to determine if they are recognizable by the database.
- Run the reference or diagnostics diskette to examine the memory.
- Print the error log.
- Make a backup copy of the DCDB using the DCDBBACK.EXE utility.
- Reinstall the LAN Server code and choose to save your existing DCDB.
- Restart the domain controller and determine if the problem was resolved.
- If the problem still persists, report it to the service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8010: The program failed during a return to the main panel.

Message Cause: The program became nested beyond the maximum trace level.

User Action: If the problem persists, contact the network administrator.

Network Administrator Action: Reinstall the LAN Server code and choose to save your existing DCDB.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8013: A network process has unexpectedly failed with exit code x1.

Message Cause: A condition or termination signal has occurred leading to abnormal termination of a single worker thread created by the LAN Requester network management subsystem.

User Action:

- Stop and restart the requester.
- If the problem persists, stop and restart the domain controller.

Report to the network administrator exactly what made this error occur.

Network Administrator Action: If this situation occurs consistently, it signals an internal LAN Requester software problem.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8032: No more file handles are available. There are too many open files.

Message Cause: The machine definition could not be opened because the system has too many open files.

User Action: End sessions or applications. Try again later when other users on the system might have reduced their network activity. Restart the workstation. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET8035: RPL.MAP is not found in the \IBMLAN\DCDB\IMAGES directory.

Message Cause: RPL.MAP was not found in the \IBMLAN\DCDB\IMAGES directory.

Network Administrator Action: Ensure that the RPL.MAP file exists and is defined properly. Ensure that the levels of DOS images on the domain controller and the additional server are the same.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8036: PCDOSRPL service was stopped. Cannot load RPL.MAP due to I/O error.

Message Cause: Input or output of RPL.MAP cannot be read or written.

Network Administrator Action: Ensure that the RPL.MAP file exists and is defined properly.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8037: PCDOSRPL service stopped. The RPL.MAP file is too large to load.

Message Cause: There may not be enough memory (RAM). The maximum number of workstations may be exceeded.

Network Administrator Action: End sessions or applications to free up memory. Ensure that the RPL.MAP file exists and is defined correctly. The domain controller may require additional RAM to load RPL.MAP. Reduce the number of workstations.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8038: Cannot start PCDOSRPL service: command failed – DIR.STATUS.

Message Cause: The requested parameters exceeded the adapter support software work area, or the adapter is defective.

Network Administrator Action: Reduce the MAX.STATION and/or MAX.SAP values to free more memory and try again. If the service still cannot be started, replace the adapter.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

NET8039: Cannot start PCDOSRPL service: Adapter 0 is not a supported type.

Message Cause: The network adapters supported by PCDOSRPL are Token Ring and PC-II Network adapter.

Network Administrator Action: Ensure that the network adapter is supported by PCDOSRPL.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8040: Cannot start PCDOSRPL service: command failed – DLC.OPEN.SAP.

Message Cause: The adapter may be defective.

Network Administrator Action: Ensure that the adapter is connected properly and retry. If the service still cannot be started, replace the adapter.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

**NET8041: Cannot start PCDOSRPL service: command failed –
DIR.SET.FUNCTIONAL.ADDR.**

Message Cause: The adapter may be defective.

Network Administrator Action: Ensure that the adapter is connected properly and retry. If the service still cannot be started, replace the adapter.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

NET8042: Image parameter substitution failed.

Message Cause: This message appears on a remote IPL workstation if the image used for the IPL contains substitutable parameters that were not properly substituted at IPL time. The remote IPL image is not valid.

Network Administrator Action: Ensure the parameters are correct. Create the remote IPL image again. Stop and restart PCDOSRPL service on the server.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8043: Too many Image parameters span disk sectors.

Message Cause: There are restrictions on the number of substitutable parameters which can span disk (or diskette) physical sectors. This message appears on a remote IPL workstation if the number of parameters spanning physical sectors exceeds the maximum number allowed.

Network Administrator Action: Decrease the number of substitutable parameters in the files making up your image definition and create the remote IPL image again.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8044: LAN driver number below gave bad return code below.

Message Cause: Improper loading of device drivers. If the device driver to be loaded fails to load correctly, the LAN driver number would respond with an incorrect return code.

Network Administrator Action: Ensure the LAN drivers installed on the remote IPL server in the \IBMLAN\DCDB\IMAGES directory are valid. Create the image again.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET8045: Parameter substitution caused a parameter to be truncated.

Message Cause: A substituted parameter was truncated because it was too long.

Network Administrator Action: Shorten the parameter, recreate the images, stop and restart PCDOSRPL services.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8046: Calling PCDOSRPL server...

Message Cause: The remote IPL attempt may be taking too long because it is unable to contact the domain controller or additional server. The error message may loop indefinitely.

Network Administrator Action: Stop and restart the PCDOSRPL service.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8048: The call to the PCDOSRPL server failed. IPL stopped.

Message Cause: The IPL image server was not listening when the IPL workstation tried to start an NCB session to the server. The IPL image server is not active and cannot respond to the request from the workstation.

Network Administrator Action: Ensure that the IPL image server is active when IPL process is in progress.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8049: Cannot connect to image server. IPL stopped.

Message Cause: The session to the IPL image server could not be established. The image server was not active, the image path was not found, access was denied, or the IPL server may not have any sessions available.

Network Administrator Action: Ensure that the IPL image server is active, the image path is created and that Guest has at least read access to \IBMLAN\DCDB\IMAGES before the IPL process is started. The IPL server may need to be reconfigured to support more sessions.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8050: Cannot open image file on PCDOSRPL server. IPL stopped.

Message Cause: The IPL image was not found, or access to the image file was denied.

Network Administrator Action: Ensure that the IPL image file exists. Ensure that Guest has at least read access to \IBMLAN\DCDB\IMAGES. Ensure that on the IPL server, IBMLAN.INI contains the line "GUESTACCT=guest."

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8051: WARNING:The image was generated from a non-DOS formatted diskette.

Message Cause: The diskette that generated the image was formatted on an incompatible operating system.

Network Administrator Action: Use DOS 3.3 or 4.0 to generate the image.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET8052: The PCDOSRPL service has already been installed. Only one instance is allowed.

Message Cause: The PCDOSRPL service has already been started successfully. This service is only allowed to start once.

Network Administrator Action: If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8053: The program number below needs the extra Kb RAM below:

Message Cause: There is not enough memory on the workstation to load the IPL programs in order to initialize the IPL process.

Network Administrator Action: If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8054: The diskette redirector did not start. Boot block is corrupt.

Message Cause: The boot block is a startup program for a remote IPL workstation. The redirector in the server, the boot block, or the remote IPL image may not be correct and consistent. The remote IPL image may not be defined properly.

Network Administrator Action: Examine the image to ensure it is defined correctly. If the problem persists, reinstall the LAN Server DOS Image Support.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8055: A program called the unsupported INT 21H call below:

Message Cause: There are only a few DOS INT 21H calls supported by the IPL process. The INT 21H call specified above is not supported. A problem exists with DLCBOOT.COM or DLCLOADR.COM.

Network Administrator Action: Reinstall DOS Image Support.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8056: IPL is terminated.

Message Cause: The IPL process cannot be continued.

Network Administrator Action: Note that the error message displays network control block (NCB) data. Save this information for the service coordinator.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8057: NETBIOS returned an error: The NCB and SMB are dumped above.

Message Cause: The IPL process cannot be continued due to a NETBIOS error. The IPL image server may not be started or GUEST may not have the correct access authority to \IBMLAN\DCDB\IMAGES.

Network Administrator Action: Ensure that GUEST has at least read access to \IBMLAN\DCDB\IMAGES. Ensure that the IPL image server is started. Note that the error message displays network control block (NCB) data. Save this information for the service coordinator.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8058: DISK I/O error.

Message Cause: The disconnection from the IPL image server failed. The image server may not be active.

Network Administrator Action: Ensure that the IPL image server is active when IPL server is in progress.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8153: DCDB has user ID *xx* <particular user ID> in a profile but this name is not known here. Retry the operation.

Message Cause: An inconsistency between internal database and system tables has been found. In attempting to update the User Account Database, the user was not found on the system.

User Action: Contact the network administrator.

Network Administrator Action:

- Stop and restart the server in question. If restarting the server in question does not solve the problem, investigate any abnormal memory allocation.
- Change the name of the user ID or re-create it. This problem could be due to a corrupted User Account Database (more likely) or faulty communication during the update process (less likely).

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8156: Unable to connect to User Account Database shared segment.

Message Cause: An attempt to link to system caches has failed on the server. This can occur only in the presence of domain control database corruption or an OS/2 problem with segment addressing.

User Action: Retry the operation.

Network Administrator Action: This should be a one-time occurrence. If it continues through successive attempts at adding resources or a particular resource:

1. Print the error log and analyze it for system or network problems.
2. Stop and restart the server in question to clean up system caches.
3. If this does not resolve the problem, restore the User Account Database by copying a backup.
4. Restart the server. If the problem persists, reinstall the LAN Server code.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8157: Unable to connect to User Account Database shared segment.

Message Cause: An attempt to link a server to a local system cache has failed. This can occur only in the presence of domain control database (DCDB) corruption or an OS/2 problem with segment addressing.

User Action: Retry the operation.

Network Administrator Action:

- Stop and start the server in question to clean up system caches. If this does not resolve the problem, restore the User Account Database.
- Restart the server.
- If the problem persists, print the error log.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET8158: Unable to connect to User Account Database shared segment.

Message Cause: An attempt to link a server to a local system cache has failed. This can occur only in the presence of DCDB corruption of some type or an OS/2 problem with segment addressing.

User Action: Retry the operation.

Network Administrator Action: Stop and start server in question to clean up system caches. If this does not resolve the problem, restore the User Account Database from backup copy. Restart the server. If the problem persists, print the error log and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8159: Unable to connect to User Account Database shared segment. Retry the operation.

Message Cause: An attempt to link a server to a local system cache has failed. This can occur only in the presence of DCDB corruption or an OS/2 problem with segment addressing.

Network Administrator Action: Stop and start server in question to clean up system caches. If this does not resolve the problem, restore the User Account Database. Restart the server. If the problem persists, print the error log and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8160: Unable to connect to extra segments. Retry the operation.

Message Cause: An attempt to link a server to a local system cache has failed. This can occur only in the presence of domain control database corruption or an OS/2 problem with segment addressing.

User Action: Retry the operation.

Network Administrator Action: Stop and start the server in question to clean up system caches. If this does not resolve the problem, print the error log and then notify your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8161: Resource name xx is not of a valid type.

Message Cause: An error is logged if the resource name cannot be analyzed into one of these types: printer, serial device, file or fileset.

Network Administrator Action:

- Stop and restart the server.
- If this does not resolve the problem, stop and restart the resource server to clear internal system tables.
- Examine the resource name type to verify its validity.
- Restore the DCDB from backup.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8162: Unable to acquire more shared segments. Retry the operation.

Message Cause: The system's virtual memory is exhausted. That is, the physical memory plus swap space on the disk has all been allocated. A less likely event is that all shared selectors are being used.

User Action: End sessions or applications to free up memory. Stop and restart the machine.

Network Administrator Action: Print the error log and determine the cause of the system or network error. Verify the memory requirements.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8163: Unable to allocate main shared segment. Retry the operation.

User Action: Retry the operation.

Network Administrator Action:

- Stop and restart the server.
- Print the error log.
- If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8164: Unable to allocate a shared segment. Retry the operation.

Message Cause: The most likely cause is that the system's virtual memory (physical memory plus swap space on the disk) is exhausted. The next most likely cause is that all shared segments are being used. Shared segments are buffers in shared memory. The least likely cause is that a shared segment for another process has the same name as this LAN Requester shared segment.

User Action:

1. End sessions or applications to free up memory.
2. Retry the operation.
3. Delete unwanted files from the hard disk to create more swap space.
4. Stop and restart the server.

Network Administrator Action:

1. Stop and restart the server.
2. Verify the memory requirements.
3. Examine the error log to determine network or system errors.
4. If the problem persists, print the error log and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8170: Unable to add xx <user ID> to User Account Database.

Message Cause: There was difficulty adding this user to the system tables at server startup.

User Action: Contact the network administrator.

Network Administrator Action: This error was detected because the server ran out of allocated space for adding a user to the system caches or a duplicate user was encountered.

1. Ensure that the user ID is unique to the network.
2. If the system has its maximum number of users, the new user cannot log on without logging off another user.
3. Stop and restart the server. If restarting the server does not help, print the error log.
4. Determine if there is an abnormal amount of memory used in other active processes. Correct that condition if it exists.
5. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8175: Access control lock file is inconsistent.

Message Cause: A problem has occurred in opening, accessing or closing the disk based lock file for access to profiles.

User Action: No action.

Network Administrator Action:

- Stop and restart the network software.
- Verify that '-IBMLAN-IBMLAN.LCK' exists on the server in question and that the server has some access control profiles defined on it. If either the file does not exist or some access control profiles are not defined, contact the service coordinator.
- If the problem persists, it will be necessary to have all administrators exit from doing any management of users, groups, or profiles, as well as having all users log off, then stop and restart the server.
- If this fails to clear the problem, print the error log and contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8176: Unable to add Presentation Manager Group *xx* <Group Name> definition to installed Group List.

Message Cause: In logging on, if there are applications to add to the user's Presentation Manager (PM) selector, the PM groups "Private Applications" and "Public Applications" are first added to the user's Group – Main window. This attempt was unsuccessful.

User Action: No action.

Network Administrator Action: A problem occurred in the Presentation Manager (PM) selector, and must be addressed there, though the user or administrator can manually attempt to add an assignment.

- Investigate the group names on the user's Group – Main window. If any duplicates are found, rename them.
- Ensure that no user-defined groups are called public applications or private applications.
- If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8177: Unable to add Presentation Manager Group *xx* <Group Name> to application selector.

Message Cause: In logging on, if there are applications to add to the user's Presentation Manager (PM) selector, the PM groups "Private Applications" and "Public Applications" are first added to the user's Group – Main window. This attempt was unsuccessful.

User Action: Contact your network administrator.

Network Administrator Action: A problem occurred in the Presentation Manager (PM) selector, and must be addressed there, though the user or administrator can manually attempt to add an assignment.

- Investigate the group names on the user's Group – Main window. If any duplicates are found, rename them.
- Ensure that no user-defined groups are called public applications or private applications.
- If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8178: Unable to add program xx <program name> definition to installed program list.

Message Cause: New actions, or programs to execute, are added to the user's Group—Main window either automatically at logon or in the full screen interface. This attempt was unsuccessful.

User Action: Contact your network administrator.

Network Administrator Action: A problem occurred in Presentation Manager and must be addressed there, though the user or administrator can manually attempt to add an assignment.

- Investigate the group names on the user's Group—Main window. If any duplicates are found, rename them.
- Ensure that no user-defined groups have called public applications or private applications.
- If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8179: Unable to add program *x*. <program name> to Presentation Manager Group *xx* <group name>.

User Action: Contact the network administrator.

Network Administrator Action: A problem occurred in Presentation Manager and must be addressed there, though the user or administrator can manually attempt to add an assignment.

- Investigate the group names on the user's Group – Main window. If any duplicates are found, rename them.
- Ensure that no user-defined groups are called public applications or private applications.
- If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8189: Logon or logoff is already in progress. Please wait.

User Action: None.

Service Coordinator Action: None.

NET8194: Some of your logon assignments were unsuccessful.

User Action: Verify that the logon assignments are available. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8195: Error running your user profile.

Message Cause: The command file run automatically at logon returned an error.

User Action: Contact the network administrator.

Network Administrator Action: Examine the logon profile for this user to determine what might be causing the error. The profile is called PROFILE.CMD if the user is on an OS/2 requester or PROFILE.BAT if the user is on a DOS requester. It is located on the domain controller in the \IBMLAN\DCDB\USERS\userid directory where userid is the ID of the user whose logon profile returned an error.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided; and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8206: Unable to list programs in the Group – Main window.

Message Cause: At logoff, private and public applications are deleted from the user's Presentation Manager (PM) Group – Main window. The existing ones are enumerated. This has failed.

User Action: Retry the operation. A problem occurred in PM and must be addressed there, though the user or administrator can manually attempt to add an assignment. Print the error log. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET8215: OPENING *xx* <new file for READ-WRITE > OS2 error number *xxxx*.

Message Cause: The function was trying to open up a new file for READ-WRITE but was unsuccessful due to an OS/2 error.

User Action: Contact your network administrator.

Network Administrator Action: If the problem persists, run diagnostics or the reference diskette to test the disk. If the problem still persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET8234: Contention for server resources exceeds capacity.

Message Cause: A request for server resources could not complete due to activity on the server.

User Action: Contact your network administrator.

Network Administrator Action: Increase the value for SRVPIPES in the IBMLAN.INI file and restart the server. If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem and be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided, and write the name of the originator of this preceding message (write only the abbreviation on the PRF).
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Copy the following files to diskettes: message log, error log, CONFIG.SYS, Communications Manager configuration file, and all trace and dump files (if available).
2. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9324E The PC LAN Program system directory could not be created.

Message Cause: A serious system error has occurred that prevented the directory from being created.

User Action: Examine the error log for details.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9325E The PC LAN Program application batch file cannot be created.

Message Cause: The batch file could not be created for this application.

User Action: Examine the error log for details.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9326E The Group – Main window cannot be updated.

Message Cause: An error occurred while trying to update the Group – Main window.

User Action: Examine the error log for details.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, “When and How to Contact IBM.”

NET9327E The logon assignments file cannot be updated.

Message Cause: An error occurred while trying to update the logon assignments file.

User Action: Examine the error log for details.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET9368E Path and filename xxxxxxxx.

Message Cause: An error occurred while trying to read the named file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9373E An error was detected while trying to read the definition file.

Message Cause: An error occurred while trying to read the definition file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9374E Path and filename xxxxxxxx.

Message Cause: An error occurred when trying to open the named destination file on the diskette.

User Action: Ensure that the diskette is inserted properly and try the operation again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9375E Path and filename xxxxxxxx.

Message Cause: An error occurred when trying to write to the named destination file on the diskette.

User Action: Ensure that the diskette is inserted properly and try the operation again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9377E Path and filename xxxxxxxx.

Message Cause: An error occurred when trying to read the named destination file on the diskette.

User Action: Ensure that the diskette is inserted properly and try the operation again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9380E Filename xxxxxxxx.

Message Cause: An error occurred when trying to copy the named DOS system file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9392E The image definition file cannot be created.

Message Cause: There may be insufficient disk space on the domain controller.

User Action: Ensure that there is disk space on the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9394E The model image definition file cannot be copied.

Message Cause: An error occurred on the disk containing the model file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9395E The selected image profile cannot be found.

Message Cause: This may be due to a problem with the domain controller.

User Action: Restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9396E The server list is not available.

Message Cause: The domain controller cannot be contacted.

User Action: Ensure that the domain controller is active and try the operation again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9397E The selected image profile definition file cannot be read.

Message Cause: An error occurred on the disk containing the definition file.

User Action: Restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9411E The RPL.MAP file cannot be read.

Message Cause: The RPL.MAP file is bad or an I/O error occurred.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9414E The RPL.MAP file cannot be found.

Message Cause: The map table file RPL.MAP cannot be found.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9415E The RPL.MAP file cannot be updated.

Message Cause: A file error has occurred while updating the RPL.MAP file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9416E The RPL.MAP file cannot be updated.

Message Cause: A file error has occurred while updating the RPL.MAP file.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9417E The RPL.MAP file cannot be read.

Message Cause: The RPL.MAP file may be too large to convert or it may be the wrong field size.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9418E The remote IPL workstation definition cannot be created or updated.

Message Cause: There may be a problem with your Communications Manager configuration file or the Communications Manager system process for your adapter type may not be installed.

User Action: Verify that the Maximum Number of Users parameter specified in the IEEE802.2 section of LAN Profile Configuration in the Communications Manager component installed on your machine is at least 3. Try increasing this value.

Verify that your *d:*CONFIG.SYS file contains either a RUN = ACSTRSYS.EXE line for Token-Ring adapters or a RUN = ACSTRSYS.EXE line for PC Network adapters.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:*\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - *d:*\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - *d:*\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - *d:*CONFIG.SYS
 - *d:*\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9505E The home directory definition in the domain control database cannot be deleted.

Message Cause: The home directory definition could not be deleted.

User Action: Check to see if the domain controller is active.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9506E The home directory of the user cannot be deleted.

Message Cause: The home directory could not be deleted.

User Action: Ensure that the home directory is active.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9522E The user definition cannot be created and added to the domain.

Message Cause: The user definition could not be created.

User Action: Check your machine configuration and try the operation again.

If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9523E The user's domain control database directory cannot be created.

Message Cause: The user domain control database directory could not be created.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9524E The user definition cannot be deleted from the domain.

Message Cause: The user definition could not be deleted from the system.

User Action: Check your machine configuration and try the operation again.

If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9527E The user database definition of the home directory cannot be created.

Message Cause: The home directory definition could not be created.

User Action: Ensure that the domain controller is active and try the operation again.

If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9529E The user database definition of the home directory cannot be deleted.

Message Cause: The home directory definition could not be deleted.

User Action: Ensure that the domain controller is active and try the operation again.

If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9531E The user definition cannot be added to the domain control database.

Message Cause: An error occurred adding the user definition to the domain control database.

User Action: Ensure that the domain controller is active and try the operation again.

If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9550E The format file that specifies the layout for this report cannot be found.

Message Cause: The report format file cannot be found.

User Action: Check to see if the format file has been removed. If it has, restore it from a backup copy.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9551E The format file that specifies the layout for this report contains format information that is not valid.

Message Cause: The format information in the report file is invalid.

User Action: Check to see if the format file has been removed. If it has, restore it from a backup copy.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9552E The format file that specifies the layout for this report cannot be read.

Message Cause: An error occurred when trying to read the report format file.

User Action: Check to see if the format file has been removed. If it has, restore it from a backup copy.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

NET9555E An error occurred when attempting to delete this group. The group has not been deleted.

Message Cause: This group was not deleted.

User Action: Try the operation again. If the problem persists, restart the domain controller.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9806E System files cannot be found.

Message Cause: Files in the domain control database are missing.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9820E The domain control database is unusable.

Message Cause: Internal checksums held in the database indicate that it has become unusable.

User Action: Restore the domain control database from a backup copy.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9821E The domain control database is unusable.

Message Cause: A partial update to a record has occurred.

User Action: Restore the database from a backup copy.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9822E Panel xxxxxxxx cannot be found.

Message Cause: This panel cannot be found.

User Action: Try the operation again.

If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:\CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9850E One or more of your logon alias assignments failed. Refer to your error log for details.

Message Cause: Each assignment has a message indicating the assignment that failed. Possible causes are the assignment was made to a server that is not running, the level of access may not be correct, or the access control profile may be denying access. The logon alias assignment must exist on the server. If the alias is not an "as required by user" alias, it must be shared when the user logs on. The alias cannot have been previously deleted.

User Action: Contact your network administrator.

Network Administrator Action: Start the server on which the logon alias assignment resides. The logon alias must exist and be shared at the time you log on, unless it is an "as required by user" alias. The logon alias assignment must have an access control profile in which the user has appropriate permission.

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - *d:\IBMLAN\LOGS\NET.AUD* (OS/2 LAN Server audit trail)
 - *d:\IBMLAN\LOGS\NET.ERR* (LAN Requester error log)
 - *d:\IBMLAN\LOGS\NET.ERR* (OS/2 LAN Server error log)
 - *d:\CONFIG.SYS*
 - *d:\IBMLAN\IBMLAN.INI*
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9853E Your user ID was not added as a message name.

Message Cause: The Messenger service may not be started or your user ID may already be in use as a message name on the network.

User Action: If the problem persists, note the time, date, and identification number of associated error messages; then contact your service coordinator.

Associated error log entries may have been logged at the same time and date as this message.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET9854E The logon program failed to find your home directory.

Message Cause: The server on which the home directory resides may not be running. The level of access may not be correct. The access control profile may be denying access. You may not have access to the home directory. The home directory must exist on the server.

User Action: Contact your network administrator.

Network Administrator Action: The server on which the home directory resides must be started. The user must have a dynamically shared alias that displays the "Update Alias - Files" screen when shared prompt is selected "as required by user." The home directory alias must have an access control profile giving the user every permission. Confirm that the home directory exists on the server by typing the following command at the server:

```
d:\IBMLAN\USERS\
```

If the problem persists, contact your service coordinator.

Service Coordinator Action: Refer to the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form describing this problem; be sure to:
 - a. Place a check mark (✓) next to MSG for question B1 and write the 8-digit alphanumeric message identification number in the space provided.
 - b. Note any other programs that were active when the problem occurred (Part B, question 2).
 - c. Answer all questions under Part E: LAN Requester-Server Information on page J-10.
2. Copy the following files, including the path, to diskettes for each computer involved in the failure:
 - d:\IBMLAN\LOGS\NET.AUD (OS/2 LAN Server audit trail)
 - d:\IBMLAN\LOGS\NET.ERR (LAN Requester error log)
 - d:\IBMLAN\LOGS\NET.ERR (OS/2 LAN Server error log)
 - d:CONFIG.SYS
 - d:\IBMLAN\IBMLAN.INI
 - Communications Manager configuration file.
3. Contact IBM using the procedures described in Chapter 4, "When and How to Contact IBM."

NET Messages

Appendix G. Database Manager (QRW or SQL) Messages That May Require Service Coordinator Intervention

This appendix contains a comprehensive set of Database Manager messages whose associated help information directs users to the service coordinator.

Using Query Manager Messages

Query Manager maps most Database Services return codes to messages with a *QRW* prefix. However, in a few cases, the return code is mapped to a message with an *SQL* prefix. SQL messages whose associated help panels direct users to their service coordinator begin in “Database Services and Query Manager (SQL) Messages” on page G-10.

Sources of Related Information

Some messages are displayed as a result of a user error. Some hints for determining if a user error caused the problem follow. A description of the following guides can be found in the *IBM Operating System/2 Extended Edition Version 1.3 Guide to Information*.

- If a user’s problem occurred using Query Manager, refer to the *User’s Guide, Volume 3: Database Manager* for information on writing a query, generating a report, or creating and editing a database.

For information about some common SQL concepts, such as constructing SQL statements with Query Manager, refer to *Structured Query Language (SQL) Concepts*.

- In those instances where the error notification is presented as an SQL message, examine the parameters specified on each SQL command to verify that they have been specified correctly.

Refer to the *Database Manager Programming Guide and Reference* for detailed information on the use of SQL with Database Manager and database management environment and utility commands.

Where to Turn for Diagnostic Procedures

The recovery procedures for many messages in this section include directions to perform a particular *system trace*. Information about what to trace is provided in the service coordinator actions for these messages.

Detailed information and procedures for performing a system trace are provided in “Preliminary Considerations for Using the System Trace Utility” on page 3-31.

Query Manager (QRW) Messages

QRW0279C A system error (reason code = "nn") occurred. Processing is ended.

Environment: Query Manager Prompted Interface

Message Cause: A system error occurred that prevents processing of the current SQL statement and subsequent SQL statements.

All applications using this database will be unable to access it.

User Action: Do the following:

1. Ensure the database is not being used by another Query Manager session or another application.
2. In the Database menu, select the appropriate database name.
3. Select **Open** from the action bar.
4. Continue with your work.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing the "Recommended Procedure for Collecting and Formatting System Trace Information," refer to the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

QRW0297C The task was not successful. Processing is ended.

Environment: Query Manager Prompted Interface

Message Cause: The COMMIT or ROLLBACK operation was not successful because of a system error.

All applications using this database are unable to access it. The database needs recovery.

User Action: Do the following:

1. Ensure the database is not being used by another Query Manager session. Ensure all other applications you may be running are ended.
2. Exit Query Manager and press the Control (Ctrl) + Alternate (Alt) + Delete (Del) keys to restart the system. Restart Query Manager.
3. In the Database menu, select the appropriate database name.
4. Select **Open** from the action bar.
5. Continue with your work.

If you receive this message again, restore the database from a backup copy using the Restore tool.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

QRW0541C A system error (reason code = "nn") occurred. The current Query Manager cannot continue.

Environment: Query Manager Prompted Interface

Message Cause: An unexpected system error occurred. Query Manager cannot process the current task.

User Action: If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

QRW1304N An error was found in the query definition.

Environment: Either:

- Query Manager Prompted Interface
- Query Manager SQL Query Window.

Message Cause: There is an error in the definition of the query that you issued from the Prompted Query, Prompted View, or SQL Query panel.

User Action: Return to the Prompted Query, Prompted View, or SQL Query panel where you defined the query. Correct the definition errors. Try to process the query again.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

QRW1305N An error was found in the form definition.

Environment: Query Manager Prompted Interface

Message Cause: You tried to generate a report, but there is a definition error in the Form panel.

User Action: Return to the Form panel. Correct the definition errors. Then try to process the contents of the Report panel again.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

QRW1306N An error was found while generating the report.**Environment:** Query Manager Prompted Interface**Message Cause:** You tried to generate a report, but a definition error was found and the report is not valid.**User Action:** Check that the report is valid or run another query that matches the form generating the report or modifying the form.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

Database Services and Query Manager (SQL) Messages

SQL0818N A time stamp conflict occurred.

Environment: Sample Database Installation

Message Cause: The timestamp generated by the precompiler at precompile time is not the same as the timestamp stored with the package at bind time.

This problem can occur if you do any of the following:

- Precompile, compile, and link without doing a bind of the application
- Precompile and bind without doing the compile and link of the program
- Bind the application using a bind file that resulted from a different precompile of the program than that which produced the object module that is linked into the application module
- Bind an application with the same name as an existing package and execute the existing application.

This SQLCODE is produced at execution time.

System Action: The statement cannot be processed.

Programmer Action: Either bind the application again, using the bind file for the program that matches the object module, or execute the program that corresponds to the package stored in the database.

If the problem persists, note the message identification number and text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184, (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.

- c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL0902C A system error (reason code = "nn") occurred. Subsequent SQL statements cannot be processed.

Note: Users may receive this message in more than one environment. Find the appropriate environment in the list that follows.

Environment: Applications Using Database Services API

Message Cause: A system error occurred that prevents processing of the current SQL statement and subsequent SQL statements.

All programs using this database are unable to access it.

System Action: The statement cannot be processed. The application program is not permitted to issue additional SQL statements. For example, a recovery routine associated with the application program cannot issue additional SQL statements. The database is marked as needing recovery. All applications using the database are prevented from accessing the database.

Programmer Action: Ensure no other sessions are using the database. Then select the database name again in the Database menu.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action: Refer to the procedure that follows the discussion of the "Query Manager SQL Query Window" environment for this message.

Environment: Sample Database Installation

Message Cause: A system error occurred.

Programmer Action: Note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action: Refer to the procedure that follows the discussion of the "Query Manager SQL Query Window" environment for this message.

Environment: Query Manager SQL Query Window

Message Cause: A system error occurred that prevents processing of the current SQL statement and subsequent SQL statements. All programs using this database are unable to access it.

User Action: Exit the SQL Query panel and return to the Database menu. Ensure no other sessions are using the database. Then select the database name again in the Database menu. If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again, modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

3. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
4. After completing steps 1, 2, and 3, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. Note the structured query language communication area (SQLCA) contents (if applicable; Part B, question 2).
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL0955C There is not enough storage available in the sort heap to process the statement.

Note: Users may receive this message in more than one environment. Find the appropriate environment in the list that follows.

Environment: Applications Using Database Services API

Message Cause: The database used all the available memory for sort processing.

System Action: The statement cannot be processed. But other SQL statements may be processed.

Programmer Action: Note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action: Refer to the procedure that follows the discussion of the "Query Manager SQL Query Window" environment for this message.

Environment: Query Manager SQL Query Window

Message Cause: The database used all the available memory for sort processing.

User Action: Note the message identification number from this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again, modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

3. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
4. After completing steps 1, 2, and 3, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.

- c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. Note the SQLCA contents (if applicable; Part B, question 2).
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
 3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL0984C COMMIT or ROLLBACK was not successful. Subsequent SQL statements cannot be processed.

Note: Users may receive this message in more than one environment. Find the appropriate environment in the list that follows.

Environment: Applications Using Database Services API

Message Cause: Due to a system error, the COMMIT or ROLLBACK statement was not successful.

Subsequent SQL statements cannot be processed. All programs using this database are unable to access it.

Programmer Action: Do the following:

1. Exit the SQL Query panel and ensure no other Query Manager sessions are using the database.
2. In the Database menu, select the name of the database you were using.
3. Press the Open (F6) key.
4. Continue with your work.

If you receive this error message again, restore the database from a backup copy using the Restore tool.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

System Action: The statement cannot be processed. The application program is not permitted to issue additional SQL statements. For example, a recovery routine associated with the application program cannot issue additional SQL statements. The database is marked as needing recovery. All applications using the database are prevented from accessing the database.

Service Coordinator Action: Refer to the procedure that follows the discussion of the "Query Manager SQL Query Window" environment for this message.

Environment: Query Manager SQL Query Window

User Action: Do the following:

1. Exit the SQL Query panel and ensure no other Query Manager sessions are using the database.
2. In the Database menu, select the name of the database you were using.
3. Press the Open (F6) key.
4. Continue with your work.

If you receive this error message again, restore the database from a backup copy using the Restore tool.

If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again, modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

3. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
4. After completing steps 1, 2, and 3, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. Note the SQLCA contents (if applicable; Part B, question 2).
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL1042C An unexpected system error occurred.

Note: Users may receive this message in more than one environment. Find the appropriate environment in the list that follows.

Environment: Applications Using Database Services API

Message Cause: A system error occurred. One possible reason for this error is that Database Manager is not installed correctly.

System Action: The command cannot be processed.

Programmer Action: Resubmit the current command. If the error persists, stop Database Manager and start it again. If the error still persists, reinstall Database Manager. If the error still persists after reinstallation, record the return code value, record all information from the SQLCA (if possible). Then contact your service coordinator.

Service Coordinator Action: Refer to the procedure that follows the discussion of the "Sample Data Base Installation" environment for this message.

Environment: Sample Database Installation

Message Cause: A system error occurred. One possible reason for this error is that Database Manager is not installed correctly.

User Action: Erase the sample database using Query Manager. Try to install the sample database again. If the problem persists, note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. Note the SQLCA contents (if applicable; Part B, question 2).
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS, and any previously listed files to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL1043C Database Services could not initialize the system catalogs. Error code *nn* was returned.

Environment: Sample Database Installation

Message Cause: The CREATE DATABASE command failed while initializing the system catalogs.

User Action: Note the message identification number and the text of this message. Then contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and error code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. Note the SQLCA contents (if applicable; Part B, question 2).
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL1084C Database Manager segments cannot be allocated.

Environment: Applications Using Database Services API

Message Cause: Database Manager could not allocate segments while processing a database environment command (START DATABASE MANAGER or START USING DATABASE).

System Action: The command cannot be processed.

Programmer Action: Record the return code value. A likely cause of the problem is insufficient memory resources, either for Database Services, or for the environment in which the operation of Database Services is being attempted. Ensure that sufficient memory resources are available to satisfy Database Services requirements. If Database Services is being operated in conjunction with other programs, ensure that the swap and move memory management option is active, or sufficient memory resources exist to satisfy the combined requirements of all programs operating. If sufficient memory resources exist and the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with "Describing a Software Problem" on page 2-5.

SQL Messages

- e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL30020N Execution failed due to a Distribution Protocol Error that will affect the successful execution of subsequent commands and SQL statements: Reason Code "<reason code>."

Environment: Application Using Remote Data Services

Message Cause: A system error occurred preventing successful execution of the current environment command or SQL statement, as well as any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The command or statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the error return code value and the reason code. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command prompt immediately before invoking the failing operation.

- b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with "Describing a Software Problem" on page 2-5.

SQL Messages

- e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL30021N Execution failed due to a Distribution Protocol Error that will affect the successful execution of subsequent commands and SQL statements: Manager "<manager>" at Level "<level>" not supported.

Environment: Application Using Remote Data Services

Message Cause: A system error occurred preventing successful connection of the application to the remote database. This SQLCODE is produced for the START USING DATABASE environment.

Manager and *level* are numeric values that identify the incompatibility between the requestor and the server.

System Action: The command cannot be processed.

Programmer Action: Record the error return code value and the *manager* and *level* values. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database again. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with "Describing a Software Problem" on page 2-5.

SQL Messages

- e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL30070N “<command – identifier>” Command is not supported.

Environment: Application Using Remote Data Services

Message Cause: The remote database received a command it does not recognize. The current environment command or SQL statement cannot be processed successfully, as is true of any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the error return code value and the command identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - The return code and command identifier
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

SQL Messages

2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL30071N “<Object – identifier>” Object is not supported.

Environment: Application Using Remote Data Services

Message Cause: The remote database received data that it does not recognize. The current environment command or SQL statement cannot be processed successfully, as is true of any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the error return code value and the object identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - The return code and object identifier
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

SQL Messages

2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL30072N “<parameter — identifier>”Parameter is not supported.

Environment: Application Using Remote Data Services

Message Cause: The remote database received data that it does not recognize. The current environment command or SQL statement cannot be processed successfully, as is true of any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the return code and the parameter identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - The return code and parameter identifier
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

SQL Messages

2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL30073N “<parameter — identifier>” Parameter value “<value>” is not supported.

Environment: Application Using Remote Data Services

Message Cause: The remote database received data that it does not recognize. The current environment command or SQL statement cannot be processed successfully, as is true of any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the return code, the parameter identifier, and the value. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - The return code and parameter identifier
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with “Describing a Software Problem” on page 2-5.

SQL Messages

- e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, “When and How to Contact IBM.” If you are directed by an IBM Support Center representative to send information to IBM, refer to “Sending Problem Determination Information to IBM” on page 4-6.

SQL30074N “<reply — identifier>” Reply is not supported.

Environment: Application Using Remote Data Services

Message Cause: The requester received a reply it does not recognize. The current environment command or SQL statement cannot be processed successfully, as is true of any subsequent commands or SQL statements. This SQLCODE is produced at statement compilation or execution time.

System Action: The statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Programmer Action: Record the error return code value and the command identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application. If the problem persists, contact your service coordinator.

Service Coordinator Action:

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF = 63). Then activate trace events 176, 182, 183, and 184 (TRACE = ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

- b. Using the procedures described in “Recommended Procedure for Collecting and Formatting System Trace Information” on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - The return code and command identifier
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with “Describing a Software Problem” on page 2-5.
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).

SQL Messages

2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL4999N A precompiler Services Error occurred.**Environment:** Outer Precompiler Using Precompiler Services API**Message Cause:** An operating system error occurred, which prevents Precompiler Services from processing function calls.**System Action:** No Precompiler Services function calls can be processed.**Programmer Action:** Record the return code. Record all error information from the SQLCA. Contact your service coordinator.**Service Coordinator Action:**

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again:
 - a. Modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.
 - b. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
3. After completing steps 1 and 2, complete the following procedure.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B, write the 8-digit alphanumeric message identification number and reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. In the space provided for Part B, question 2, write:
 - The SQLCA contents
 - A description of memory resources and requirements that includes available memory resources and the memory requirements of programs operating concurrently with Database Services
 - Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Make copies of all related files, including CONFIG.SYS and any previously listed files, to send to IBM.
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

SQL Messages

Appendix H. User Profile Management (UPM) Messages That May Require Service Coordinator Intervention

Errors detected by User Profile Management are displayed on the screen. These messages are system errors received by User Profile Management from calls to the OS/2 base operating system. They are displayed on the screen as *reason codes* in the form 'xxxx'. These reason codes are the OS/2 *return codes* received from the call. These return codes can provide some insight into the underlying problem that caused the error to occur. See OS/2 return codes for more information.

Any error or reason codes displayed by the UPM panels for values between 2100 and 2456 are Network error codes. See the NET2000 series of messages in Appendix F, "LAN Requester or OS/2 LAN Server (NET) Messages That May Require Service Coordinator Intervention" for more information.

The **Service Coordinator Action** that follows is the same for all of the User Profile Management messages.

1. If the problem was experienced with one or more of trace events 176, 182, 183, and 184 active, format the contents of the trace buffer.
2. If no traces were active when the problem occurred and if the problem can be created again, respond as directed in the following steps for the *environment* in which the user was operating:
 - For the *sample database installation* or *applications using Database Services API* environments, modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184 (TRACE=ON 176,182,183,184).
 - For the *Query Manager SQL Query Window* environment, modify the CONFIG.SYS file to allocate maximum trace buffer (TRACEBUF=63). Then activate trace events 176, 182, 183, and 184, (TRACE=ON 176,182,183,184).

Note: If the problem is associated with a specific operation, do not activate trace events from the CONFIG.SYS file. Rather, activate the trace events from the OS/2 command line immediately before invoking the failing operation.

3. Using the procedures described in "Recommended Procedure for Collecting and Formatting System Trace Information" on page 3-34, attempt to re-create the problem and gather trace information.
4. After completing steps 1, 2, and 3, complete the procedure that follows.

Before you call or mail information to IBM:

1. Complete the Problem Report Form (PRF) describing this problem:
 - a. If you have not done so already, place check marks (✓) next to Database Manager (Part A, question 3d), and MSG (Part B, question 1).
 - b. In the space provided in Part B for Return Codes and Error Codes, write the reason code contained in the message.
 - c. Answer all questions associated with "Describing a Software Problem" on page 2-5.
 - d. Note the SQLCA contents (if applicable; Part B, question 2).

User Profile Management Messages

- e. List any trace and dump selections (if applicable) that you have completed (Part B, question 3).
2. Copy the following files to diskettes: error log, CONFIG.SYS, and all trace and dump files (if available).
3. Refer to Chapter 4, "When and How to Contact IBM." If you are directed by an IBM Support Center representative to send information to IBM, refer to "Sending Problem Determination Information to IBM" on page 4-6.

User Profile Management (UPM) Messages

UPM0010C The operation could not be performed due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the requested action from being processed.

User Action: Contact your service coordinator.

UPM0058C The comment could not be changed due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0062C The user IDs could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0063C The user ID *AAAAAAAA* could not be added due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0064C The user ID *AAAAAAAA* could not be erased due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the requested action from processed.

User Action: Contact your service coordinator.

UPM0065C The groups for user ID *AAAAAAAA* could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0066C The information for user ID *AAAAAAAA* could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

User Profile Management Messages

UPM0067C The user could not be assigned to group ID AAAAAAAAAA due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0068C The information for user ID AAAAAAAAAA could not be updated due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0069C The group ID AAAAAAAAAA could not be added due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0070C The group ID AAAAAAAAAA could not be erased due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0071C The information for group ID AAAAAAAAAA could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0072C The group ID could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0073C The user ID AAAAAAAAAA could not be added to the group due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0074C The user could not be removed from group ID AAAAAAAAAA due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0078C The user ID AAAAAAAAAA could not be removed from the group due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0079C The users of group ID AAAAAAAAAA could not be retrieved due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0080C The comment for group ID AAAAAAAAAA could not be changed due to an OS/2 system error, reason code 'xxxx'.

Message Cause: A system error occurred, which prevented the command from being processed.

User Action: Contact your service coordinator.

UPM0092C The logon did not complete successfully; see the Communications Manager message file. Select Cancel in the Logon pop-up.

Message Cause: The logon was unsuccessful due to a system error during 5250 emulation.

User Action: Contact your Communications Manager system administrator.

UPM0103C Logon is denied. You are already logged on to this domain. If you want to log on at this machine, you must first log off at the other machine or specify another domain.

Message Cause: You are logged on to this domain at another machine.

User Action: Log off at the other machine or try logging on to a different domain.

Base Operating System Return Codes

Typically, base operating system return codes identify errors detected by the OS/2 program that are returned to the calling program. When these return codes are displayed on the screen or included in control blocks, they can provide clues to the underlying problems.

For example, return code '0004' indicates there are "TOO MANY OPEN FILES," preventing the application from opening another file. Closing one of the open files should resolve the problem.

Following is a list of return codes.

NO_ERROR	0000
ERROR_INVALID_FUNCTION	0001
ERROR_FILE_NOT_FOUND	0002
ERROR_PATH_NOT_FOUND	0003
ERROR_TOO_MANY_OPEN_FILES	0004
ERROR_ACCESS_DENIED	0005
ERROR_INVALID_HANDLE	0006
ERROR_ARENA_TRASHED	0007
ERROR_NOT_ENOUGH_MEMORY	0008
ERROR_INVALID_BLOCK	0009
ERROR_BAD_ENVIRONMENT	0010
ERROR_BAD_FORMAT	0011
ERROR_INVALID_ACCESS	0012
ERROR_INVALID_DATA	0013
ERROR_INVALID_DRIVE	0015
ERROR_CURRENT_DIRECTORY	0016
ERROR_NOT_SAME_DEVICE	0017
ERROR_NO_MORE_FILES	0018
ERROR_WRITE_PROTECT	0019
ERROR_BAD_UNIT	0020
ERROR_NOT_READY	0021
ERROR_BAD_COMMAND	0022
ERROR_CRC	0023
ERROR_BAD_LENGTH	0024
ERROR_SEEK	0025
ERROR_NOT_DOS_DISK	0026
ERROR_SECTOR_NOT_FOUND	0027
ERROR_OUT_OF_PAPER	0028
ERROR_WRITE_FAULT	0029
ERROR_READ_FAULT	0030
ERROR_GEN_FAILURE	0031
ERROR_SHARING_VIOLATION	0032
ERROR_LOCK_VIOLATION	0033
ERROR_WRONG_DISK	0034
ERROR_FCB_UNAVAILABLE	0035
ERROR_SHARING_BUFFER_EXCEEDED	0036
ERROR_NOT_SUPPORTED	0050
ERROR_NETWORK_ACCESS_DENIED	0065
ERROR_FILE_EXISTS	0080
ERROR_DUP_FCB	0081
ERROR_CANNOT_MAKE	0082
ERROR_FAIL_I24	0083
ERROR_OUT_OF_STRUCTURES	0084
ERROR_ALREADY_ASSIGNED	0085

ERROR_INVALID_PASSWORD	0086
ERROR_INVALID_PARAMETER	0087
ERROR_NET_WRITE_FAULT	0088
ERROR_NO_PROC_SLOTS	0089
ERROR_NOT_FROZEN	0090
ERR_TSTOVFL	0091
ERR_TSTDUP	0092
ERROR_NO_ITEMS	0093
ERROR_INTERRUPT	0095
ERROR_TOO_MANY_SEMAPHORES	0100
ERROR_EXCL_SEM_ALREADY_OWNED	0101
ERROR_SEM_IS_SET	0102
ERROR_TOO_MANY_SEM_REQUESTS	0103
ERROR_INVALID_AT_INTERRUPT_TIME	0104
ERROR_SEM_OWNER_DIED	0105
ERROR_SEM_USER_LIMIT	0106
ERROR_DISK_CHANGE	0107
ERROR_DRIVE_LOCKED	0108
ERROR_BROKEN_PIPE	0109
ERROR_OPEN_FAILED	0110
ERROR_BUFFER_OVERFLOW	0111
ERROR_DISK_FULL	0112
ERROR_NO_MORE_SEARCH_HANDLES	0113
ERROR_INVALID_TARGET_HANDLE	0114
ERROR_PROTECTION_VIOLATION	0115
ERROR_VIOKBD_REQUEST	0116
ERROR_INVALID_CATEGORY	0117
ERROR_INVALID_VERIFY_SWITCH	0118
ERROR_BAD_DRIVER_LEVEL	0119
ERROR_CALL_NOT_IMPLEMENTED	0120
ERROR_SEM_TIMEOUT	0121
ERROR_INSUFFICIENT_BUFFER	0122
ERROR_INVALID_NAME	0123
ERROR_INVALID_LEVEL	0124
ERROR_NO_VOLUME_LABEL	0125
ERROR_MOD_NOT_FOUND	0126
ERROR_PROC_NOT_FOUND	0127
ERROR_WAIT_NO_CHILDREN	0128
ERROR_CHILD_NOT_COMPLETE	0129
ERROR_DIRECT_ACCESS_HANDLE	0130
ERROR_NEGATIVE_SEEK	0131
ERROR_SEEK_ON_DEVICE	0132
ERROR_IS_JOIN_TARGET	0133
ERROR_IS_JOINED	0134
ERROR_IS_SUBSTED	0135
ERROR_NOT_JOINED	0136
ERROR_NOT_SUBSTED	0137
ERROR_JOIN_TO_JOIN	0138
ERROR_SUBST_TO_SUBST	0139
ERROR_JOIN_TO_SUBST	0140
ERROR_SUBST_TO_JOIN	0141
ERROR_BUSY_DRIVE	0142
ERROR_SAME_DRIVE	0143
ERROR_DIR_NOT_ROOT	0144
ERROR_DIR_NOT_EMPTY	0145
ERROR_IS_SUBST_PATH	0146
ERROR_IS_JOIN_PATH	0147
ERROR_PATH_BUSY	0148

Return Codes

ERROR_IS_SUBST_TARGET	0149
ERROR_SYSTEM_TRACE	0150
ERROR_INVALID_EVENT_COUNT	0151
ERROR_TOO_MANY_MUXWAITERS	0152
ERROR_INVALID_LIST_FORMAT	0153
ERROR_LABEL_TOO_LONG	0154
ERROR_TOO_MANY_TCBS	0155
ERROR_SIGNAL_REFUSED	0156
ERROR_DISCARDED	0157
ERROR_NOT_LOCKED	0158
ERROR_BAD_THREADID_ADDR	0159
ERROR_BAD_ARGUMENTS	0160
ERROR_BAD_PATHNAME	0161
ERROR_SIGNAL_PENDING	0162
ERROR_UNCERTAIN_MEDIA	0163
ERROR_MAX_THRDS_REACHED	0164
ERROR_MONITORS_NOT_SUPPORTED	0165
ERROR_INVALID_SEGMENT_NUMBER	0180
ERROR_INVALID_CALLGATE	0181
ERROR_INVALID_ORDINAL	0182
ERROR_ALREADY_EXISTS	0183
ERROR_NO_CHILD_PROCESS	0184
ERROR_CHILD_ALIVE_NOWAIT	0185
ERROR_INVALID_FLAG_NUMBER	0186
ERROR_SEM_NOT_FOUND	0187
ERROR_INVALID_STARTING_CODESEG	0188
ERROR_INVALID_STACKSEG	0189
ERROR_INVALID_MODULETYPE	0190
ERROR_INVALID_EXE_SIGNATURE	0191
ERROR_EXE_MARKED_INVALID	0192
ERROR_BAD_EXE_FORMAT	0193
ERROR_ITERATED_DATA_EXCEEDS_64k	0194
ERROR_INVALID_MINALLOCSIZE	0195
ERROR_DYNLINK_FROM_INVALID_RING	0196
ERROR_IOPL_NOT_ENABLED	0197
ERROR_INVALID_SEGDPL	0198
ERROR_AUTODATASEG_EXCEEDS_64k	0199
ERROR_RING2SEG_MUST_BE_MOVABLE	0200
ERROR_RELOC_CHAIN_XEEDS_SEGLIM	0201
ERROR_INFLOOP_IN_RELOC_CHAIN	0202
ERROR_ENVVAR_NOT_FOUND	0203
ERROR_NOT_CURRENT_CTRY	0204
ERROR_NO_SIGNAL_SENT	0205
ERROR_FILENAME_EXCED_RANGE	0206
ERROR_RING2_STACK_IN_USE	0207
ERROR_META_EXPANSION_TOO_LONG	0208
ERROR_INVALID_SIGNAL_NUMBER	0209
ERROR_THREAD_1_INACTIVE	0210
ERROR_INFO_NOT_AVAIL	0211
ERROR_LOCKED	0212
ERROR_BAD_DYNALINK	0213
ERROR_TOO_MANY_MODULES	0214
ERROR_NESTING_NOT_ALLOWED	0215

Appendix I. Supported Hardware and Software Considerations

This appendix describes supported hardware (that works with the OS/2 program or allows you to run the OS/2 program) and software considerations.

Note: The following systems are also supported by the OS/2 program. Detailed information was not available at the date of publication.

- IBM PS/2 Model 55 LS (8555) Models LT0 and LE0
- IBM PS/2 Model 65 SX (8565) Models 081, 161, and 321 (U.S); Model S21 (Europe, Middle East, and Africa)
- IBM PS/2 Model 80 (8580) Models 081, 161, and A16 (U.S); Models M16 and M81
- IBM PS/2 Model 90 XP 486 (8590) Models 0J5, 0J9, and 0KD (U.S); Models AJ5, AJ9, AK9, and AKD (Europe, Middle East, and Africa)
- IBM PS/2 Model 95 XP 486 (8595) Models 0J9, 0JD, and 0KD (U.S); Models AJ9, AJD, AK9, and AKD (Europe, Middle East, and Africa).

Determining Hardware Requirements for the OS/2 Workstation

Once you have determined the communications requirements for each Communications Manager workstation, you must ensure that the necessary communications adapters, devices, and cables are installed for each workstation. This chapter includes a complete list of the supported hardware for the OS/2 program. Some enhancement may be required to accommodate Extended Edition Version 1.3 on some models and is so noted.

Models, Diskette Drives, and Fixed-Disk Drives

Use the following tables to determine the specific hardware you need for installing and running the OS/2 program and Communications Manager on the supported models of the IBM personal computers. See Appendix B in the *System Administrator's Guide* for assistance in determining fixed-disk capacity requirements.

IBM Personal System/2 Models, Diskette Drives, and Fixed-Disk Drives

Your system unit must have a diskette-drive A capable of reading either 3.5-inch (1.44MB) or 5.25-inch (1.2MB) high capacity diskettes as the OS/2 program will be shipped on this media. A fixed-disk drive of at least 30MB of storage is required to install the OS/2 program. The IBM PS/2* models, diskette drives, and fixed-disk drives that are supported by the OS/2 program are shown in the following table.

Table I-1. IBM Personal System/2 Models, Diskette Drives, and Fixed-Disk Drives	
Hardware	Type
The IBM PS/2 Models	<ul style="list-style-type: none"> Model 30 286 (8530) Models E01 (U.S.) and E21 (Europe, Middle East, and Africa), with 30MB fixed-disk drive Model 50 (8550) with 60MB fixed-disk drive (#6666, P/N 6450606) Model 50Z (8550) Models 031 and 061 (U.S.) and 021 (Europe, Middle East, and Africa) Model 55SX (8555) Models 031 and 061 Model 60 (8560) Models 041 and 071 Model 70 (8570) Models A21, E61, and 121 (U.S.); A21, F61, M61 and 121 (Europe, Middle East, and Africa) Model 70 486 (8570) Models B21 and B61 (U.S.); R21 (Europe, Middle East and Africa) Model P70 386 (8573) Models 061 and 121 Model 80 (8580) Models 041, 071, 111, and 311 IBM 7541 and 7542 Industrial Computers Model 111 IBM 7561 and 7562 Industrial Computers Model 111
Diskette drives	<ul style="list-style-type: none"> IBM 3.5-inch (1.44MB) high-capacity diskette drive (#3057 P/N 6450353) IBM 4869 5.25-inch (360KB) external diskette drive and adapter (#8760, P/N 6450245 U.S.; P/N 6134350 Europe, Middle East, and Africa) IBM 5.25-inch (1.2MB) internal diskette drive (P/N 6451006) and adapter (P/N 6451007) for Models 60 and 80 IBM 4869 Model 2 5.25-inch (1.2MB) external diskette drive (P/N 4869002 U.S.; P/N 6451308 Europe, Middle East, and Africa) and adapter/A (P/N 6451007)
Fixed-disk drives	<ul style="list-style-type: none"> IBM 30MB fixed-disk drive (#1030 P/N 6451030 U.S.) for Model 30-286 IBM 44MB fixed-disk drive (#3046 P/N 6453046 U.S.; and P/N 6450354 Europe, Middle East, and Africa) for Models 60, 70, and 80 IBM 60MB fixed-disk drive standard on Model 70-E61 (#6666 P/N 6450606 U.S.) for Models 50 or 50Z 021 and 031 (for Europe, Middle East, and Africa, standard on Model 70-F61, #0606 P/N 6450606 for Model 50 021 and 031) IBM 70MB fixed-disk drive (#3051 P/N 6450355) for Models 60 and 80 IBM 115MB fixed-disk drive (#8730 P/N 6450377) for Model 80 IBM 120MB fixed-disk drive standard on Models 70 A21 and 121 IBM 314MB fixed-disk drive (#6023 P/N 6450381 U.S.; #0381 Europe, Middle East, and Africa) for Model 80
Note: See Appendix B in the <i>System Administrator's Guide</i> for OS/2 memory and fixed-disk requirements.	

IBM Personal Computer AT Models, Diskette Drives and Fixed-Disk Drives

The following IBM Personal Computer AT* models with at least one diskette drive and one fixed-disk drive are supported by the OS/2 program.

Table I-2. IBM Personal Computer AT Models, Diskette Drives, and Fixed Disks	
Hardware	Type
PC Model	<ul style="list-style-type: none"> IBM Personal Computer AT (5170) Models 239, 319, and 339 IBM 7531 and 7532 Industrial Computers Models 041 and 111 with 40MB fixed-disk drive IBM 7552 Industrial Computer Model 540 with additional 20MB fixed-disk option
Diskette drive	<ul style="list-style-type: none"> IBM 3.5-inch (720KB) diskette drive (#0357, P/N 6450357) IBM 5.25-inch (1.2MB) high-capacity diskette drive (#0206, P/N 6450206) IBM 4865 Model 2 (720KB) 3.5-inch external diskette drive (P/N 6280774 U.S.; P/N 2683191 Europe, Middle East and Africa)
Fixed-disk drive	<ul style="list-style-type: none"> IBM (30MB) fixed-disk drive (#0210, P/N 6450210)
Note: See Appendix B in the <i>System Administrator's Guide</i> for OS/2 memory and fixed-disk requirements.	

Displays and Adapters

Display and adapter combinations supported by PS/2 workstations and the OS/2 program are shown in the tables that follow.

IBM Personal System/2 Displays and Adapters

Use any of the displays with one of the two adapters shown in the following table.

Table I-3. IBM Personal System/2 Adapters and Displays	
Adapter	Display
IBM PS/2 Display Adapter for Models 30, 50, 50Z, 55SX, 60, 70, and 80	<ul style="list-style-type: none"> • IBM PS/2 Monochrome Display 8503 • IBM PS/2 Monochrome Display 8507 • IBM PS/2 Color Display 8512 • IBM PS/2 Color Display 8513 • IBM PS/2 Color Display 8514
IBM PS/2 Display Adapter 8514/A (#4054 P/N 1887972 U.S.; #7161 P/N 59X7161 Europe, Middle East, and Africa) not applicable to Models 30 and P70	

IBM Personal Computer AT Displays and Adapters

Use the adapters in the following table with the appropriate display indicated.

Table I-4. The IBM Personal Computer AT Adapters and Displays	
Adapter	Display
IBM Color/Graphics Monitor Adapter (#4910 P/N 1504910)	<ul style="list-style-type: none"> • IBM Color Display 5153
IBM Enhanced Graphics Adapter (EGA) (#1200 P/N 1501200 U.S.; #1250 P/N 1501250 Europe, Middle East, and Africa)	<ul style="list-style-type: none"> • IBM Color Display 5153 • IBM Enhanced Color Display 5154 • IBM Industrial Graphics Display 7534
Note: The EGA with 64KB of memory will be supported as a CGA (640 x 200 monochrome).	
IBM PS/2 Display Adapter (#4050 P/N 1887744 U.S.; #4341 P/N 07F4341 Europe, Middle East, and Africa)	<ul style="list-style-type: none"> • IBM PS/2 Monochrome Display 8503 • IBM PS/2 Monochrome Display 8507 • IBM PS/2 Color Display 8512 • IBM PS/2 Color Display 8513 • IBM PS/2 Color Display 8514

Communications Adapters

A single workstation may require one or more communications adapters (and appropriate cables). A workstation may also require devices such as a printer or a modem (for SDLC, asynchronous, or X.25 communication).

The OS/2 program supports the adapters specified in the following tables for the personal computers indicated.

Table I-5 (Page 1 of 3). OS/2 Supported Communications Adapters	
PC	Adapter types
IBM PS/2 Model 30 286 E01	IBM PS/2 Multifunction Adapter (#8635 P/N 30F5364 U.S.; #5364 Europe, Middle East, and Africa)
For the IBM PS/2 Model 30 286, the IBM PC AT* and the IBM 7531, 7532, and 7552 Industrial Computers	<ul style="list-style-type: none"> • IBM SDLC Adapter (#1205, P/N 1501205) • IBM Advanced 3278/79 Emulation Adapter (#5050, P/N 8665789 U.S.; #0252 P/N 39F9228 Europe, Middle East, and Africa) • IBM 3278/79 Emulation Adapter (#2507, P/N 8665789 U.S.; #5789 Europe, Middle East, and Africa) • IBM Serial/Parallel Adapter, asynchronous port, (#0215, P/N 6450215) • IBM PC Network Adapter II (#1220, P/N 1501220 U.S.; #6972 P/N 90X6968 Europe, Middle East, and Africa) • IBM Token-Ring Network PC Adapter II (#9858, P/N 25F9858 U.S.; #5063 P/N 67X0398 Europe, Middle East, and Africa) • IBM Enhanced 5250 Display Station Emulator Adapter (#2911 P/N 30F5383 U.S.; #3367 P/N 55X3367 Europe, Middle East, and Africa) (requires EC C30692 available 3/30/90) • Ethernet DIX Version 2 and IEEE 802.3 LAN Adapters: <ul style="list-style-type: none"> – 3Com**s EtherLink II** Model 3C503† – Ungermann-Bass** NIU**pc Model PC2030†‡ – Western Digital EtherCard PLUS** Model WDLAN-ERP-F001
†Cannot be used on the 7552 Industrial Computer.	
‡Cannot be used on the IBM PS/2 Model 30 286.	

Table I-5 (Page 2 of 3). OS/2 Supported Communications Adapters

PC	Adapter types
<p>For the IBM PS/2 models 50, 50Z, 55SX, 60, 70, P70, and 80 and the IBM 7541, 7542, 7561, and 7562 Industrial Computers</p>	<ul style="list-style-type: none"> • IBM PS/2 Dual Asynchronous Adapter/A (#3033 P/N 6550347 U.S.; #0089 P/N 6451013 Europe, Middle East, and Africa) • IBM X.25 Interface Co-Processor/2 (#6401, P/N 16F1858, except Europe, Middle East, and Africa) • IBM X.25 Interface Co-Processor/2 (#3130, P/N 07F3130, for Europe, Middle East, and Africa) † • IBM PS/2 Multiprotocol Adapter/A (SDLC, Asynchronous) (#3042, P/N 6550348) for Model 60 only • IBM PS/2 Multiprotocol Adapter/A (SDLC, Asynchronous) (#3043, P/N 6451003 U.S.) • IBM 3270 Connection, DFT (#2000 P/N 25F8448 U.S.; P/N 83X9702 Europe, Middle East, and Africa) • IBM Token-Ring Network Adapter/A (#4790, P/N 69X8138) • IBM Token-Ring Network 16/4 Adapter/A (#1133, P/N 16F1133 U.S.; #0051 P/N 25F9528 Europe, Middle East, and Africa) • IBM PC Network Adapter II/A (#1222 P/N 1501222 U.S.; #6974 P/N 90X6969 Europe, Middle East, and Africa) • IBM PC Network Adapter II/A -- frequency 2 (#5647 P/N 96X5647 U.S.; #6093 P/N 96X6061 Europe, Middle East, and Africa) • IBM PC Network Adapter II/A -- frequency 3 (#5648 P/N 96X5648 U.S.; #6094 P/N 96X6066 Europe, Middle East, and Africa) • IBM PC Network Baseband Adapter/A (#1223 P/N 1501223 U.S.; #6975 P/N 90X6967 Europe, Middle East, and Africa) • IBM Realtime Interface Co-Processor Multiport/2 (#6263 P/N 09F1897 U.S.; P/N 09F1896 Europe, Middle East, and Africa) (supported by Device Driver API only) • IBM S/36/38 Workstation Emulation Adapter/A (#6279 P/N 69X6279 U.S.; P/N 69X6275 Europe, Middle East, and Africa) • Ethernet DIX Version 2 and IEEE 802.3 LAN Adapter: <ul style="list-style-type: none"> – 3Com's EtherLink/MC** Model 3C523 – Ungermann-Bass NIUps Model PC3030(U.S.) – Western Digital EtherCard PLUS/A Model WDLAN-EPA-F001 (U.S.)
<p>† After Communications Manager has been installed on a workstation that will use X.25 support, you must copy the file ICAAIM.COM from the X.25 Interface Co-Processor/2 adapter options diskette into the CMLIB subdirectory.</p> <p>For best use of the IBM X.25 Interface Co-Processor/2 adapter, set the Shared Storage Window Location and Size parameter for the adapter to 16KB without an address conflict. You do this after you install the adapter using the PS/2 reference diskette. Follow instructions in the documentation provided with the PS/2 reference diskette.</p> <p>You must set the IBM X.25 Interface Co-Processor/2 adapter to use hardware Interrupt Request 11 (IRQ11). The default is Interrupt Request 7 (IRQ7). IRQ7 can interfere with a printer attached to a parallel port of the workstation. Follow the instructions in the documentation provided with the PS/2 reference diskette.</p>	

Table I-5 (Page 3 of 3). OS/2 Supported Communications Adapters

PC	Adapter types
<p>For the IBM PC AT or the IBM 7531 and 7532 Industrial Computers</p>	<ul style="list-style-type: none"> • IBM Memory Expansion Adapter, Asynchronous, (#3395, P/N 55X3679) • Ex 128/640K Memory Expansion (#3338 P/N 6450338 Europe, Middle East, and Africa) • Ex 512K/1MB Memory Expansion (#3343 P/N 6450343 Europe, Middle East, and Africa) • IBM Token-Ring Network PC Adapter (#3391 P/N 6339100 U.S.; #9100 P/N 61X3807 Europe, Middle East, and Africa) • IBM Token-Ring Network PC Adapter II (#5063 P/N 67X0438 U.S.; P/N 67X0398 Europe, Middle East, and Africa) • IBM Token-Ring Network PC Adapter II (short) (#5733 P/N 16F0500 Europe, Middle East, and Africa) • IBM Token-Ring Network 16/4 Adapter (#7367 P/N 25F7367 U.S.; #0020 P/N 25F9522 Europe, Middle East, and Africa) • IBM PC Network Baseband Adapter (#1221 P/N 1501221 U.S.; #6973 P/N 90X6966 Europe, Middle East, and Africa) • IBM PC Network Adapter II -- frequency 2 (#5645 P/N 96X5645 U.S.; #6091 P/N 96X6051 Europe, Middle East, and Africa) • IBM PC Network Adapter II -- frequency 3 (#5646 P/N 96X5646 U.S.; #6092 P/N 96X6056 Europe, Middle East, and Africa) • IBM Multifunction Memory Expansion Adapter (#3619 P/N 74X8640 U.S.; #5364 P/N 30F5364 Europe, Middle East, and Africa) • IBM Enhanced Memory Expansion Adapter, Asynchronous, (#8635 P/N 74X8635 U.S.)
<p>Note: Due to hardware interrupts and DMA usage conflicts, not all combinations of communications adapters can be used concurrently by the OS/2 program. Refer to "Limitations on Communication Adapters" on page I-7 for an explanation of the limitations.</p>	

Limitations on Communication Adapters

When planning, be careful to observe the hardware limitations shown in the following table.

Table I-6 (Page 1 of 2). Hardware Limitations	
Adapter Type	Limitations
LAN	<p>If an IBM Token-Ring Adapter and an IBM PS/2 Display Adapter are installed in an IBM Personal Computer AT or an IBM Industrial Computer (7522, 7531, or 7532), do not set the jumper switches on the IBM Token-Ring Adapter to use addresses X'CA000' through X'CA7FF'. The IBM PS/2 Display Adapter uses the addresses.</p> <p>The number of supported LAN adapters per workstation is limited to a maximum of two (IBM Token-Ring Network, ETHERAND Network, and IBM PC Network).</p> <p>Only one Ungermann-Bass card and only one Western Digital card can be installed, but either one can be combined with one other LAN adapter.</p> <p>The LAN Requester feature of the OS/2 program Version 1.3 requires OS/2 LAN Server Version 1.2 or OS/2 LAN Server Version 1.3 to be operational.</p> <p>Interrupt levels also must be considered when multiple adapters are used simultaneously since some adapters use the same interrupt levels.</p>
X.25	<p>Concurrent connection is supported on up to eight X.25 links by the X.25 API. Each link requires a separate IBM X.25 Interface Co-Processor/2 adapter. Consequently, the actual number of links is also limited by the number of adapters that can be installed.</p> <p>A maximum of 128 virtual circuits (permanent virtual circuits (PVCs) or switched virtual circuits (SVCs)) can be defined on each of these links. Up to 64 of these can be PVCs. A system total of 128 virtual circuits can be configured. A system total of 128 virtual circuits can be active at once.</p> <p>Up to 40 X.25 applications can run concurrently, one of which normally supports the higher level SNA applications and the remainder can be used for non-SNA applications. However, this single X.25 SNA application can itself support multiple concurrent SNA applications such as applications written to the higher level SNA APIs of Communications Manager.</p> <p>A user application using the IBM Realtime Interface Co-Processor: Operating System/2 Support program may not run on an IBM X.25 Interface Co-Processor/2 adapter concurrently with Communications Manager X.25 support. You must set the IBM X.25 Interface Co-Processor/2 adapter to use hardware Interrupt Request 11 (IRQ11). The default is Interrupt Request 7 (IRQ7). IRQ7 can interfere with a printer attached a parallel port of the workstation. Follow the instructions in the documentation provided with the PS/2 reference diskette.</p>
3270 DFT	<p>If an IBM 3270 Connection DFT adapter and an IBM S/36/38 Workstation Emulation Adapter/A are installed in a PS/2 workstation, the IBM 3270 Connection DFT adapter must reside in a lower-numbered slot. For example, the 3270 Connection adapter can reside in slot 0 and the S/36/38 Adapter/A can reside in slot 4.</p>
3278/3279 emulation	<p>Only one 3278/3279 emulation adapter per IBM Personal Computer is supported.</p>
SDLC	<p>On an IBM PC AT system, the SDLC device driver cannot be used at the same time as the OS/2 mouse device driver or the asynchronous device driver.</p> <p>You cannot use an SDLC adapter and an Asynchronous adapter concurrently on a Model 30 286.</p>

Table I-6 (Page 2 of 2). Hardware Limitations	
Adapter Type	Limitations
Asynchronous	<p>A maximum of two asynchronous ports on the IBM Personal Computer AT system and the Model 30 286 are supported. You can have a maximum of three asynchronous ports on the other supported PS/2 computers.</p> <p>Interrupt levels also must be considered when multiple adapters are used simultaneously, since some adapters use the same interrupt levels. For example, an asynchronous adapter cannot be used concurrently with an SDLC adapter on the PC AT or IBM PS/2 Model 30 286 systems, because both adapters use hardware interrupt levels 3 and 4. This problem does not exist on other supported PS/2 systems, because they can share hardware interrupt levels.</p> <p>If both adapters are installed, you must maintain two copies of the CONFIG.SYS file, one for each device driver environment. In addition, you must restart your system using the required file, renamed to CONFIG.SYS, to load the appropriate device before trying to start ASCII or 3270 terminal emulation (SDLC).</p>
SDLC, Asynchronous	<p>A maximum of two IBM PS/2 Multiprotocol Adapter/A (SDLC, Asynchronous) can be used on a PS/2 computer, except for the Model 30 286, which does not support this adapter.</p> <p>The PS/2 Multiprotocol Adapter/A (SDLC, Asynchronous) must be initialized using the PS/2 Installation Setup program. When more than one adapter is being installed, there are specific DMA channels, called "arbitration levels" by the setup program, that must be assigned to the primary and alternate adapters to prevent failures. The SDLC primary adapter, called SDLC 1 during setup, should always be configured using arbitration level 1. The SDLC alternate adapter, called SDLC 2 during setup, should be configured using arbitration level 7. Be sure to avoid another arbitration level that might be in conflict with other installed adapters.</p>
Twinaxial	<p>Only one IBM S/36/38 Workstation Emulation Adapter/A can be installed in a PS/2 workstation.</p> <p>If an IBM 3270 Connection DFT adapter and an IBM S/36/38 Workstation Emulation Adapter/A are installed in a PS/2 workstation, the IBM 3270 Connection DFT adapter must reside in a lower-numbered slot. For example, the 3270 Connection adapter can reside in slot 0 and the S/36/38 Adapter/A can reside in slot 4.</p> <p>A maximum of one Enhanced Display Station Emulation Adapter for the IBM PC AT can be installed.</p>

Keyboards and Keyboard Templates

You should provide users with a keyboard template for any local key differences such as when using protocol converters. One set of keyboard templates is shipped with every OS/2 package; additional sets are available for separate purchase. See Chapter 22 in the *System Administrator's Guide* for details about remapping the keyboard.

The keyboards in the following table are supported by the OS/2 program.

Table I-7. Keyboards Supported by the OS/2 Program	
Keyboard	Hardware
The IBM Personal Computer AT Keyboard	The IBM PC AT Models 239 and 319
The IBM Enhanced Personal Computer Keyboard	The IBM PS/2, all models, and the IBM PC AT Model 339

Pointing Devices

The pointing devices in the following table are supported by the OS/2 program.

Pointing Device	Comments
The PS/2 Mouse	Feature #8770, P/N 6450350, attached to the system pointing device port
Serial pointing device	Serial or asynchronous pointing devices are supported in the OS/2 mode only.
Microsoft** Mouse for the IBM PCs	Microsoft P/N 039-099, 100 ppi
Microsoft Mouse for the IBM PCs	Microsoft P/N 039-199, 200 ppi
PC Mouse	Metagraphics/Mouse Systems P/N 900120-214, 100 ppi
VisiOn Mouse	VisiOn Corp. P/N 69910-1011, 100 ppi

The following table describes parallel pointing devices for the IBM Personal Computer AT supported by the OS/2 program.

Parallel Pointing Device	Comments
Microsoft Mouse for the IBM Personal Computers	Microsoft P/N 037-099, 100 ppi
Microsoft Mouse for the IBM Personal Computers	Microsoft P/N 037-199, 200 ppi
InPort Microsoft Mouse for the IBM Personal Computers	Microsoft P/N 037-299, 200 ppi

Printers

The following printers are supported by the OS/2 program for Presentation Manager* and non-Presentation Manager applications.

Printer	Model
IBM 4019 Laser Printer (supported with 5250 WSF only)	
IBM 4201 Proprinter* (no longer marketed)	Model 1
IBM 4201 Proprinter	Model 2
IBM 4201 Proprinter	Model 3
IBM 4202 Proprinter XL (no longer marketed)	Model 1
IBM 4202 Proprinter II XL	Model 2
IBM 4202 Proprinter III XL	Model 3
IBM 4207 Proprinter X24 (no longer marketed)	Model 1
IBM 4207 Proprinter X24E	Model 2
IBM 4208 Proprinter XL24 (no longer marketed)	Model 1
IBM 4208 Proprinter XL24E	Model 2
IBM 3852 Color Jetprinter (no longer marketed)	Model 2
IBM 5152 Graphics Printer (no longer marketed)	Model 2

Table I-10 (Page 2 of 2). Printers Supported by the OS/2 Program	
Printer	Model
IBM 5182 Color Printer (supported in mono mode only and is no longer marketed)	Model 1
IBM 3812 Page Printer (supported in 5152 compatibility mode)	
IBM 5201 Quietwriter*	Model 1
IBM 5201 Quietwriter	Model 2
IBM 5202 Quietwriter III	
IBM 5204 Quickwriter* (supported in Quietwriter III compatibility mode)	Model 1
IBM 5216 Wheelprinter	Model 1
IBM 5216 Wheelprinter	Model 2
IBM Personal Page Printer II	Model 4216-030
Note: Parallel attached printers are supported in both the OS/2 mode and the DOS mode. Serially attached asynchronous printers are supported only in the OS/2 mode. A PostScript driver is included with the OS/2 program.	

Plotters

Non-Presentation Manager applications coded to interface with plotters will run unmodified under the OS/2 program and are supported only in the OS/2 mode.

The following table lists plotters supported by the OS/2 program in the OS/2 mode.

Table I-11. Plotters Supported by the OS/2 Program in the OS/2 Mode	
Plotter	Comments
IBM 6180 Plotter	
IBM 6182 Plotter	
IBM 6184 Plotter	
IBM 6186 Plotter	Models 1 and 2
IBM 7371 Plotter	No longer marketed
IBM 7372 Plotter	
IBM 7374 Plotter	Models 1 and 2 (no longer marketed)
IBM 7375 Plotter	No longer marketed
Note: Ensure that the COM port parity and the plotter parity use the same setting with a PS/2 Model 60. From the OS/2 Utilities Control Panel, select Options , and then select Communications port . Set the parity to Even or Odd and ensure the plotter uses the same setting.	

Controllers

The following table lists IBM host communication controllers supported by the OS/2 program.

Table I-12. IBM Controllers Supported by the OS/2 Program
IBM 3274 Control Unit
IBM 3174 Subsystem Control Unit
IBM 3705 Communications Controller
IBM 3720 Communications Controller
IBM 3725 Communications Controller
IBM 3745 Communications Controller
IBM 3726 Communication Controller Expansion
IBM 5394 Remote Controller
IBM 9370 Telecommunications and Workstation Subsystem Controllers

Protocol Converters

The following table describes protocol converters supported by the OS/2 program.

Table I-13. Protocol Converters Supported by the OS/2 Program	
Protocol Converter	Comments
IBM 3708 Model 001	
IBM 7171 Model 001	
IBM Series/1	With Yale ASCII version 2 IUP
IBM 3174 (with #3020) Models 51R or 52R	
9370 ASCII Subsystem	

Modems

The OS/2 program supports currently available IBM modems, both synchronous modems for Synchronous Data Link Control (SDLC) connections and asynchronous modems for asynchronous connections.

Non-IBM asynchronous modems are also supported, as well as the base function of CCITT V.24 (EIA RS232D) standard data terminal equipment (DTE) to data circuit-terminating equipment (DCE) interface for asynchronous communications.

X.25 users will require a synchronous connection to the link access protocol balanced (LAPB) link. See your network supplier for the recommended connection type and modem.

Synchronous Modems for SDLC Connections

The modem features included in the SDLC modem support are as follows:

- Switched connections:
 - SDLC supports only data circuit-terminating equipment (DCE) clocking modems.
 - Modems that are compatible with the 1984 CCITT V.24/V.28 interface recommendation as implemented by IBM are supported for manual calling as follows:
 - Manual call originate
 - Manual call answer

— Automatic call answer.

- Non-switched connections:

Non-switched connections are supported to devices that are compatible with the 1984 CCITT V.24/V.28 interface recommendation as implemented by IBM.

An IBM modem or equivalent that supports either switched or non-switched communications at transmission speeds of a minimum of 1200 bps to a maximum of 19200 bps is required for SDLC communications.

Asynchronous Modems

Communications Manager supports switched or non-switched connections to full-duplex modems, or asynchronous communications devices that are compatible with the 1984 CCITT V.24 (EIA RS232D)/V.28 interface recommendations as implemented by IBM are supported with the following command sets:

- No command set
- Hayes** Attention command set
- 1984 V.25 bis command set
- V.25 bis and V.22 bis control circuit signaling between the DTE and the DCE.

The following table shows asynchronous modems that have been tested with appropriate IBM personal computers when using Communications Manager.

Table I-14. Modems for Communications Manager		
Type	Modem	Command Set Supported
Asynchronous modems tested with IBM Personal System/2 Models 30 286, 50, 50Z, 55SX, 60, 70, P70, and 80	IBM 5841/PC 1200 (external)	Attention
	IBM 5842/PC 2400 (external)	Attention
	IBM PS/2 (internal 300/1200)	Attention
Asynchronous modems tested with IBM PC AT	IBM 5841/PC 1200 (external)	Attention
	IBM 5842/PC 2400 (external)	
	IBM 4805/PC 1200 (internal)	Attention
	IBM 4829/PC 2400 (internal)	Attention
Asynchronous non-IBM modems tested with IBM PS/2 or IBM Personal Computer AT. Many other equivalent units may also work.	Hayes Smartmodem** 1200	Attention
	Hayes Smartmodem 2400	Attention
	Hayes V-Series Modem Enhancer 1200	Attention
	Hayes V-Series Modem Enhancer 2400	Attention
	ROLMphone** 244PC	Attention
	MicroCom**AX/2400C	Attention
	Racal-Vadic** VI2422S	V.25bis
<p>Note: Communications Manager ACDI recognizes each attached device (modem or ROLMphone 244PC) through user-specified configuration.</p> <p>The ROLMphone 244PC contains both a data channel and a voice channel, but ACDI supports only the data channel for making data connections.</p> <p>Asynchronous modems use the following command sets for modems:</p> <ul style="list-style-type: none"> • Hayes ATtention command set • V.25bis (Racal-Vadic V12422S) • Typed command sets provided by user. <p>Asynchronous modems that follow CCITT V.24 (EIA RS232D) signal protocols as implemented by IBM are also supported.</p>		

Modem Switch Settings for Asynchronous Modems

On some modems, certain optional settings are preset by the manufacturer to the requirements of the Post Telephone and Telegraph Administration (PTT) for the country in which they are marketed. If any portion of a setup for a modem listed here violates any PTT regulations for the country in which it is to be used, you should use the setup required by the PTT.

Recommended Modem Switch Settings: Modems produced by different manufacturers differ in the number of switches and in the default values assigned to them. For correct operation with the OS/2 ACDI, the applicable modem switches must be set to follow the true state of data terminal ready (DTR) and to send the true state of Carrier Detect. A switch may also need to be set to enable command recognition.

Recommended IBM 5841 Switch Settings: The following table shows front switch settings for the IBM 5841 modem.

Front Switch	Position	Function
ST	Out	Self test not active
AL	Out	Analog Loop test not active
DL	Out	Digital Loop test not active
RL	Out	Remote Digital Loop test not active
FS	In Out	For 300 bps For 1200 bps
D/T	Use appropriately if manual dialing is to be used	

The following table shows the dip switch settings for the IBM 5841 modem.

Dip Switch	Position	Function
1	On	True DCD
2	N/A	Not used
3	N/A	Not used
4	On	Asynchronous mode
5	On	DTR from PC
6	N/A	Not used in asynchronous mode
7	Off	CTS in response to RTS
8	Off	Semi-traditional DSR

ROLMphone 244PC: There are no switches on the ROLMphone 244PC and it is supported as a Hayes 1200B modem. Communications Manager uses the AT command set only (Hayes emulation mode).

Recommended MicroCom AX/1200 and AX/2400 Switch Settings: The following tables show the recommended front and rear switch settings for the MicroCom AX/1200 modem and the MicroCom AX/2400 modem.

Table I-17. Front Configuration Switches		
Switch	Position	Function
1	Up	Respond to DTR
2	Down	AT mode
3	Down	Return result code
4	Up	Command echo ON
5	Down	Disable auto answer
6	Up	CD tracks remote modem Data Carrier
7	Up	Return long form result codes
8	Down	Smart mode
A/S	Out	Asynchronous mode
T/D	Data	Data mode
<p>Note: On rack-mount modems, the T/D (Talk/Data) and A/S (Asynchronous/Synchronous) pushbuttons are replaced by two additional front configuration switches. The T/D button is replaced by front switch #9 and the A/S button is replaced by front switch #10.</p>		

Table I-18. Rear Configuration Switches		
Switch	Position	Function
1	Up	No flow control on serial or modem port
2	Up	No flow control on serial or modem port
3	Down	Auto-reliable mode
4	Up	Auto-reliable mode
5	Down	Use MNP extended result codes
6	Down	Restore factory defaults
7	Down	Read switches on reset
8	N/A	Not used

Recommended Racal-Vadic VI2422S Switch Settings: The following table shows the switch settings recommended for the Racal-Vadic VI2422S modem.

Table I-19. Racal-Vadic VI2422S Switch Settings		
Switch/Strap	Position	Function
A3	Off	Allow remote interactive operation
A4	Off	Allow local interactive operation
A6	Off	Enable option key on front panel

All other straps are factory set and should not be changed.

Using the instructions in the modem documentation for setting options manually, set the PSTN option #12 (ring delay) to 3 (no delay). ACDI controls the minimum time delay for answering and the standard modem setting adds 3 seconds to this time.

Asynchronous Cable Configuration

Two types of cables are required when connecting the personal computer directly to another computer or to a modem.

- When connecting the personal computer to another computer, a null modem cable is required. See the *System Administrator's Guide* for null modem cable specifications.
- When connecting the personal computer to a modem, the cable is normally supplied with or is specified by the modem. The cable and the modem must meet the control circuit signaling requirements of the ACDI.

Signal and frame grounding requirements in your country must be considered.

Asynchronous Communication Device Interface (ACDI)

The equivalent CCITT V.24 and EIA RS232D circuit names are described in the following list.

- Request to send (RTS) is EIA RS232D Circuit CA and CCITT V.24 Circuit Number 105.

This signal is raised by ACDI prior to establishing a connection and lowered when the connection is brought down. This signal works in concert with DTR in that it is always raised after DTR and lowered before DTR.

- Clear to send (CTS) is EIA RS232D Circuit CB and CCITT V.24 Circuit Number 106.

This signal is raised by the DCE when it is ready to accept data, usually in response to the RTS being raised. ACDI will not transmit data without this circuit being raised. If this circuit is lowered and remains lowered for more than 30 seconds, ACDI will assume the connection is lost and will bring the connection down.

- Data set ready (DSR) is EIA RS232D Circuit CC and CCITT V.24 Circuit Number 107.

This signal is raised by the DCE to indicate it is on-line and ready to begin communicating. Some DCEs use this signal as a *power-on* indicator. ACDI expects this signal to be lowered for a minimum of 100 ms after every connection *take-down*. Failure to do so can cause a warning message to be displayed instructing the user to ensure the DCE has, in fact, gone *on-hook*.

- DTR is EIA RS232D Circuit CD and CCITT V.24 Circuit Number 108.2.

This signal is raised by ACDI to indicate it is ready to establish a connection. When this signal is lowered, it instructs the DCE to take down the connection.

- Ring indicator (RI) is EIA RS232D Circuit CE and CCITT V.24 Circuit Number 125 (CCITT).

This signal is raised by the DCE every time a ring signal is detected, and it remains raised for the duration of the ring signal. This is used to indicate an incoming call.

- Received line signal detector, or carrier detect (CD or DCD), is EIA RS232D Circuit CF and CCITT V.24 Circuit Number 109.

This signal is raised by the DCE when the DCE and the remote DCE have recognized each other's carrier signal and have synchronized themselves. If this circuit is lowered and remains lowered for more than 30 seconds, ACDI assumes the connection is lost and brings the connection down.

X.25 Connection Types

The X.25 support within Communications Manager supports only DCE clocking modems and X.21 connections. This applies to both DTE and partner link level configurations profiles.

The following connection types are available (see "X.25 Cables"):

- Non-switched connections to an X.25 network

Non-switched connections are supported to devices compatible with the following CCITT interfaces:

- X.21 bis/V.24 up to 19.2kbps
- X.21 bis/V.35 up to 56kbps
- X.21 up to 64kbps.

- Switched connections to an X.25 network

In France, X.25 support for the Transpac VX32 modem subscriber unit is provided. The use of this modem requires a smart card that must be configured for call mode Automatic 108/1, DTE type 1. Connection to the modem will require cable option V.24, feature #6322.

The Transpac VX32 network access supports a single standardized input logical channel, logical channel 1. Eight outgoing dedicated logical channels are available; these are logical channels 1 through 8. The packet level format is X.25 CCITT 1984. Refer to your network subscription details when configuring this option.

- Point-to-point connections using X.25

Two PS/2 computers that both have Communications Manager X.25 support installed can be connected in a *back-to-back* configuration. One PS/2 must be configured as a partner in the line profile, and the other PS/2 must be configured as a DTE. Both link configuration profiles must be set to initiate from the DTE.

The following connection types are supported:

- X.21 bis/V.24 up to 19.2kbps
- X.21 bis/V.35 up to 56kbps
- X.21 up to 64kbps.

This configuration will require appropriate manual call originate or answer modems or modem eliminators.

X.25 Cables

The following cables are required for attachment of the IBM X.25 Interface Co-Processor/2 adapter to the X.25 packet switching data network (PSDN):

- Cable option X.21 (#6321, P/N 16F1865); Europe, Middle East, and Africa (#3150, P/N 07F3150)
- Cable option V.24 (#6322, P/N 16F1869); Europe, Middle East, and Africa (#3160, P/N 07F3160)

- Cable option V.35 (#6323, P/N 16F1871); Europe, Middle East, and Africa (#0190, P/N 07F3170); France (#3175, P/N 07F3175).

Host Software Considerations

Programming Tools and Information is available for application developers. It can be used to create a base operating system application or an API program.

The following sections identify software products for systems with which the OS/2 program interacts. The indicated software should be at the version, release, and modification level (V/R/M) identified or at a more recent level.

If you are installing and running Communications Manager, use the following tables to determine whether additional host communications programs (or their equivalents) are necessary depending on the function you are performing.

The acronyms used in these tables are defined in Table I-20.

Table I-20. Acronym Definitions	
Acronym	Definition
ACF/VTAM*	Advanced Communications Functions for the Virtual Telecommunications Access Method
AIX*	Advanced Interactive Executive
APPC	Advanced Program-to-Program Communication
CICS	Customer Information Control System
CMS	Conversational Monitor System
CPF	Control Program Facility
DOS	Disk Operating System
ECF	Enhanced Connectivity Facility
EDX	Event Driven Executive
EE	Extended Edition
ES	Extended Services
FTP	File Transfer Program
IWS	Intelligent Work Station
ICF	Interactive Communications Feature
MVS	Multiple Virtual Storage
NCP	Network Control Program
NIS	Network Interface Support
NPSI	Network Control Program Packet Switching Interface
NSF	Network Supervisor Program
OEM	Original Equipment Manufacturer
PTF	Program Temporary Fix
RPS	Real-time Programming System
S	System
SP	System Product
SSP	System Support Program
TSO(/E)	Time Sharing Option (/Extensions)
VM	Virtual Machine
VS	Virtual Storage
VSE	Virtual Storage Extended
XA	Extended Architecture

Host Communications Programs

One or more of the following host software prerequisites (or its equivalent) may be required depending upon the function to be performed with Communications Manager.

Table I-21 (Page 1 of 2). Host Communications Programs				
Environment	Host Software	Program Number	V/R/M	Comments
APPC (LU 6.2)	CICS/OS/VS	5740-XX1	1.7.0	With ACF/VTAM 3.1.1
	CICS/DOS/VS	5746-XX3	1.7.0	With ACF/VTAM 3.1.1
	ACF/VTAM	5665-289	3.2.0	
	OS/400*	5728-SS1	1.2	
	S/36 SSP	5727-SS1	5.1	
	S/38 CPF	5714-SS1	8.0	
	S/88 OS		3.0	
	S/88 APPC Program	5732-025	3.0	
	S/88 SNA/NIS	5732-027	3.0	
	S/1 RPS	5719-PC7	7.2	
	RT*AIX	5713-AEQ	2.1.1	
	APPC/PC	6467-038	1.11	For IBM PC DOS systems
	OS/2 EE		1.0, 1.1, or 1.2	For IBM OS/2 systems
3270 terminal emulation	MVS + TSO/E	5665-285	1.3.0	With ACF/VTAM 3.1.1
	VM/SP + CMS	5664-167	1.4.0	ACF/VTAM 3.1.1 optional
	MVS + CICS	5740-XX1	1.7.0	With ACF/VTAM 3.1.1
	DOS/VSE + CICS	5746-XX3	1.7.0	With ACF/VTAM 3.1.1
	IBM AS/400 Communication Utilities	5728-CM1		3270 Remote Attachment †
ECF/SRPI	MVS/XA + TSO/E	5665-285	1.3.0	With ACF/VTAM 3.1.1
	VM/SP + CMS	5664-167	1.4.0	ACF/VTAM 3.1.1 optional
LUA (LU 0)	IMS DB/DC	5740-XX2	1.2 or 2.1	
	CICS/OS/VS	5740-XX1	1.7	With ACF/VTAM 3.1.1
5250 Work Station Feature	S/36 SSP	5727-SS1	5.1	
	Base Communications Support		5.1	Feature 6001/6047
	Base SSP-ICF Support		5.1	Feature 6266/6268
	Display Station Pass-through		5.1	Feature 6079/6090 (Required for S/36)
	S/36 Token-Ring Support	5727-LC1 or 5727-LC6	5.1	5.1
	OS/400	5728-SS1	1.2	

Environment	Host Software	Program Number	V/R/M	Comments
IBM 3101 terminal emulation through supported protocol converters				"Protocol Converters" on page I-11 lists supported protocol converters
	S/1 EDX	5719-EM1	5.0	
Asynchronous DEC** VT100 terminal emulation	RT AIX	5713-AEQ	2.1.1	
	OEM hosts			Appropriate programs

† To run 3270 Emulation with AS/400, either from a standalone workstation or through an OS/2 SNA gateway, use IBM AS/400 Communication Utilities Licensed Program, program number 5728-CM1. You must use the 3270 Remote Attachment Support feature of this AS/400 program.

Host Communications Programs for NCP

The following figure shows the NCP and related programs supported when communicating with Communications Manager. ACF/NCP (and associated NPSI) programs group support various 37x5 devices.

Environment	Controller	ACF/NCP Program Number	V/R/M	NPSI † Program Number	V/R/M
X.25 or SDLC or Token-Ring	3705 ††	5667-124	3.1	5668-981	1.3.2
	3725	5668-854	4.2	5668-981	1.4.3
	3725	5668-854	4.3.1	5668-719	2.1
	3720/3745	5668-738	5.2	5668-035	3.1

† NPSI is required only for X.25.
†† There is no Token-Ring connection to 3705.

Host File Transfer Programs

The products required to support file transfer with the OS/2 program are described in the following table.

Environment	Host Software	Program Number	V/R/M	Comments
3270 terminal emulation	3270 PC FTP	5665-311	1.1.1	MVS + TSO/E
		5664-281	1.1.1	VM/SP + CMS
		5798-DQH		MVS + CICS
	VSE/SP IWS Support	5666-345 5750-ABF	3.2.0 4.1	From OS/2 command prompt only
5250 Work Station Feature	AS/400 PC Support	5728-PC1	2.0	
	S/36 PC Support	5727-WS1 5727-WS6	5.1 5.1	
Asynchronous terminal emulation with protocol converter	3270 PC FTP	5665-311	1.1.1	MVS + TSO/E
		5664-281	1.1.1	VM/SP + CMS
	VSE/SP IWS Support	5666-345 5750-ABF	3.2.0 4.1	From OS/2 command prompt only
XMODEM file	PC			Non-IBM programs
	OEM hosts			Appropriate programs
	S/1			Application Program dependent
	RT AIX	5713-AEQ	2.1.1	

Communications and System Management Host Programs

The product required in the S/370 architecture to support communications and system management alerts and vital product data (VPD) (requires NetView* 1.3.0) sent from the OS/2 program is described in the following table.

Environment	Host Software	Program Number	V/R/M	Comments
Communications and System Management	NetView	5665-361 (No VPD support)	1.2.0 †	MVS/370 + ACF/VTAM Version 3.1.1 or later
		5665-362	1.3.0	MVS/XA + ACF/VTAM Version 3.1.1 or later
		5664-204	1.3.0	VM/SP + ACF/VTAM Version 3.1.1 or later
		5666-343	1.2.0	VSE/SP + ACF/VTAM Version 3.1.2 or later

†Vital Product Data (VPD) requires Version 1.3.0 or later.

Host Graphical Data Display Manager (GDDM) Programs

To be able to use the GDDM to OS/2 Link, software to view, print, plot, and download GDDM host graphics, GDDM Version 2, Release 2, is required with the following authorized program analysis report (APAR) applied.

Host System	APAR Number
MVS	PL49183
VSE	PL49248
VM/370	PL49249
VM/XA	PL49259

Appendix J. Problem Report Form

This appendix contains the OS/2 program Problem Report Form (PRF), describes when and why a PRF should be used, and explains how to complete a PRF.

Note: Do not write on the blank Problem Report Form that begins on page J-6. Make several copies and save this original in case you need additional copies in the future.

When and Why You Should Use This Form

IBM suggests that service coordinators maintain a history of problems that they have been asked to investigate. Make several copies of the blank Problem Report Form (PRF) contained in this appendix for future use.

When a problem is reported, use a copy of the PRF to maintain a history and to report problems to IBM.

How to Use a Problem Report Form

Answer all the questions in Part A and Part B, and, if applicable, the questions in Part C for the communications problems only.

Explanatory information for each question is provided as follows.

- **Part A: BACKGROUND INFORMATION**

1.a. Customer Number: This number is assigned at the time the program license is acquired. If you do not know your customer number, contact your authorized IBM marketing representative. (When you use ServiceLine, this number is referred to as your *access code*. See "When to Contact the IBM Support Center" on page 4-4 for more information).

1.b. Customer Name: Company or organization.

1.c. Service Coordinator Name: As registered with IBM.

2. Problem Numbers: If the problem was previously reported to the IBM Support Center or by way of ServiceLine, one or both of the following numbers may have been assigned by IBM to the problem:

- Problem Management Record Number.

This number can be provided by ServiceLine or an IBM Support Center representative. When you report a problem, if a resolution was not provided at the time of your call, an IBM Support Center representative will return your call within eight business hours. Use this number to determine the status of the investigation of the problem.

- Authorized Program Analysis Report (APAR) Number.

If the problem is new and unique, IBM will continue to research potential causes and actions. For purposes of IBM internal recording, this process creates an IBM report known as an Authorized Program Analysis Report (APAR).

If either or both numbers are assigned to the problem, write the numbers in the spaces provided on the PRF (Part A, question 2). For additional information, refer to "How the IBM Support Center Works for You" on page 4-5.

3.a. *Program Name:* This is filled in for you.

3.b. *Version Number:* (The release of the product) This is provided for you.

3.c. *Level:* If you have previously loaded program updates or corrections from IBM, write the current level in the space provided. Refer to "Determining the Level of Corrective Service Currently Loaded on a Workstation" on page 5-2 for assistance.

3.d. *Component reporting the problem:* Check (✓) the component that is reporting the problem, such as base operating system. For additional information to determine the source of a message, refer to "How to Use This Information" on page B-1.

4. *Priority:* Read the Priority Checklist that follows and on the Problem Report Form, place a check mark (✓) next to the number below that best describes the impact of this problem.

5. *Problem Abstract:* This abstract should be constructed based upon your responses to other questions on the PRF. *Your response should not exceed 52 alphanumeric characters.*

An IBM Support Center representative may use the information in this abstract as the basis of a search through the Known Problem Database. To expedite and simplify this search, copy the following items into the space provided on the PRF for Part A, question 5 (each item should be separated by a blank space):

- The abbreviation for the problem symptoms that you checked in Part B, question 1.

For example, if you checked ABEND for abnormal termination, write ABEND in the space provided in "Problem Abstract."

- For problems involving messages, refer to "MSG for Error Message" under Part B, question 1 on the completed PRF and copy the following information for the problem abstract:
 - The abbreviation for message: MSG
 - The message identification number
 - Any return codes or error codes
 - The originator or environment (if one is provided, use the abbreviation; for example, write RAS rather than Problem Determination).

These items are explained in the discussion of Part B that follows.

- The answers to the questions you completed in Part D (your answers to those questions should be limited to one word).

For example, for Part D, questions 3, 4 and 5, you might have written CICS, SDLC, and Hayes (for modem type), respectively. In this example, you would write each of these abbreviations or words in the line for "Problem Abstract" following the abbreviation for the problem symptom (separating each entry with a blank space).

- Other pertinent highlights (as space allows) from Part B, question 2.

For example, you might include the name of the last command typed or the last completed task before the problem occurred. Refer to "Describing a Software Problem" on page 2-5 for other ideas.

Prioritizing the Problem: Having noted the symptoms and special conditions that can be associated with the user's problem, you should estimate how the problem impacts the user's operations.

The following are four sets of descriptions of the impacts that this problem might have on the user's operations. Determine which set best describes the impact of the problem. Then mark Part A, question 4 on the PRF as directed.

Note: If you prefer to write on the Priority Checklist or place a check mark (✓) next to the appropriate description, IBM recommends that you make at least one copy of the Priority Checklist and save the original for future use.

- If the following descriptions apply to this problem:
 - The problem affects the use of the OS/2 program but *does not* severely limit the user's ability to complete any task.
 - Despite the problem, the user can complete desired tasks in a way that *does not* require more time, too many steps, or is annoying to the user.

If these descriptions apply, place a check mark (✓) next to *Priority 4* for Part A, question 4 on the PRF.

- If the following descriptions apply to this problem:
 - The problem is an annoyance to the user due to differences between the design (the way it works) or terminology associated with the OS/2 program and previous or other systems the user is familiar with.
 - The problem causes the user to perform unnecessary steps.
 - The problem results from a lack of clear, accurate, or complete documentation by IBM, but is nevertheless a problem from which the user can recover.
 - The user can complete desired tasks in spite of the problem but the required effort requires more time, too many steps, or is annoying to the user.

If these descriptions apply, place a check mark (✓) next to *Priority 3* for Part A, question 4 on the PRF.

- If the following descriptions apply to this problem:
 - The problem *does not* occur frequently but is difficult to recover from when it does occur.
 - The problem causes frustration for several users but does not prevent them from completing any job-related tasks.
 - The problem significantly reduces the productivity of users.
 - The problem causes difficulties for other system users (in addition to the user who reported the problem) or produces a conflict of interests among multiple users of the same system or network.

If these descriptions apply, place a check mark (✓) next to *Priority 2* for Part A, question 4 on the PRF.

- If the following descriptions apply to this problem:
 - The problem causes the user to lose data that has been created or is being used.
 - This a frequent problem that is difficult to recover from.
 - The problem creates a situation that is or may be potentially detrimental to the user's safety.
 - The problem prevents the completion of a task the user is normally capable of, or allows the user to complete the task only after a period of time that is longer than average for this task and is causing a loss of productivity.
 - The problem results in inadvertent damage to the system during the completion of a supported operation or problem determination procedure, or while recovering from an exception or error condition.

If these descriptions apply, place a check mark (✓) next to *Priority 1* for Part A, question 4 on the PRF.

Figure J-1. Priority Checklist

- **Part B: PROBLEM DESCRIPTION**

If you *have not* completed this section based upon directions provided elsewhere in this guide, complete the following as directed.

1. Problem Symptoms: If a message that is somehow associated with the problem that is displayed on a user's screen or was sent to a message log, and if you have not already done so, place a check mark (✓) next to MSG and ask the user to provide:

- The 8-digit alphanumeric message identification number
- Any return or error codes contained in the message (if applicable)
- If the message is contained in the Messages Appendixes A through H, or in a message log, note the following (if it is specified directly below the text of the message):
 - The **Originator** for messages that begin with an *ACS* prefix
or
 - The *Environment* for messages that begin with an *SQL* or *QRW* prefix.

If an abbreviation is provided for the originator or environment, use the abbreviation on the PRF.

Note: Whether to provide the message text is optional. If no identification number, return code, or error codes were displayed with the message, or if you were directed to do so, write the text of the message in the space provided.

A description of the other problem symptoms listed on the PRF is provided in "Classifying a Software Problem" on page 2-12.

2. Describe the problem...: Refer to "Describing a Software Problem" on page 2-5.

3. List any traces and dumps...: If you have used any of the advanced problem determination procedures described in Chapter 3, "Using Diagnostic Tools," provide the information requested.

- **Part C: WORKSTATION HARDWARE CONFIGURATION INFORMATION**
Information

Provide a description of the type of hardware listed in Part C for the workstation where the problem occurred or was reported. Include the model type (IBM AT or PS/2 models) and model number along with the other information requested, if applicable. Be sure to include the name of the manufacturer and a part number for all listed pieces of hardware.

Note: For LAN-related problems, attach a similar description for each workstation that is associated with the problem.

- **Part D: HOST COMPUTER AND NETWORK INFORMATION:
COMPLETE THIS SECTION FOR COMMUNICATIONS PROBLEMS**

The questions in this section of the form apply for problems associated *only* with communications, including any problems experienced while using or reported by Communications Manager.

If necessary (and possible), contact your host personnel to determine the information requested.

Problem Report Form

- **Part E: LAN REQUESTER-SERVER INFORMATION**

Complete this section if the user was using the OS/2 LAN Requester or OS/2 LAN Server at the time the error occurred.

Provide this information for each workstation that is associated with the problem.

- **Part F: PROBLEM RESOLUTION**

Describe the resolution of the problem in the space provided; if necessary, attach additional text.

Problem Report Form

Part A: BACKGROUND INFORMATION

1.a. Customer Number: _____ 1.b. Customer Name: _____

1.c. Service Coordinator Name: _____

2. Problem Numbers: Problem Management Record Number: _____

Authorized Program Analysis Report (APAR) Number: _____

3.a. Program Name: OS/2 Extended Edition b. Version Number: 1.3 c. Level: _____

d. Component reporting the problem: place a check mark (✓) next to one or more:

___ Base Operating System

___ Database Manager

4. Priority. (see "Prioritizing the Problem" on page J-3.) Check the appropriate priority:

Priority 1 ___ Priority 2 ___ Priority 3 ___ Priority 4 ___

5. Problem Abstract (Read the instructions on page J-2 before completing this answer. Your response should not exceed 52 alphanumeric characters):

Part B: PROBLEM DESCRIPTION

1. Check one or more problem symptoms: INSTALL Installation

ABEND Abnormal Termination WAIT/LOOP Wait or Loop DOC User Documentation

PERFM Performance Problem INCORROUT Incorrect Output

MSG Error Message (for messages, provide the following information if appropriate)

Message Identification Number: _____

Return Codes and Error Codes: _____

Originator or Environment (if applicable): _____

Message Text (optional - see related directions for Part B):

2. Describe the problem in the following space:

3. List any traces and dumps that you have completed:

Problem Report Form

Part C: WORKSTATION HARDWARE CONFIGURATION INFORMATION

1. What is the computer type and model of the involved workstation?

2. What was the IBM plant of manufacture and serial number for this computer?

3. How much memory is installed on the workstation?

4. For fixed-disk systems (IBM disks only), what is the size of the fixed disk?

5. List any adapters installed in the workstation in the following space
(include the manufacturer and part number):

Part D: HOST COMPUTER AND NETWORK INFORMATION: COMPLETE THIS SECTION FOR COMMUNICATIONS PROBLEMS

1. What is the host computer operating system?

2. What is the release level of the host system?

3. What is the host application (CICS, TSO, VM, or CMS)?

4. How is the PC connected to the host network?

5. If SDLC or ASYNC, what is the modem type, make, and line speed?

6. If ASYNC protocol converter, what is the type, and model number?

7. If DFT or Token-Ring, what is the controller model and level?

8. For file transfer problem, what is the IND\$FILE
version number of the host file transfer program?

9. If X.25, what is the name and type of the network?

Problem Report Form

PART E: LAN REQUESTER-SERVER INFORMATION

1.a. If this is a server, provide the following information:

OS/2 LAN Server Version number: _____ Level: _____

1.b. If this is a DOS requester or an OS/2 LAN Server that supports remote IPL, provide the following information, if applicable:

IBM DOS Version number: _____ Level: _____

IBM PC LAN Program Version number: _____ Level: _____

IBM LAN Support Program Version number: _____ Level: _____

IBM PC Network Protocol Version number: _____ Level: _____

3. List the LAN services that were running on this machine when the problem occurred:

4. List the name and version number of any tested and compatible software involved prior to or during the time the problem occurred. Include if the software requires configuration data.

Name of Software	Version Number	Configuration Data
_____	_____	_____
_____	_____	_____

Part F: PROBLEM RESOLUTION

1. Describe the resolution of the problem in the following space.
If necessary, attach additional text.

Problem Report Form

Appendix K. Authorized Program Analysis Report (APAR) Mailing Labels

A copy of one of the Authorized Program Analysis Report (APAR) Mailing Labels contained in this appendix *must* be affixed to any package or envelope containing problem report information that you send to IBM. However, *before* using these labels, you should read the following information.

Before Sending Problem Report Information to IBM

Sending problem report information to IBM can be one step that is part of the overall problem determination procedure needed to resolve a problem. As such, it is important that all preliminary procedures have been adhered to; this can help ensure a quick response to a user's problem.

Information should be sent to IBM for analysis *only*:

- After you have completed the appropriate problem determination procedures described in the following sections of this guide:
 - Chapter 2, “Problem Determination: Getting Started”
 - Chapter 3, “Using Diagnostic Tools” (if applicable)
 - Chapter 4, “When and How to Contact IBM” (if applicable; in particular, refer to “Sending Problem Determination Information to IBM” on page 4-6)
 - Messages Appendixes A through H (if applicable).
- Upon direction from an IBM Support Center representative.
- After you have completed a Problem Report Form describing the problem (see Appendix J for additional information).

If, upon contacting IBM using the procedures provided in Chapter 4, “When and How to Contact IBM,” you are directed by an IBM Support Center representative to send information to IBM, refer to “How to Use an APAR Mailing Label” on page K-2.

Note: Do not send IBM information that is considered to be confidential or proprietary by you or any licensed end user. IBM is under no obligation of any kind with regard to information or material submitted by registered service coordinators. IBM reserves the right to publish or disclose such information to third parties. For additional information, refer to “Understanding Your Right to Privacy” on page 4-6.

How to Use an APAR Mailing Label

IBM suggests that you make several copies of the APAR mailing labels provided on the following page and keep the original labels in a secure place for future use.

When you are ready to use a label:

1. Cut along the center (perforated) line of a copy to separate the two labels.
2. Affix the appropriate label to the package or envelope containing information requested by IBM for analysis.



To determine which label is appropriate for a given problem, refer to the following information (or ask an IBM Support Center representative):

- For problems associated with the base operating system, Presentation Manager, or System Editor, use a copy of the Boca Raton APAR mailing label provided on the following page.
 - For problems associated with Database Manager, Communications Manager, use the Austin APAR mailing label provided on the following page.
3. Write the APAR number assigned to the problem in the space provided on the APAR label.



When IBM determines that a problem is new and unique, IBM assigns an APAR number. This number should have been written on the Problem Report Form describing this problem. If an APAR number was not assigned or if you lose the APAR number, contact the IBM Support Center.

Do not send information to IBM that does not have this number written on the APAR label. Also, do not confuse this number with the *Problem Management Record Number*. Both numbers are described in "How the IBM Support Center Works for You" on page 4-5.

Boca Raton APAR Mailing Label (USA Only)

Name _____		<div style="border: 1px solid black; padding: 5px; text-align: center;">NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES</div>	
Address _____			
City, State, Zip _____			
APAR No. _____			
<div style="border: 1px solid black; padding: 5px;">BUSINESS REPLY LABEL FIRST CLASS PERMIT NO. 1152 BOCA RATON, FL.</div>			
POSTAGE WILL BE PAID BY			
IBM Corporation Boca Raton APAR Control and Screening OS/2 Extended Edition P.O. Box 1328, International Zip 3813 Boca Raton, Florida 33429-9923			

Austin APAR Mailing Label (USA Only)

Name _____		<div style="border: 1px solid black; padding: 5px; text-align: center;">NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES</div>	
Address _____			
City, State, Zip _____			
APAR No. _____			
<div style="border: 1px solid black; padding: 5px;">BUSINESS REPLY LABEL FIRST CLASS PERMIT NO. 40 ARMONK, NY 10504</div>			
POSTAGE WILL BE PAID BY ADDRESSEE			
IBM Corporation Austin APAR Control and Screening OS/2 Extended Edition/Dept 640 11400 Burnet Road Austin, Texas 78758-9986			

Glossary

This glossary defines the terms that are used with the IBM Operating System/2 Extended Edition Version 1.3 program in this manual.

In addition, this glossary includes terms and definitions from the *IBM Dictionary of Computing*.

A

abend. Synonym for *abnormal termination*.

abnormal stop. In Communications Manager, to stop communications without waiting for current functions to complete. Contrast with *normal stop*.

abnormal termination. (1) A system failure, a program failure, or operator action that causes a program to end unsuccessfully. Contrast with *normal termination*. (2) In the OS/2 program, the unusual cessation of processing prior to termination. Synonymous with *abend*.

absolute path name. Synonym for *path*.

accented character. Synonym for *special character*.

access. (1) The manner in which files or data are referred to by a computer. (2) The controlled authorization to enter or to make use of objects. (3) In Database Manager, there are several authority privileges such as Database privileges, Table privileges, or Plan privileges that can be granted to a user which allow different types of access. See also *authority*, *privilege*, and *privilege level*.

access channel control. In an IBM Token-Ring Network, the collection of logic and protocol machines that manages the transfer of data between the link stations and medium access control.

access control. The means by which network administrators restrict access to network resources and user programs and data.

access control byte. In an IBM Token-Ring Network, the byte following the start delimiter in a token or frame. The access control byte controls access to the ring.

access control profile. A list of the access privileges assigned to users and groups for a particular network resource in a domain. There are two types of access profiles. See *discrete profile* and *generic profile*.

access mode. A method of operation used to obtain a specific logical record from, or to place a specific logical record into, a file assigned to a mass storage device.

access path. In Database Manager, the path used to get to data specified in Structured Query Language (SQL) statements. An access path can involve an index or a sequential search, or a combination of the two.

access plan. In Database Manager, a database object stored in the database that includes all of the information needed to process the Database Services statements of a single application program. An access plan is generated through processing of the SQLBIND program or through the precompile process if the bind option is used. See *application plan*.

access priority. In the IBM Token-Ring Network, the maximum priority a token can have for the adapter to use for transmission.

access procedure. In a local area network (LAN), the procedure or protocol used to gain access to the transmission medium.

access unit. See *multistation access unit*.

accessory. A separately orderable IBM part that has no type number, is for purchase only, and does not receive normal IBM maintenance.

ACDI. See *Asynchronous Communications Device Interface*.

ACDI port. A serial port such as COM1, COM2, or COM3 that can be programmed for asynchronous communications through ACDI.

ACF. See *Advanced Communications Function*.

ACF/NCP. See *Advanced Communications Function for the Network Control Program*.

ACF/TCAM. See *Advanced Communications Function for the Telecommunications Access Method*.

ACF/VTAM. See *Advanced Communications Function for the Virtual Telecommunications Access Method*.

ACF/VTAME. See *Advanced Communications Function for the Virtual Telecommunications Access Method Entry*.

action. One of a set of predefined tasks a computer can perform.

action bar. The highlighted area at the top of a panel that contains the choices currently available in the application program that a user is running.

action point. The current position on the screen where the pointer is pointing. See also *hot spot*.

action text. The text added to panels and menus created in Query Manager that indicates the action a user has available to perform.

activate. To make an object, program, system, or device available for use.

active. Pertaining to anything that is current or operational.

active monitor. A function in a single adapter that initiates the transmission of tokens and provides token error recovery facilities. Any active adapter on the ring has the ability to provide the active monitor function if the current active monitor fails. Synonymous with *token monitor*.

active program. A program currently running on the computer. Contrast with *inactive program*.

active session. The session in which a user is currently interacting with the computer. Synonymous with *foreground session*.

active window. The window with which the user is currently interacting.

adapter. (1) A piece of hardware that connects a computer and an external device. (2) See *communication adapter*.

adapter address. The address of the Media Access Control Service Access Point (MSAP).

adapter number. A specific number that identifies an adapter when more than one adapter is used in a workstation.

address. A value that identifies the location of a register, a particular part of storage, or a network node.

Adjacent Link Station (ALS). In Systems Network Architecture (SNA), a link station directly connected to a given node by a link connection over which network traffic can be carried.

administrator. The person responsible for the designing, planning, installing, configuring, controlling, managing, and maintaining of a network, system, or database. See *system administrator*, *network administrator*, and *database administrator*.

administrator worksheet. In communications, a worksheet used by administrators to plan and organize a network.

Advanced Communications Function (ACF). The IBM program products (principally ACF/TCAM,

ACF/VTAM, ACF/VTAME, and ACF/NCP) that use the concepts of Systems Network Architecture (SNA), including distribution of function and resource sharing. ACF/TCAM and ACF/VTAM allow the interconnection of two or more domains into one multiple-domain network.

Advanced Communications Function for the Network Control Program (ACF/NCP). An IBM program product made up of a collection of utilities and small programs.

Advanced Communications Function for the Telecommunications Access Method (ACF/TCAM).

(1) An IBM-licensed program that provides single-domain network capability and optionally multiple-domain capability. (2) An IBM-licensed program that provides queued message handling.

Advanced Communications Function for the Virtual Telecommunications Access Method (ACF/VTAM). An IBM-licensed program that controls communication and the flow of data in an SNA network. ACF/VTAM provides single-domain, multiple-domain, and interconnected network capability.

Advanced Communications Function for the Virtual Telecommunications Access Method Entry (ACF/VTAME). A licensed program that provides single-domain and multiple-domain network capability for IBM 4300 systems that may include communication adapters.

Advanced Program-to-Program Communications (APPC). An implementation of the Systems Network Architecture (SNA) logical unit (LU) 6.2 protocol that allows interconnected systems to communicate and share the processing of programs. See also *logical unit 6.2 (LU 6.2)*.

Advanced Program-to-Program Communications/Personal Computers (APPC/PC). A DOS extension that performs Advanced Program-to-Program Communications (APPC) functions for a transaction program running on an IBM personal computer.

AEI. See *Application Enabling Interface*.

AID. See *attention identifier*.

alert. (1) In communications, an error message sent to the system services control point (SSCP) at the host system. (2) In OS/2 LAN Server, an error or warning specified in the IBMLAN.INI file that is sent to the user. See also *system services control point*.

alert focal point. The location in a network specified as the forwarding node to the host system. An alert focal point is a subset of the problem management focal point. See *problem management focal point*.

alias. (1) An alternative name used to identify an object or a database. (2) A nickname set up by the network administrator for a file, printer, or serial device. (3) A name used to identify a network resource to a domain. Aliases are similar to network names but can be used only through the full-screen interface. See also *network name*.

allocate. (1) To assign a resource to perform a specific task. (2) In Advanced Program-to-Program Communications (APPC), a verb used to assign a session to a conversation for its use.

alphanumeric. Pertaining to a character set that contains letters, digits, and usually other characters such as punctuation marks.

ALS. See *Adjacent Link Station*.

alternate (Alt) mode. A mode that is obtained by pressing and holding the Alt key. Pressing and holding the Alt key places the keyboard in a special or alternate mode, where pressing a second key gives predefined functions.

alternate shift. During keyboard remap, an operation that defines a different set of characters or functions for the keyboard when the Alt key is pressed. For example, the Clear function is defined as the alternative shift state of the Backspace key. The Clear function is started by pressing and holding the Alt key while pressing the Backspace key at the same time.

American National Standard Code for Information Interchange (ASCII). The standard code with a coded character set consisting of 7-bit coded characters (8 bits including parity check), used for information interchange among data processing systems and data communication systems. The ASCII set consists of control characters and graphic characters.

American National Standards Institute (ANSI). An organization sponsored by the Computer and Business Equipment Manufacturers Association for establishing voluntary industry standards.

anchor point. A point in a window used by a program designer or by a window manager to position a subsequently displayed window.

ANSI. See *American National Standards Institute*.

APAR. See *Authorized Program Analysis Report*.

APAR number. A number assigned by IBM to identify an Authorized Program Analysis Report (APAR). These numbers are only provided to registered service coordinators. Contrast with *Problem Management Record number*.

API. See *application programming interface*.

API trace. See *application program interface trace*.

APPC. See *Advanced Program-to-Program Communications*.

APPC/PC. See *Advanced Program-to-Program Communications/ Personal Computers*.

append. To attach a record or file to the end of another record or file. Contrast with *replace*.

application. A program or set of programs that perform a task; for example, a payroll application. For OS/2 LAN Server, see *private application* and *public application*. In Query Manager, see *customization tasks*.

Application Enabling Interface (AEI). An application programming interface (API) that supports the Systems Application Architecture (SAA) programming requirements and is portable across all computers supporting that API.

application plan. The control structure produced during the bind process and used by Database Services to process Structure Query Language (SQL) statements encountered during application processing. See *access plan*. Synonymous with *plan*.

application program. (1) A collection of software components, such as Communications Manager and Database Manager that a user installs to perform particular types of work, or applications, on a computer. (2) A program written for or by a user to perform work on a computer.

application programming interface (API). A formally-defined programming language interface that is between an IBM system control program or a licensed program and the user of a program.

application program interface (API) trace. A method used to trace points of the interface where user programs interact with an API.

application-embedded SQL. The Structured Query Language (SQL) statements coded within an application program.

archive. A copy of one or more files or a copy of a database that is saved for future reference or for recovery purposes in case the original data is damaged or lost.

ARF. See *Automatic Response File*.

argument. A parameter passed between a calling program and a called program. See also *value*.

arithmetic expression. An expression that contains arithmetic operations and operands that can be reduced to a single numeric value.

arithmetic function. A function that represents one of the basic arithmetic operations such as addition, subtraction, division, or multiplication. It can also be a mathematical operation such as finding the average, minimum, or maximum value of a set of values.

arithmetic operator. A symbol used to represent a mathematical operation such as the plus sign (+), which is used to represent addition, or the minus sign (-), which is used to represent subtraction.

arithmetic overflow. A condition in which the result of a mathematical operation exceeds the storage or register capacity.

ASCII. See *American National Standard Code for Information Interchange*.

ASCII terminal emulation. A feature of Communications Manager that emulates the function of an asynchronous terminal.

assembler language. A programming language whose instructions are usually in one-to-one correspondence with machine instructions. It may also provide other facilities such as macro instructions. See also *IBM Macro Assembler/2*.

asynchronous. Pertaining to the lack of regular time relationship; unpredictable with respect to the execution of program instructions. Contrast with *synchronous*.

asynchronous communication. Data transmission in which transmission of a character or a block of characters can begin at any time but in which the bits that represent the character or block have equal time duration.

Asynchronous Communications Device Interface (ACDI). An application programming interface (API) for asynchronous communications provided by Communications Manager.

asynchronous data transfer. A physical transfer of data to or from a device that occurs without a regular or predictable time relationship following the execution of an input/output (I/O) request.

asynchronous transmission. A type of data communication in which communication of a character or a block of characters can begin at any time, but in which the bits that represent the character or block have equal time duration. Contrast with *synchronous transmission*.

attach. (1) In programming, to create a task that can be executed asynchronously with the execution of the inline code. (2) To connect a device logically to a ring network so that it can communicate over the network.

attach manager. The portion of Advanced Program-to-Program Communications (APPC) that manages incoming allocation requests.

attach queue. In Advanced Program-to-Program Communications (APPC), the queue of incoming ALLOCATE requests that is managed by attach manager.

attaching device. A device that is physically connected to a network and that can communicate over the network.

attention identifier (AID). A character in a 3270 or 5250 data stream indicating that the user has pressed a key, such as the Enter key, that requests an action by the system.

attribute. (1) A characteristic or property; for example, the color of a line or the length of a data field. (2) In Database Manager, a characteristic of data contained in a column or field, such as length, data type, or data format.

attribute byte. In an IBM 3270 or application, the byte used for determining the characteristics of the field that follows it; for example, a byte to indicate that a field is colored, protected, or highlighted.

audit trail. A history of network activity on a server.

authority. A permission, privilege, or group of privileges granted to an individual or group of individuals.

authorization. (1) The right granted to a user or group of users to communicate with or make use of a computer system, network, or database. (2) In Database Manager, a collection of privileges which defines the right to access objects. For example, two levels of authorizations in Database Manager are SYSADM and DBADM.

authorization ID. A sequence of characters that uniquely identifies a user or group of users. See also *qualifier*.

Authorized Program Analysis Report (APAR). A report of a problem caused by a suspected defect in a current unaltered release of a program.

auto-answer. A feature that enables a machine to respond without user action to a call it receives.

auto-removal. In an IBM Token-Ring Network, to remove a device from the data passing activity without user intervention. This action is accomplished by the adapter.

autocall. A feature that enables a machine to automatically dial a number to establish a switched connection without user action. Contrast with *autodial*.

autodial. A feature that enables a machine to automatically dial a number to establish a switched connection that requires user action. Contrast with *autocall*.

automatic bind. In Database Manager, a feature that automatically binds an invalidated application plan without requiring a manually entered SQLBIND command.

Automatic Response File (ARF). A file used in linking programs that allows users to automatically process the names of all the files desired.

auto-start. In Communications Manager, a facility that starts communications features without requiring the user to manually request the start.

auxiliary. Pertaining to a process or device not under direct control of the central host processing unit.

available choice. A choice that the current state of the application allows users to select. Contrast with *unavailable choice*.

B

back up. (1) To copy information onto a diskette or fixed disk for record keeping or recovery purposes. (2) An OS/2 command (BACKUP) that saves files. (3) In Database Manager, a utility that saves a database.

backbone. In local area network (LAN) communications, a transmission facility that interconnects bridges in hierarchical networks.

backbone ring. In an IBM Token-Ring Network, a ring that interconnects ring networks.

background mix. An attribute that determines how the background of a graphics primitive is combined with the existing color of the graphics presentation space. Contrast with *mix*.

backup path. In the IBM Token-Ring Network, an alternate path for signal flow through access units and their main ring path cabling. The backup path allows for recovery of the operational portion of the network while problem determination procedures are being performed.

backward. A scrolling action that displays information in the panel preceding the current panel. Contrast with *forward*.

base operating system. The component of IBM Operating System/2 Extended Edition Version 1.3 that manages system resources, excluding Database Manager, Communications Manager, and LAN Requester.

base table. In Database Manager, a table created with the CREATE TABLE statement or through the Query Manager prompted interface. A table with both its description and data physically stored in the database.

baseband local area network (LAN). A LAN in which information is encoded, multiplexed, and transmitted without modulation of a carrier. Contrast with *broadband local area network (LAN)*.

basic conversation. In Advanced Program-to-Program Communications (APPC), a conversation between two transaction programs using the APPC basic conversation API. In typical situations, service transaction programs use basic conversations and end-user transaction programs use mapped conversations. However, either type of program may use either type of conversation. Contrast with *mapped conversation*.

basic conversation verb. In Advanced Program-to-Program Communications (APPC), a verb that a transaction program issues when using the basic conversation application programming interface (API). See also *mapped conversation verb*.

basic information unit (BIU). In Systems Network Architecture (SNA), the unit of data and control information passed between half-sessions. It consists of a request/ response header (RH) followed by a request/response unit (RU).

Basic Input/Output System (BIOS). In an IBM personal computer, code that controls basic hardware operations such as interactions with diskette drives, fixed-disk drives, and the keyboard.

basic transmission unit (BTU). In SNA, the unit of data and control information passed between path control components.

batch file. (1) A file containing DOS commands organized for sequential processing while in DOS mode. (2) Files that are identified with a .BAT extension. For OS/2 mode, see *command file*.

batch mode. A mode in which noninteractive programs are executed.

BCC. See *block-check character*.

BCUG. See *bilateral closed user group*.

beacon. In the IBM Token-Ring Network, a frame sent by an adapter indicating a serious network problem, such as a broken cable.

beaconing. To send beacon frames continuously.

bilateral closed user group (BCUG). In data communications, two users who have bilaterally agreed

to communicate with each other, but not with other users. See *closed user group*.

bimodal. Pertaining to both the DOS environment and the OS/2 environment.

binary. Pertaining to the base two system of numbers. The binary digits are 0 and 1.

binary string. A sequence of consecutive binary digits.

binary synchronous communication (BSC). A form of telecommunication line control that uses a standard set of transmission control characters and control character sequences for binary synchronous transmission of binary-coded data between stations. Contrast with *Synchronous Data Link Control (SDLC)*.

bind. (1) In Systems Network Architecture (SNA), the response/request unit (RU) involved in activating a logical unit-logical unit (LU-LU) session. (2) The process whereby the output from the Database Services precompiler is converted to an access plan.

bind file. A file produced by the Database Services precompiler when the BIND option is specified without the SYNTAX option. This file includes information on all Structured Query Language (SQL) statements in the application program.

bind image. The session parameters that the system services control point (SSCP) sends to the primary logical unit (PLU) and PLU sends in the BIND request to the secondary logical unit (SLI); these parameters specify the proposed protocol options for an LU-LU session.

binding. The process of installing an application into a database. Binding is performed either directly during an application program precompilation or through an SQLBIND program execution that uses the output of a precompilation.

BIOS. See *Basic Input/Output System*.

bit. A binary digit (either 0 or 1).

bits per second (bps). In serial transmission, the speed at which bits are transmitted.

BIU. See *basic information unit*.

block. (1) A string of data elements recorded or transmitted as a unit. (2) To wait, usually for an input/output (I/O) event to complete or for a resource to become available.

block size. The number of records, words, or characters in a block.

block-check character (BCC). In longitudinal redundancy checking and cyclic redundancy checking, a

character that is transmitted by the sender after each message block and compared with the receiver to determine if the transmission was successful.

bps. See *bits per second*.

bracket. One or more chains of request units (RUs) and their responses that are exchanged between two LU-LU half-sessions and that represent a transaction between them. One bracket must be completed before another one can be started. Examples of brackets are database inquiries/replies, update transactions, and remote job entry output sequences to workstations.

break levels. In Query Manager, the feature used to group data from a query, which is then displayed in a report.

break signal. (1) In communications, a signal that interrupts the sending end and takes control of the circuit at the receiving end. (2) A signal generated when the transmit line is held low.

bridge. In a local area network, a device that connects an IBM Token-Ring and a PC Network together. See also *gateway*.

bridge number. In a local area network, a number that distinguishes parallel bridges (that is, bridges spanning the same two rings).

broadband local area network (LAN). A LAN in which information is encoded, multiplexed, and transmitted with modulation of a carrier. Contrast with *baseband local area network (LAN)*.

broadcast. A message sent to all computers on a network, rather than to specific users or groups.

broadcast topology. A network topology in which all attaching devices are capable of simultaneously receiving a signal transmitted by any other attaching device on the network.

BSC. See *binary synchronous communication*.

BTU. See *basic transmission unit*.

buffer. A memory area reserved for use in performing input/output (I/O) operations.

buffer device. A device that has input/output (I/O) elements queued to a direct access device before being written.

buffer pool. A memory area reserved to satisfy the buffering requirements for a function.

built-in function. (1) A function that is supplied by a programming language. (2) In Database Manager, a scalar function or column function.

bus. A type of network topology where the network consists of a bidirectional communication path with defined end points.

business graphics interface. An API provided by Query Manager to link between Query Manager and a vendor graphics program in order to allow the graphing of report data. Query Manager provides the interface, the vendor program is responsible for linking to this interface, and the user is responsible for installing the vendor program.

button. A mechanism on a pointing device, such as a mouse, used to request or initiate an action. See *select button*.

bypass. To eliminate a component from a network by allowing the data to flow in a path around it.

byte. The amount of storage required to represent 1 character.

byte reversal. A technique in which numeric data is stored with the least significant byte first.

bytes per sector. A term used to identify the number of bytes that can be stored on a sector of a disk or diskette.

C

C & SM. See *Communications and System Management*.

cache. A high-speed storage buffer that contains frequently accessed instructions and data; it is used to reduce access time.

call. (1) The action of bringing a computer program, routine, or subroutine into effect, usually by specifying the entry conditions and an entry point. (2) A transmission for the purpose of identifying the transmitting station for which the signal is intended. (3) An attempt to reach a user whether or not the attempt is successful.

call accepted packet. A call supervision packet that called data terminal equipment (DTE) transmits to indicate to the data circuit-terminating equipment (DCE) that it accepts the incoming call.

call connected packet. A call supervision packet that data circuit-terminating equipment (DCE) transmits to indicate to a calling data terminal equipment (DTE) that the connection for the call has been completely established.

called address. The network user address (NUA) of the called data terminal equipment (DTE).

called address extension. Additional addressing information associated with the called address.

calling address. The network user address (NUA) of the calling data terminal equipment (DTE).

calling address extension. Additional addressing information associated with the calling address.

call request packet. A call supervision packet that data terminal equipment (DTE) transmits to ask that a connection for a call be established throughout the network.

call supervision packet. A packet used to establish or clear a call at the interface between the data terminal equipment (DTE) and the data circuit-terminating equipment (DCE).

call user data. User data that can be carried in X.25 call and call accept packets.

callable interface. See *Query Manager Callable Interface*.

callable programming interface (CPI). The means by which other application programs can run Query Manager functions. The execution results in return codes and status information being returned to the application. Also, Query Manager screens may be presented to the user.

cancel. (1) To end a task before it is completed. (2) An action that removes the current panel or window without processing it and returns to a previous one. See also *Escape key*, *exit*, and *return*.

candidate key. In Database Manager, a key that is a valid choice for a primary key.

capture. To gather data and save it in a file.

capture to file. A feature of ASCII terminal emulation that allows the user to save data received from a remote location into a file.

cardinality. (1) The number of rows in a database table. (2) The number of different values in a column of a database table.

carriage return. An operation that prepares for the next character or cursor to be printed or displayed at the specified first position on the next line.

carrier. On broadband networks, a continuous frequency signal that can be modulated with an information-carrying signal.

carrier detect. See *data carrier detect*.

carrier return. An indication to continue printing at the left margin of the next line.

CASCADE. In Database Manager, an option that can be used with the DELETE rule of a referential constraint. CASCADE implies that deleting a row in the parent table automatically deletes any dependent rows.

cascading. The connecting of network controllers to each other in a succession of levels, to concentrate many more lines than a single level permits.

case-sensitive. A condition in which entries for an entry field must conform to a specific lowercase, uppercase, or mixed-case format in order to be valid.

catalog. (1) A set of system tables maintained by Database Services. Catalog tables are created when the database is created and contain information about tables, views, and indexes. (2) A utility that records a database and information about the database.

CCITT. See *International Telegraph and Telephone Consultative Committee (CCITT)*.

cell. Synonym for *character cell*. Synonymous with *linked list*.

chained list. A list in which the data elements may be dispersed, but in which each data element contains information for locating the next. Synonymous with *linked list*.

change. In Communications Manager, an operation that allows the contents of a profile to be altered. In most cases, the keylock must be open before a change operation can be performed.

change direction protocol. A data flow control protocol in which the sending logical unit stops sending requests, signals this fact to the receiving logical unit, and prepares to receive requests.

channel. See *data communications channel*.

CHAR(n). In Structured Query Language (SQL), a column data type that is a character string with a fixed length of *n*, where *n* can be any value between 1 and 254. This is also known as character (fixed length) in Query Manager.

character. (1) A letter, digit, or other symbol that is used as part of the organization, control, or representation of data. (2) A column data type in Query Manager.

character box. In computer graphics, the rectangle or (for sheared characters) the parallelogram boundaries that govern the size, orientation, spacing, and italicizing of individual symbols or characters to be shown on a display screen or printer page. See also *character cell*.

character cell. The rectangular space in which any single character is displayed on a screen or printer

device. The position is addressed by row and column coordinators. See also *character box*. Synonymous with *cell*.

character code. The ASCII or EBCDIC values assigned to the symbols or functions that are used by a computer. Synonymous with *code point*.

character constraint. A limitation placed by an information processing system on character formats.

character data. A type of data in the form of letters, digits, and special characters such as punctuation marks.

character (fixed length). In Query Manager, a column data type that allows each character string a fixed number of characters. Each entry is required to have the same number of characters and the maximum length is 254. This is also known as CHAR(n) in Database Services.

character frame. In communications, the total set of information transmitted for a character including the start, data, parity, and stop bits.

character mode. (1) In Presentation Interface, the type of character to be used. There are three modes:

- Mode-1 characters have device-dependent spacing, orientation, positioning, and are of fixed size.
- Mode-2 characters have fixed orientation and size. Their spacing and positioning are variable by program.
- Mode-3 characters are vector characters. Box size, position, spacing, orientation, and shear of individual characters are variable by program.

(2) In communications ASCII terminal emulation, the mode that transmits data one character at a time.

(3) In communications block mode, transmitting data one block at a time.

character set. A group of characters used for a specific reason; for example, the set of characters a printer can print or a keyboard can support.

character string. (1) A sequence of bytes or characters associated with a single-byte character set. (2) A sequence of printable characters. (3) A string of characters, such as a command and its parameters, used to communicate with the base operating system.

character string delimiter. (1) In Database Manager, the characters used to enclose character strings in delimited ASCII (DEL) files that are imported or exported. (2) In Query Manager, the default is a double quotation mark. See *delimiter*.

character variable. The name of a character data item whose value may be assigned or changed while the program is running.

character (variable length). In Query Manager, a column data type that varies in the number of characters. The maximum is 4000.

check box. A user-interface component that is a square box with associated text. It acts like a switch that users can toggle on and off. An x appears in the check box to show a choice is selected. Many check boxes are combined in related sets so users can choose one or more choices or no choices. Contrast with *radio button*.

check mark. A symbol used on a graphics screen to indicate that users have selected an item.

checksum. (1) The sum of a group of data associated with the group and used for checking purposes. (2) On a diskette, the data written in a sector for error detection purposes; a calculated checksum that does not match the checksum of data written in the sector indicates a defective sector.

child process. In the OS/2 program, a dependent process that is created by another process. Contrast with *parent process*.

child window. A window that is positioned relative to another window (either a parent window or another child window). Child windows are dependent on their parent windows. See *sibling window*. See also *parent window*.

choice. An item a user can select.

CICS. See *Customer Information Control System*.

CICS/VS. See *Customer Information Control System for Virtual Storage*.

circuit. A medium for transmitting signals; for example, one or more conductors through which an electric current can flow.

circuit switching. A process that, on demand, connects data terminal equipment (DTE) through telephone switching equipment and permits the exclusive use of a data circuit between them until the connection is released. Synonymous with *line switching*.

circular log. A file used to log data to a disk or diskette. Each record is timestamped. When the end of the file is reached, the file is not extended in size, but the file is reused from the beginning. See *database log*.

C/2 Language. See *IBM C/2 Language*.

class of service. In Systems Network Architecture (SNA), a designation of the path control network characteristics, such as path security, transmission priority, and bandwidth, that applies to a particular session. The end-user program specifies the class of service when requesting a session by using a symbolic name (*mode_name*) that Advanced Program-to-Program

Communications (APPC) maps into a list of virtual routes, any one of which can provide the requested level of service for the session.

class style. In the Presentation Interface, the set of properties that apply to every window class.

clause. In Structured Query Language (SQL), a distinct part of a statement, such as a WHERE clause.

clear confirmation packet. See *DCE clear confirmation packet* and *DTE clear confirmation packet*.

clear indication packet. A call supervision packet that data circuit-terminating equipment (DCE) transmits to inform data terminal equipment (DTE) that a call has been cleared.

clear request packet. A call supervision packet transmitted by data terminal equipment (DTE) to ask that a call be cleared.

clear to send (CTS). A signal that is raised by the data circuit-terminating equipment (DCE) when it is ready to accept data, usually in response to request to send (RTS) being raised. ACIDI will not transmit data without this circuit being raised. If this circuit is lowered and remains lowered for more than 30 seconds, ACIDI will assume the connection is lost and will bring the connection down.

close. (1) To end an activity and remove it from the screen. (2) To end the processing of a file or device.

closed path (or network). A network in which all the cable paths and wiring closets are directly or indirectly connected.

closed user group (CUG). In data communication, a group of users who can communicate with other users in the group, but not with users outside the group. Note: Data terminal equipment (DTE) may belong to more than one closed user group.

CMS. See *Conversational Monitor System*.

coaxial cable. A cable consisting of one inner conductor, usually a small copper tube or wire, within and insulated from another conductor of larger diameter, usually copper tubing or copper braid.

COBOL/2. See *IBM COBOL/2*.

code. (1) A set of instructions for the computer. (2) To write instructions for the computer. (3) A representation of a condition, such as an error code.

code page. (1) A table that defines a coded character set by assignment of a character meaning for a language or country to each code point in the table. (2) A mapping between characters and their internal (binary) representation. See *primary code page*.

code point. A single character or shape defined in the code page and presented on the screen or printer. Synonym for *character code*.

code segment. Synonym for *segment*. Contrast with *data segment*.

code violation. In differential Manchester code encoding, a situation in which a bit is missing a state transition at the mid-bit point. See also *differential Manchester code*.

column. (1) A vertical arrangement of data. (2) In Database Manager, the vertical component of a table.

column data type. A data type used in Database Manager to specify the characteristics of a column when defining a table for a database.

column delimiter. In Database Manager, the character used to enclose columns in delimited ASCII (DEL) files that are imported or exported. The default is a comma (,).

column function. (1) In Database Manager, an operation performed on a column or columns that produces one value from a set of values. A column function is expressed in the form of a function name followed by an argument enclosed in parentheses; for example, SUM(COMM + SALARY). (2) In Query Manager, see *expression*.

column heading. In Query Manager, an alternative to the column name that a user can specify in a form for a report.

column name. A unique name given to each column of a table in a database.

column wrapping. See *wrap*.

COM. A representation of one of the asynchronous serial communications ports, (COM1, COM2, and COM3), supported by the OS/2 program.

command. (1) A request from a terminal for performance of an operation or execution of a program. (2) In Query Manager, a statement that is in a procedure, panel or menu or typed in the Command Line panel that processes a specified Query Manager command. (3) Any field set in the transmission header (TH), request header (RH), and sometimes in portions of a request unit that initiates an action or that begins a protocol; for example:

- Bind Session (session-control request unit), a command that activates an LU-LU session.
- The change-direction indicator in the RH of the last RU of a chain.

(4) In SDLC, the control information (in the C-field of the link header) sent from the primary station to the secondary station.

command area. An area in a panel in which a user types commands.

command entry field. A field into which a user types commands.

command file. (1) A file containing OS/2 commands organized for sequential processing while in OS/2 mode. For DOS mode, see *batch file*. (2) Files that have a .CMD file name extension.

command interface. The method used to type commands at the OS/2 or DOS command prompt.

command name. The verb in a command that specifies the action to be performed.

command processor. A program that performs an operation specified by a command.

command prompt. A displayed symbol, such as C:\, where a user enters commands.

comment. Optional text that describes an object or statement.

commit. A process that causes data changed by an application or user to become part of a database.

commit point. Synonym for *point of consistency*.

Common Programming Interface (CPI). The part of SAA that specifies the languages, commands, and calls that programmers must use when developing applications. These specifications provide consistent implementation on participating systems.

Common Services API. Application programming interface (API) verbs used to access services provided by Communications Manager for user-written programs.

common user access (CUA). A part of Systems Application Architecture (SAA) that gives a series of guidelines describing the way information should be displayed on a screen, and the interaction techniques between users and computers.

common user identification (common user ID). The user identification of a PC Support user that is used for the ROUTER entry in the CONFIG.PCS file or in the alternative configuration file if either file does not have a user ID specified. The common user ID of a PC Support user is the same on each host system that the router is connecting to the personal computer.

communication. The transmission and reception of data. Synonymous with *data communication*.

communication adapter. (1) A circuit card with associated software that enables a processor, controller, or other device to be connected to a network. (2) See *Realtime Interface Co-processor*.

communication port. (1) An access point for data entry or exit to or from a communication device such as a terminal. (2) On a personal computer, a synchronous or asynchronous serial port to which a modem can be attached. Synonymous with *port*.

Communications and System Management (C & SM).

(1) The process of coordinating operations over an entire communications system. (2) In Communications Manager, the operation that supports generating and sending of alerts.

communications coprocessor. A microprocessor on a communications adapter that supplements the operations of the processor in the system unit, enabling a computer to use communication services in parallel with other operations.

communications line. The physical link (such as wire or a telephone circuit) that connects one or more work stations to a communications control unit or that connects one control unit to another. See also *data link*.

Communications Manager. A component of the OS/2 program that lets a workstation connect to a host computer and use the host resources as well as the resources of other personal computers to which the workstation is attached, either directly or through a host. Communications Manager provides application programming interfaces (APIs) so that users can develop their own applications.

Communications Manager system administrator. See *system administrator*.

comparison operator. (1) A symbol, such as =, >, or <, used to specify a relationship between two values. (2) Comparison operators in the Query Manager prompted interface are expressed as words such as equal to.

compatibility mode. A mode of operation for running IBM 3800 Model 1 application programs on the 3800 Model 3 with little or no change to the application or job control language. Contrast with *page mode*.

compile. (1) To translate a program written in a high-level programming language into a machine language program. (2) The computer actions required to transform a source file into an executable object file.

completion code. The final return code provided by an adapter as a result of an issued command.

component. A functional part of IBM Operating System/2 Extended Edition Version 1.3

(Communications Manager, base operating system, Database Manager, and LAN Requester).

composite key. (1) In Database Manager, a key composed of more than one column from a database table for referential integrity. (2) In Communications Manager, a character that combines with an accent to produce an accented character.

composite value. A value composed of more than one column value.

computed fields. In Query Manager panel definition, the fields that take their value from a computation of other field values or variables.

computerized branch exchange (CBX). If the exchange equipment contains an integral computer, it is called a computerized branch exchange (CBX). See *private branch exchange (PBX)*.

concatenation. The method of combining two strings into a single string by appending the second to the first.

concurrency. The shared use of resources by multiple interactive users or application programs at the same time.

concurrency control. In Database Manager, a feature that allows multiple users to run database transactions simultaneously without interfering with each other.

concurrent. Pertaining to the occurrence of two or more activities within a given interval of time.

concurrent sort. In Database Manager, a method of balancing sort memory usage in concurrent environments so that resources and performance remain optimized during multiple sorts.

CONFIG.SYS. A file that contains configuration options for an OS/2 program installed on a workstation. See also *configuration file*.

configuration. (1) The task of defining the devices, features, parameters, and programs for a system. Synonymous with *customize*. (2) The arrangement and relationship of the components in a system or network.

configuration file. (1) In Communications Manager, a file that describes the devices, optional features, communications parameters, and programs installed on a workstation. (2) In Database Manager, a file containing values that can be set to adjust the performance of Database Manager. (3) For the base operating system, the CONFIG.SYS file that describes the devices, system parameters, and resource options of a workstation. See also *CONFIG.SYS*.

configuration services (CS). In Systems Network Architecture (SNA), one of the types of network services in the system services control point (SSCP) and

in the physical unit (PU). Configuration services activate, deactivate, and maintain the status of physical units, links, and link stations. Configuration services also shut down and restart network elements and modify path-control routing tables and address-transformation tables.

configure. (1) To prepare a workstation component or program for operational use. (2) To describe to a system the devices, optional features, and programs installed on the system.

confirmation. (1) A prompt in a menu window wherein a program questions the user when the consequences of a user action are significant. (2) Acknowledgement by a program that data has been received or a request completed.

congestion. An overload condition caused by traffic in excess of the capabilities of a network.

congestion tolerance. In communications, the percentage of the total number of link stations on each adapter which, when exceeded by the number of current link stations on each adapter, causes any unused link stations to be freed.

connection. An association established between functional units for conveying information.

connectivity. The physical link that provides the ability to attach to another system.

consistency of data. In Database Manager, a feature that ensures that no transaction can see uncommitted updates of another transaction. See also *repeatable read*.

constant. A fixed value.

contention. In a local area network (LAN), a situation in which two or more data stations are allowed by the protocol to start transmitting concurrently and thus risk collision.

contention loser. In Advanced Program-to-Program Communications (APPC), the logical unit (LU) that must request and receive permission from the session partner LU to allocate a session. Contrast with *contention winner*.

contention mode. In data communication, a mode of transmission in which any station may transmit whenever the line is available. If stations transmit simultaneously, protocols determine which station wins the contention.

contention system. A system in which one or more stations compete for use of a communications line.

contention winner. The logical unit (LU) that can allocate a session without requesting permission from the session partner LU. Contrast with *contention loser*.

contention-loser polarity. In Advanced Program-to-Program Communications (APPC), the designation that a logical unit (LU) is the contention loser for a session. Contrast with *contention-winner polarity*.

contention-winner polarity. In Advanced Program-to-Program Communications (APPC), the designation that a logical unit (LU) is the contention winner for a session. Contrast with *contention-loser polarity*.

context. The environment in which a program processes functions.

context-sensitive help. Synonym for *contextual help*.

contextual help. Information about a field or other display element on which the cursor is positioned that is provided to the user upon request. Synonymous with *context-sensitive help*. See *extended help*.

continuation messages. These are messages used in Menu and Panel Definition to allow the user to continue the definition process regardless of an error being detected in the definition.

continuous carrier. On broadband networks, a condition in which a carrier signal is being constantly broadcast on a given frequency. No further information can be broadcasted on that frequency. Synonymous with *hot carrier*.

control. In Presentation Interface, the means by which a user gives input to an application. A choice corresponds to a control.

control block. (1) A storage area used by a computer program to hold control information. (2) A specifically formatted block of information provided from the application program to an application programming interface (API) to request an operation.

Control (Ctrl) mode. A mode that is obtained by pressing and holding the Ctrl key. Pressing and holding the Ctrl key places the keyboard in a special control mode, where pressing a second key gives predefined functions.

Control Panel. A function of the OS/2 program that is used to set up user preferences, such as color on a screen.

control privilege. In Database Services, the authority to completely control a Database Services object. This includes the authority to access, drop, or alter an object as well as the authority to extend or revoke privileges on the object to other users.

control program (CP). A computer program designed to schedule and to supervise the execution of programs of a computer system.

control station. The controlling or primary computer on a multipoint line. The control station controls the sending and receiving of data.

controller. A unit that controls operations for one or more devices.

conventional LU application (LUA). An implementation of the SNA LU 0 protocol that allows a workstation to communicate with host applications using LU 0, 1, 2, or 3, protocols.

conversation. In Advanced Program-to-Program Communications (APPC), a connection between two transaction programs over a logical unit-logical unit (LU-LU) session that allows them to communicate with each other while processing a transaction.

conversation security. In Advanced Program-to-Program Communications (APPC), a process that allows validation of a user ID or group ID and password before establishing a connection.

conversation security profile. The set of user IDs or group IDs and passwords that are used by Advanced Program-to-Program Communications (APPC) for conversation security.

conversation state. In Advanced Program-to-Program Communications (APPC), this determines which verbs APPC allows a program to issue.

conversation verb. In Advanced Program-to-Program Communications (APPC), one of the verbs a transaction program issues to perform transactions with a remote program.

Conversational Monitor System (CMS). A virtual machine operating system that provides general interactive time sharing, problem solving, and program development capabilities. It operates only under control of the VM/370 control program.

conversational transaction. In Advanced Program-to-Program Communications (APPC), two or more programs communicating using the services of logical units (LUs).

conversion. (1) In programming languages, the transformation between values that represent the same data item but belong to different data types. (2) The process of changing from one method of data processing to another or from one data processing system to another.

coprocessor. A microprocessor that extends the address range of the processor in the system unit or adds specialized instructions to handle a particular category

of operations; for example, an input/output (I/O) coprocessor, a math processor, a networking processor.

corrective service. See *Corrective Service diskette*.

Corrective Service diskette. A diskette provided by IBM to registered service coordinators for resolving user-identified problems. This diskette includes program updates designed to resolve problems.

correlated reference. In Database Manager, the combined correlation name and column name referring to a specific column within a SELECT statement.

correlated subquery. In Database Manager, a subquery (part of a WHERE or HAVING clause) applied to a row or group of rows of the table or view names in the outer SELECT statement.

correlation. In Presentation Interface, an action determining which element or object within a picture is at a given position on the display.

correlation name. In Database Manager, an identifier designating a table or view within a single Structured Query Language (SQL) statement. It can be defined in any FROM clause or in the first clause of an UPDATE or DELETE statement.

CP. See *control program*.

CPI. (1) See *callable programming interface*. (2) See *Common Programming Interface*. (3) characters per inch.

CRC. See *cyclic redundancy check*.

CRC error detection. A system of error checking performed at both the sending and receiving station after a frame check sequence or block check character has been accumulated.

critical message. The information provided by the program to the user that describes a required action the user must take.

critical section. A part of a program that must run without interruption.

cryptography. The transformation of data to conceal its meaning.

CS. See *configuration services*.

CTS. See *clear to send*.

CUA. See *common user access*.

CUG. See *closed user group*.

current connection. The connection a user has during a terminal session or batch job.

current position. In Presentation Interface, the point from which the next graphics primitive is drawn.

current variable. The most recent setting of the variable used. See *local variable*.

cursor. (1) A symbol displayed on the screen and associated with an input device, used to indicate where input from the device will be placed. (2) In Database Services, a named control structure used by an application program to point to a row of data. Synonymous with *selection cursor* and *text cursor*.

cursor stability. An isolation level that provides more concurrency than repeatable read. With cursor stability, a unit of work holds locks only on its uncommitted changes and the current row of its cursors.

custom build. A feature of the OS/2 installation program that allows a user, database administrator, system administrator, or network administrator to create a custom build diskette for installing Database Manager, Communications Manager, or LAN Requester. See also *Custom Install mode*.

custom build diskette. A diskette created to be used for installing Database Manager, Communications Manager, or LAN Requester.

custom install diskette. A diskette created using the custom build feature of the OS/2 installation program. A custom install diskette contains the specific features and device drivers needed for installing Database Manager, Communications Manager, or LAN Requester on one or more computers.

Custom Install mode. The mode used when installing any component of the OS/2 program with a custom build diskette. See also *custom build*.

Customer Information Control System (CICS). An IBM-licensed program that enables transactions entered at remote terminals to be processed concurrently by user-written application programs. It includes facilities for building, using, and maintaining databases.

Customer Information Control System for Virtual Storage (CICS/VS). An IBM-licensed program used in a communications network.

customization tasks. A feature supported by Query Manager that includes a control language, Query Manager command language, customized panels, customized menus, and customized procedures.

customize. Synonym for *configuration*.

customized processing. A method used to run a procedure in which the procedure is specified as a parameter when Query Manager is started.

Cut. A Presentation Manager function that moves a marked section of text to the clipboard.

cycle. In Database Manager, a set of tables that can be ordered so that each table is a descendent of the one before it, and the first is a descendent of the last. Thus, each table is a descendent of itself.

cyclic redundancy check (CRC). A numeric value derived from the bits in a message that is used to check for any bit errors in transmission.

cylinder. (1) The fixed disk or diskette tracks that can be read or written without moving the disk drive or diskette drive read and write mechanism. (2) The number of tracks for space allocation.

D

DAF. See *destination address field*.

data. The coded representation of information for use in a computer. Data has certain attributes such as type and length.

data carrier detect (DCD). This signal is raised by the data circuit-terminating equipment (DCE) when it and the remote DCE have recognized each other's carrier signal and have synchronized themselves. If this circuit is lowered and remains lowered for more than 30 seconds, ACDI will assume the connection is lost and will bring the connection down.

data circuit-terminating equipment (DCE). (1) The equipment installed at the user's premises that provides all the functions required to establish, maintain, and end a telephone connection for data transmission, and which does the signal conversion and coding between the data terminal equipment (DTE) and the line. See also *modem*. (2) For an X.25 packet switching network, the equipment in a data station that provides the signal conversion and coding between the data terminal equipment (DTE) and the line.

data communication. Synonym for *communication*.

data communications channel. A means of one-way data transmission. Contrast with *logical channel*.

Data Definition Language (DDL). In Database Manager, a series of Structured Query Language (SQL) commands used to define objects.

data edit. Changing, inserting, or deleting data from a table in a database.

data file. A collection of user data that is not a program.

data frame. Synonymous with *frame*.

data link. A physical link, such as a wire or a telephone circuit, that connects one or more devices or communication controllers. See also *communications line*.

data link control (DLC). (1) In Systems Network Architecture (SNA), the protocol layer that consists of the link stations that schedule data transfer over a link between two nodes and perform error control for the link. (2) In Communications Manager, a profile containing parameters for a communication adapter.

data manipulation language (DML). A series of Structured Query Language (SQL) commands used to manipulate data.

data mode. In data communications, a time during which phone lines are sending or receiving characters on the communications line.

data packet. At the interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE), a packet used to transmit user data over a virtual circuit.

data segment. A control section of a program which contains only data. It is usually addressed with its own hardware segment and offset. Contrast with *code segment*.

data set. The major unit of data storage and retrieval, consisting of a collection of data in one of several prescribed arrangements and described by control information to which the system has access. See also *file*.

data set ready (DSR). This signal is raised by the data circuit-terminating (DCE) to indicate it is online and ready to begin communicating. Some DCEs use this signal as a power-on indicator. ACIDI expects this signal to be lowered after every connection take-down for a minimum of 100 ms. Failure to do so may cause a warning message to be displayed instructing the user to insure the DCE has, in fact, gone on-hook.

data station. Synonym for *station*.

data stream. The data and control information that is transmitted over a communication facility during a single operation.

data terminal equipment (DTE). The equipment that sends or receives data, or both.

data terminal ready (DTR). The on condition of the circuit connected to the RS232C modem indicating that the terminal is ready to send or receive data.

data trace. A record of the data sent and received on a communications link.

data transmission facility. See *telecommunication facility*.

data type. An attribute used for defining data.

database. (1) A systemized collection of data that can be accessed and operated upon by an information processing system. (2) In Database Manager, a collection of information such as tables, views, and indexes. With Query Manager, a database can also include such other information as report forms, queries, panels, menus, and procedures.

database administrator (DBADM). (1) An individual responsible for the design, development, operation, security, maintenance, and use of a database. (2) In Database Manager, a user with database administrator authority. Such users may access, create, alter, or revoke the right to access these objects to other users or groups.

database directory. A file maintained by Database Services that contains information about the location of databases. A volume database directory exists on every OS/2 file system where a database exists. A system database directory exists on the drive where Database Services was installed. Synonymous with *system database directory* and *volume database directory*. See *indirect directory*.

database environment commands. In Database Manager, a group of programmable interfaces allowing an application program to start and stop Database Manager, connect to and disconnect from databases, create and delete databases, scan database directories, and initiate database recovery. Synonymous with *database environment routines*.

database environment routines. Synonym for *database environment commands*.

database log. The database log is used to rollback uncommitted changes in the database tables. It is used to recover a database to a consistent state after a system crash or power failure. See *circular log*.

database management system (DBMS). A computer program that manages data by providing the services of centralized control, data independence, and complex physical structures for efficient access, integrity, recovery, concurrency control, privacy, and security.

Database Manager. A component of the OS/2 program consisting of Database Services, Query Manager, and Remote Data Services. Database Manager is based on the relational model of data and allows users to create, update, and access databases.

database server. A Database Manager Remote Data Services workstation which provides database services for its local databases to other Remote Data Services workstations.

Database Services. The part of Database Manager providing the base functions and configuration files needed to use Database Manager. Database Services also provides an application programming interface (API) that allows you to write programs in, for example, the IBM C/2 language in order to access Database Manager databases. In addition, Database Services provides an application programming interface that allows software developers to write their own precompilers for Database Manager applications. Synonymous with *engine*.

database tools. The utilities that enable the manipulation of databases; for example, import, export, and restore.

datagram. In NETBIOS, a particular type of information encapsulation at the network layer of the adapter protocol. When a message is sent as a datagram, the receiver of the message sends no acknowledgement for its receipt.

data interchange format (DIF). A format that presents data in rows and columns.

DATE. In Structured Query Language (SQL), a column data type in the form of a three-part value that designates a day, month, and year.

DBADM. See *database administrator*.

DBCS. See *double-byte character set*.

D-bit. See *delivery confirmation bit*.

dBm. See *decibels above milliwatt*.

DBMS. See *database management system*.

DCD. See *data carrier detect*.

DCDB. See *domain control database*.

DCE. See *data circuit-terminating equipment*.

DCE clear confirmation packet. A call supervision packet that data circuit-terminating equipment (DCE) transmits to confirm that a call has been cleared.

DDL. See *Data Definition Language*.

DDSA. See *digital data service adapter*.

deactivate. To take any element out of service, rendering it inoperable or placing it in a state in which it cannot perform the functions for which it was designed.

dead key. Synonym for *non-escaping key*.

deadlock. (1) An unresolved contention for the use of a resource. (2) In Advanced Program-to-Program

Communications (APPC), a situation that occurs when two or more nodes are waiting for messages from each other and cannot continue processing verbs. Synonymous with *hang*.

deallocate. To release a resource that is assigned to a specific task.

decibels above milliwatt (dBm). A unit of absolute power measurement that is scaled such that 0 dBm equals 1 milliwatt.

DECIMAL. In Structured Query Language (SQL), a column data type that consists of numeric data that contains a decimal point. There can be a maximum of 31 digits in the number.

decimal point character. (1) In Database Services, the character used to represent the decimal point in numeric data in delimited ASCII (DEL) files that are imported or exported. The default is a period (.). (2) In Query Manager, the character is also used in reports, panels, and data edit.

dedicate. To assign a system resource, such as an input/output (I/O) device, a program, or a whole system, to one application or purpose.

dedicated server. A personal computer on a network that functions only as a server, not as a requester and a server.

default. A value, attribute, or option that is assumed when no option is explicitly specified.

default choice. An emphasized and pre-selected choice provided by a program when a panel is initially displayed.

default definition. A definition used in panels in Query Manager. A default definition can be used to create a customized panel and is based on one table.

default form. The form used by Query Manager to format reports for queries when a user-defined form is not specified.

default printer. A printer that is assigned to a system or user and accepts all the printed output from that system or user, when no other printer is specified.

default procedure. A function provided by Presentation Interface that can be used to process standard messages from dialogs or windows.

default value. A predetermined value, attribute, or option that is assumed when no other is explicitly specified.

DEL. A format used to export and import data formatted with delimited ASCII.

delay characteristics. The average amount of time required for operations (call setup, call clearing, data transfer, and so forth) to be performed on a packet-switching network.

delete. To remove; for example, to delete a file.

delimited identifier. In Database Manager, an identifier enclosed between two escape characters ("").

delimiter. (1) A character or flag that groups or separates items of data. (2) In the IBM Token-Ring Network, a bit pattern that defines the limits of a frame or token on a ring network.

delivery confirmation bit (D-bit). A bit in the data-packet header that instructs the network to wait until delivery to the remote data terminal equipment (DTE) has been confirmed before confirming delivery to the sending DTE.

dependent logical unit (LU). An LU controlled by a Systems Network Architecture (SNA) host system. A dependent LU cannot send BIND commands.

deselect. An action that causes a choice that was previously selected to no longer be selected.

desk top window. The window, corresponding to the physical device, from which all other types of windows are established.

destination. A point or location in a network to which data is sent.

destination address. A code that identifies the location to which information is sent.

destination address field (DAF). In Systems Network Architecture (SNA), a field in a FID0 or FID1 transmission header that contains the network address of the destination. Contrast with *origin address field*.

Destination Service Access Point (DSAP) Address.

(1) The address of the Link Service Access Point (LSAP) for which a Link Protocol Data Unit (LPDU) is destined. (2) A field in the LPDU.

DevHlp. An OS/2 program function used by device drivers to request operating system services.

device. (1) An input/output (I/O) unit such as a terminal, display, or printer. (2) In OS/2 LAN Server, a drive (for files resources) or port (for printers and serial devices) that is assigned when a resource is used.

device context. In Presentation Interface, a logical description of data destination such as memory, metafile, display, printer, or plotter. See *information device context*, *memory device context*, *metafile device*

context, *screen device context*, *queued-device context*, and *directly-attached-device context*.

device driver. The executable code needed to attach and use a device such as a display, printer, plotter, or communications adapter.

device name. A name reserved by the system or a device driver that refers to a specific device.

device pool. A group of serial devices available to local area network (LAN) users. Often, several users want to use a device at the same time. The network administrator creates a pool of devices so that when one is in use, users are connected to a similar device in the pool.

device queue. An ordered list of device requests routed to a serial device or device pool one at a time.

DFT. See *Distributed Function Terminal*.

diagnostic diskette. A diskette used by computer users and service personnel to diagnose hardware problems.

diagnostic packet. In X.25, a packet used by some networks to indicate error conditions under circumstances where the usual methods of indication are inappropriate.

diagnostic tool. One of the OS/2 program utilities designed to gather and process data to help identify the cause of a problem.

dialog. (1) The interaction between a computer and its user. (2) The interaction of the user with a predefined set of panels or window displays requiring navigation control through a structured hierarchy.

dialog box. In Presentation Interface, the type of window that allows the application to receive data typed by the user or to present formatted information to the user.

DIF. See *data interchange format*.

differential Manchester code. A data encoding method used by the IBM Token-Ring Network. See also *code violation*.

digital data service adapter (DDSA). In data communications, a device used when sending and receiving data using a non-switched digital data system. Contrast with *modem*.

direct authorization. An authorization granted directly and specifically to an individual.

direct connect. A type of connection in which two computers are physically connected by a cable. No modems are required with this type of connection.

direct privilege. In Database Manager, a privilege that is granted explicitly to a user. Contrast with *indirect privilege*.

directly-attached-device device context. A logical description of a data destination that is a device other than the screen (for example, a printer or plotter). See *device context*.

directory. (1) A list of the files that are stored on a disk or diskette. A directory also contains information about the file such as size and date of last change. (2) A named grouping of files in a file system. See also *files resource*. (3) In Database Manager, a list of objects, for example, databases or nodes, and their corresponding locations. (4) In X.25 support, a table that associates X.25 network information about a use with a name.

disable. (1) To make nonfunctional. (2) The state of a processing unit that prevents the occurrence of certain types of interruptions.

DISC. (1) The transmission control character that is part of the sequence for disconnecting a switched line. (2) In X.25, an unnumbered command frame that is used to terminate the mode previously set.

discrete profile. An access control profile that protects a single resource such as a printer or serial device queue. See *access control profile*.

disk. A magnetic disk unit. See also *diskette*.

disk operating system (DOS). An operating system for computer systems that use disks and diskettes for auxiliary storage of programs and data.

diskette. A disk enclosed in a protective container that is removable from the hardware. See also *disk*.

display. A visual presentation of data.

display device. An output unit that gives a visual representation of data.

display screen. The part of the display device that displays information visually.

display station pass-through (DSPT). A communications function that allows a user to sign on to one system (either an IBM AS/400 system, IBM System/38, or IBM System/36) from another system (either an AS/400 system, System/38, or System/36) and use that system's programs and data.

Distributed Function Mode. See *Distributed Function Terminal*.

Distributed Function Terminal (DFT). (1) An operational mode that allows multiple concurrent logical terminal sessions. (2) A hardware or software protocol

used for communication between a terminal and an IBM 3274 or IBM 3174 control unit.

distributed transaction processing services. In Advanced Program-to-Program Communications (APPC), the set of services that enables transaction programs to communicate, access remote resources, and aid in synchronization and error recovery.

distribution tape reel (DTR). A reel of magnetic tape on which IBM sends programs or data to a customer.

DLC. See *data link control*.

DLR. See *dynamic link routine*.

DML. See *data manipulation language*.

domain. (1) A set of servers that allocates shared network resources within a single logical system. (2) For database tables, the attribute or all possible valid values associated with a column.

domain control database (DCDB). A database that resides on the domain controller and contains files that describe the current domain.

domain controller. A server within the domain that provides details of the OS/2 LAN Server to all other servers and requesters on the domain. The domain controller is responsible for coordinating and maintaining activities on the domain.

domain definition. A list of network resources and users that can be printed out by the network administrator.

DOS. See *disk operating system*.

DOS mode. The mode that allows the base operating system to run programs written for DOS.

double-byte character session. A display station operating session that uses double-byte character data for the system to communicate with the user.

double-byte character set (DBCS). (1) A set of characters in which each character is represented by 2 bytes. (2) A set of characters used by national languages such as Japanese and Chinese that have more symbols than can be represented by the 256 single-byte positions. Each character is two bytes in length. Contrast with *single-byte character set*.

double-click. To press and release the select button on the pointing device twice in rapid succession.

download. To move data or programs from a host computer to a workstation. Contrast with *upload*.

downstream. In the IBM Token-Ring Network, the direction of data flow. Contrast with *upstream*.

dragging. Moving an object on the display screen as if it were attached to the pointer, performed by holding the select button and moving the pointer. See also *drop*.

drive. The device used to read and write data on disks or diskettes.

drop. (1) To fix the position of the object that is being dragged by releasing the select button on the pointing device or mouse. See also *dragging*. (2) A cable that leads from a faceplate to the distribution panel in a wiring closet.

DSAP. See *Destination Service Access Point Address*.

DSL. See *dynamic SQL language*.

DSPT. See *display station pass-through*.

DSQCOMM. Serves as an anchor for a return code for a started session and must be preserved, not modified, by the application.

DSR. See *data set ready*.

DTE. See *data terminal equipment*.

DTE clear confirmation packet. A call supervision packet transmitted by data terminal equipment (DTE) to confirm the clearing of a call.

DTR. See *data terminal ready*.

dump. To copy data from memory onto an external medium such as a diskette or printer.

dump diskette. (1) A diskette that contains a dump (data copied from memory) or that is prepared to receive data from memory. (2) In the OS/2 program, a diskette (created using the CREATEDD command) that contains the contents of storage at a specified point in time.

dump services. In Communications Manager, a menu-driven utility used to make a copy of a portion of memory used by Communications Manager for analysis by IBM.

duplex. Pertaining to communication in which data can be sent and received at the same time. Synonymous with *full-duplex*. Contrast with *half-duplex*.

duplicates. In Database Manager, (1) an option used in prompted query and prompted view definition to specify whether duplicate data rows in a query or view should be returned. (2) An option used when creating an index for a table to specify whether or not duplicate values are allowed for the set of columns that comprise the index.

dynamic link library. A module containing a dynamic link routine (DLR) that is linked at load or run time.

dynamic link routine (DLR). A program or routine that can be loaded by an application or as part of a program.

dynamic SQL language (DSL). The Structured Query Language (SQL) statements that are prepared and executed within an application program while the program is running. In dynamic SQL, the SQL source is contained in host language variables rather than being coded into the application program. The SQL statement might change several times during the application program's execution.

E

EBCDIC. See *extended binary-coded decimal interchange code*.

ECF. See *Enhanced Connectivity Facility*.

echo mode. In data communications, a mode in which characters are automatically returned to the transmitting data terminal equipment (DTE) device. Also known as echoplex mode.

edit. To add, change, delete, or rearrange data.

edit code. In Query Manager, a code used in forms and panels to indicate how the data in a particular column or field is formatted to be inputted, displayed, or printed.

edit control. In Presentation Interface, a rectangular window that displays a single line of text that can be changed. When it has the input focus, it displays a flashing pointer to mark the position of the next character.

EHLLAPI. See *Emulator High-Level Language Application Programming Interface*.

ellipsis. A symbol (...) used on a panel indicating that an additional menu panel follows.

embedded SQL. The Structured Query Language (SQL) statements embedded within a program and prepared during the program preparation process before the program is executed. See also *precompilation*.

emulation. The imitation of all or part of one system by another so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated computer system.

Emulator High-Level Language Application Programming Interface (EHLLAPI). A Communications Manager Application Programming Interface that provides a way for users and programmers to access the IBM 3270, IBM AS/400, or System/36 host presentation space.

enable. (1) To make functional. (2) The state of a processing unit that allows the occurrence of certain types of interruptions. (3) In the OS/2 program, to initiate the operation of a circuit or device.

end of block (EOB). A code that marks the end of a block of data.

end of data (EOD). A cursor-movement function that moves the selection cursor to the rightmost position on the bottommost line of information.

end of line (EOL). A cursor-movement function that moves the selection cursor to the rightmost position on the current line.

end user. The ultimate source or destination of data flowing through an SNA network. An end user can be an application program or a workstation operator.

engine. Synonymous for *Database Services*.

Enhanced Connectivity Facility (ECF). A set of programs used for interconnecting IBM personal computers and IBM System/370 host computers operating in the MVS/XA or VM/SP environment. These ECF programs provide a method for sharing resources between workstations and host systems.

enter. An action performed by pressing the Enter key or selecting the Enter push button. This action causes the computer to receive and process user input.

entry field. A panel element, usually highlighted in some manner and usually with its boundaries indicated, where users type information.

environment. In Database Manager, a collection of names of logical and physical resources used to support the performance of a function.

EOB. See *end of block*.

EOD. See *end of data*.

EOL. See *end of line*.

error. An unexpected result from a program command or action.

error log. A file that stores error information for later access. See *log*.

escape character. The symbol used to enclose a Structured Query Language (SQL) delimited identifier. This symbol is the quotation mark (").

Escape key. A key that removes the current panel, menu, or window without processing it and returns to a previous one. See also *cancel* and *return*.

ETHERAND. The name of a LAN protocol that utilizes the protocol definitions of Ethernet Digital Intel Xerox (DIX) version 2.0 and IEEE 802.3.

even parity. A data transmission attribute in which the parity bit of a character frame is set so that the sum of the binary digits in the character and the parity bit is even.

event. An occurrence of significance to a task; for example, the completion of an asynchronous operation such as an input/output (I/O) operation.

exchange station ID (XID). In Synchronous Data Link Control (SDLC), a control field command and response for passing station IDs between a primary and secondary station.

exit. An action that ends the current function and returns to a higher-level function. See also *Escape key*, *cancel*, and *return*.

export. To copy data from Database Manager tables to an OS/2 file using PC/IXF, DEL, or WSF formats. In addition, in Query Manager this refers to copying Query Manager objects from a database to an OS/2 file. Contrast with *import*.

express buffering. A method of improving the likelihood that a ring station will copy a medium access control (MAC) frame immediately, when the normal receive buffers of the ring station are full.

expression. An operand or a combination of operands and operators yielding a single value.

extended binary-coded decimal interchange code (EBCDIC). A coded character set consisting of 8-bit coded characters used by host computers.

extended error code. An 8-byte data string returned by Query Manager generated by an internal system error that is used by service personnel for diagnosis.

extended help. In Presentation Manager, an action available from Help panels that provides users with current information about the application panel rather than a particular item on the panel. See *contextual help*.

extended storage. The storage that supplements system storage. See *system storage*.

external resource. A file, printer, or serial device resource supplied by a server outside the current domain.

external server. A server outside the domain that defines and controls domain resources.

F

facilities field. In an X.25 packet switching data network, an optional field used by the DTE to convey information about the call to the network.

fast path. A way to navigate through panels and menus using short cuts. Fast paths can include selections using numbers, mnemonics, and function keys. See also *mnemonic* and *function key*.

fast select. A packet-switching data network optional facility that allows a greater amount of call user data to be included on call, call accept, and call clear packets.

FAT. See *file allocation table*.

fault domain. In IBM Token-Ring Network problem determination, the portion of the ring that is involved with an indicated error.

FCB. See *File Control Block*.

feature. A programming or hardware option.

feature group. In Communications Manager, a grouping of functions that is optionally installed.

FID field. See *format identification field*.

FID0. A field used for traffic involving non-Systems Network Architecture (SNA) devices between adjacent subarea nodes when either or both nodes do not support explicit-route and virtual-route protocols.

FID1. A field used for traffic between adjacent subarea nodes when either or both nodes do not support explicit-route and virtual-route protocols.

field. (1) An area in a record or on a panel used to contain data. (2) In Database Manager, the smallest unit of data that can be referred to in a table from a database. A field contains one unit of information from a column within a row of data in a table. (3) In the IBM 3270 data stream, a group of consecutive positions on a presentation space with similar characteristics. These characteristics are defined by the field attribute byte at the beginning of the field.

field delimiters. Symbols, usually brackets, surrounding or within an entry field in a panel that indicate the limits of an entry field.

field entry message. A message that is displayed when an attempt has been made to violate a rule or limitation of an entry field.

FIFO. See *first-in, first-out*.

file. A collection of related data that is stored and retrieved by an assigned name. See also *data set*.

file allocation table (FAT). In IBM personal computers, a table used to allocate space on a disk for a file. This can then be used to locate and chain together parts of the file that may be scattered on different sectors so that the file can be used in a random or sequential manner.

File Control Block (FCB). A record that contains all of the information about a file; for example, its structure, length, and name.

file description. A part of a file where file and field attributes are described.

file name. (1) The name used by a program to identify a file. (2) The portion of the identifying name that precedes the extension.

file name extension. An optional three-letter code that may be used as the second part of an OS/2 file name and that is separated from the file name by a period (.). Extensions are used to more specifically identify the name of the file.

file specification. The full identifier for a file, which includes its drive, path, file name, and file name extension.

file system. The collection of files and file management structures on a physical or logical mass storage device such as a disk.

files resource. A directory or subdirectory on a server that contains programs or data files that can be made available to users. For the IBM PC LAN program, see also *fileset*. See also *directory*.

filemode. The third field in the VM/CMS file identifier. The filemode indicates the mode letter currently assigned to the virtual disk in which the file resides.

fileset. An IBM PC LAN program term. See also *files resource*.

filespec. The name and location of a file. The format is dependent on the storage medium of a file; for example, c:\path\filename.ext.

filetype. The second field in the VM/CMS file identification.

filter. A device or program that modifies data, signals, or material in accordance with specified criteria.

final summary. In Query Manager, the summary totals for the data displayed in a report generated from a query.

first-in, first-out (FIFO). A type of queue where the oldest elements in the queue are removed before any newer elements are added. See also *stack*.

fixed disk. A flat, circular, nonremovable plate with a surface layer on which data can be stored by magnetic recording.

fixed-length. Pertaining to a characteristic of a file in which all of the records are the same length.

fixed-length string. A character or graphic string whose length is specified and cannot be changed.

fixed-space font. See *uniformly-spaced font*.

FLOAT. In Structured Query Language (SQL), a column data type using floating point numbers. Floating point numbers consist of a number followed by an exponent designator; for example, 1.234E2, -5.678E2, or 1.234E-2. In Query Manager, see also *scientific notation*.

flow control. In communications, the process of controlling the flow of data that passes between components of the network. See also *pacing*.

flush. To delete, erase, or remove.

FM. See *function management header*.

font. A particular style of typeface that contains definitions of character sets, marker sets, and pattern sets.

foreground mix. Synonym for *mix*.

foreground program. The program with which the user is currently interacting.

foreground session. Synonym for *active session*.

foreign key. In Database Manager, a column or set of columns in a table whose values are required to match at least one primary key value of a row of its parent table. See *primary key*. See also *referential constraint*, *relationship*, and *referential integrity*.

form. A Query Manager object containing the specifications for printing or displaying a report.

format. (1) A specific arrangement of a set of data. (2) In the base operating system (both DOS and OS/2 modes), a command used to prepare a diskette.

format identification (FID) field. A field in each transmission header (TH) that indicates the format of the TH.

formatted diskette. A diskette on which track and sector control information has been written. Contrast with *unformatted diskette*.

formatted program interface. The 3270 terminal emulation support that converts 3270 data streams into

a display image for user-written programs. Contrast with *unformatted program interface*.

FORTRAN/2. See *IBM FORTRAN/2*.

forward. A scrolling action that displays information below the currently visible information. Contrast with *backward*.

frame. (1) In high level data link control (HDLC), the sequence of contiguous bits bracketed by and including the opening and closing flag (01111110). Frames are used to transfer data and control information across a data link. (2) A data structure that consists of fields predetermined by a protocol for the transmission of user data and control data. Synonymous with *data frame*. (3) In X.25 packet switching data networks, the contiguous sequence of 8-bit bytes delimited by beginning and ending flags. Frames are used at the frame level (level 2) of the X.25 protocol to transport information that performs control functions, data transfers, and transmission checking.

frame check sequence. (1) A field immediately preceding the closing flag sequence of a frame that contains a bit sequence checked by the receiver to detect transmission errors. (2) In Synchronous Data Link Control (SDLC) and X.25, 16 bits in a frame that contain transmission-checking information.

frame level. Synonym for *link level*.

frame-level data circuit-terminating equipment. In a packet switching data network, the equipment at the exchange that manages the network connection side of the protocol at the frame (or link) level.

frame reject. In X.25, a control field that is used to indicate an error condition that cannot be recovered by the retransmission of identical frames.

full-duplex. Synonym for *duplex*. Contrast with *half-duplex*.

fullselect. A SELECT statement (without ORDER BY or FOR UPDATE) or more than one SELECT statement combined by using set operators (UNION, INTERSECT, or EXCEPT).

full selector. A 16-bit index pointer in a descriptor table.

full selector offset. A 32-bit value consisting of a 16-bit index pointer in a descriptor table and a 16-bit offset within the address space.

full speed. The top-rated speed of transmission for a piece of equipment.

full-screen application. An application program that uses a screen group. It cannot run in a window.

full-screen mode. A form of screen presentation in which the contents of an entire screen can be displayed at once.

function. A specific purpose of an entity or its characteristic action, such as a column function, or scalar function. See *column function* and *built-in function*.

function key. A key that causes a specified sequence of operations to be performed when it is pressed. See also *fast path*.

function key area. The area at the bottom of a panel that identifies function key assignments that are available on that panel.

function key selection. See also *function key*.

function management header (FM). In Systems Network Architecture (SNA), one or more headers optionally present in the leading request units (RUs) on an RU chain.

functional address. A subset of group addresses or Media Access Control Service Access Points (MSAPs) that is encoded in bit-significant format, thereby allowing multiple individual groups to be designated by a single address.

G

gateway. In communications, a functional unit that connects two computer networks of different network architectures. See also *bridge*.

GDDM. See *graphical data display manager*.

GDF. See *graphics data file*.

generic profile. An access control profile that allows protection of a directory and its subdirectories and files. Only file resources can be protected by generic profiles. See *access control profile*.

global access list. A file of access control profiles that OS/2 LAN Server program checks first. Profiles in this file override access authorities

global variable. In Query Manager, a variable that exists from the time it is initially set until Query Manager is ended. Note: Query Manager does create some global variables to aid in the running of Query Manager. See *local variable*.

grant. Gives authority to a user ID or group ID.

graphic character. A character other than a control character that is normally represented by a graphic.

graphic character set. A set of graphic characters in a code page.

graphical data display manager (GDDM). A function of the host operating system that processes both text and graphics for output on a display, printer, or plotter.

graphics. A picture defined in terms of graphics primitives and graphics attributes.

graphics attributes. The attributes that apply to graphics primitives. Examples are color selection, line type, and shading pattern definition. See *segment attributes*.

graphics data file (GDF). A picture definition in a coded format used internally by the graphical data display manager (GDDM) and optionally providing the user with a lower level programming interface than the GDDM application programming interface.

graphics field. A field used for graphics.

graphics model space. The conceptual coordinate space in which a picture is constructed after any model transforms have been applied. Synonymous with *model space*.

graphics primitive. A single item of drawn graphics, such as a line, arc, or graphics text string. Synonymous with *primitive*. See also *graphics segment*.

graphics segment. In Presentation Interface, a sequence of related graphics primitives and graphics attributes. See also *graphics primitive*.

graphics symbol set. An object that can contain either lines or images.

graphics text. Text displayed by an application program using a graphics symbol set.

graying. A form of emphasis that tells users which items are currently unavailable for selection because selection would violate some condition. Graying is accomplished by reducing the contrast between the choice and its background.

group. (1) In Presentation Interface, a collection of logically connected controls; for example, the buttons controlling paper size for a printer. See *program group*. (2) A logical organization of users that have IDs according to activity or resource access authority.

group access list. A list of groups and the associated access authorities for each group in the list.

group address. An address assigned to a collection of Service Access Points (SAPs), either Link Service Access Points (LSAPs) or Media Access Control Service Access Points (MSAPs).

group heading. The words identifying a group of related selection fields or entry fields.

group ID. An ID that relates to rights given to a group profile to access objects, resources, or functions.

group SAP. A single address assigned to a group of Service Access Points (SAPs).

H

half-duplex. In two-way communication, where only one user transmits at a time. Contrast with *duplex*.

half-session. In Systems Network Architecture (SNA), a component that provides function management data services, data flow control, and transmission control for one of the sessions of a network addressable unit. See *session*, *primary half-session*, *secondary half-session*.

handle. An identifier that represents an object, such as a device, window, or file.

hang. Synonym for *deadlock*.

hard error. (1) An unrecoverable error where a workstation is stopped. (2) In the IBM Token-Ring Network, an error on the network that requires that the network be reconfigured or that the source of the error be removed before the ring can resume reliable operation.

HDLC. See *high-level data link control*.

heap. An area of free memory available for dynamic allocation by a program. The size of a heap varies, depending on the memory requirements of a program.

Help. A feature that provides assistance and information to the user.

help on help. General information about the types of help information available to assist users of an application. Help on help is accessed by selecting the function key or by selecting Help with the mouse.

help panel. The information displayed on a screen in response to a help request from a user.

hertz (Hz). A unit of frequency equal to 1 cycle per second. Note: In the United States, line frequency is 60 Hz or a change in voltage polarity 120 times per second; in Europe, line frequency is 50 Hz or a change in voltage polarity 100 times per second.

hex. See *hexadecimal*.

hexadecimal. Pertaining to a numbering system with a base of 16; valid numbers use the digits 0 through 9 and

characters A through F, where A represents 10 and F represents 15.

hidden field. A field in a display file that is passed to and from the program but is not sent to the display.

hierarchical network. In the IBM Token-Ring Network, a multiple-ring network configuration providing only one path through intermediate rings between source rings and destination rings. Contrast with *mesh network*.

high-level language application programming interface (HLLAPI). A software product that usually operates in conjunction with a terminal emulator, such as 3270 terminal emulation, and allows interaction between a host session and an application program running in a personal computer session.

high-level data link control (HDLC). In data communication, the use of a specified series of bits to control data links in accordance with the International Standards for HDLC, ISO 3309 Frame Structure and ISO 4335 Elements of Procedures.

history file. A file providing a record of system installation.

hit testing. In Presentation Interface, the means of identifying windows associated with input device events.

HLLAPI. See *high-level language application programming interface*.

home fileset. (1) In Database Services, the condition in which the system database is in the same OS/2 file system as the volume database directory. See *database directory*. (2) A home fileset is optional for OS/2 program users. In OS/2 LAN Server, a files resource on a server automatically assigned when a user logs on. IBM PC LAN program users are automatically assigned a home fileset.

home position. (1) The first position of the first input field on the display. (2) The position to which a cursor normally returns. (3) The position (far left) to which the print head moves after the printer is turned on and the Stop or Reset button is pressed. (4) The first item in a list or the first line of help information.

homologation. The enforcement of certain country or network requirements regarding the use of telephone circuits, X.25 packet switching networks, and other networks by computers.

hook. (1) In programming, an area of program code that makes connections with other program codes possible. (2) A mechanism by which procedures are called when certain events occur in the system; for example, the filtering of mouse and keyboard input before it is received by an application program.

hook chain. A sequence of hook procedures that are chained together so that each event is passed in turn to each procedure in the chain.

hop count. The number of nodes through which a frame has passed on the way to its destination.

hop count limit. The maximum number of nodes through which a frame can pass on the way to its destination.

host computer. (1) In a computer network, a computer providing services such as computation, database access and network control functions. (2) The primary or controlling computer in a multiple computer installation.

host language. In Database Manager, a programming language in which Structured Query Language (SQL) statements are embedded.

host node. In Systems Network Architecture (SNA), a subarea node that contains a system services control point (SSCP); for example, an IBM System/370 computer with OS/VS2 and VTAM.

host processor. A processor that controls all or part of a network.

host program. (1) In Database Manager, a program written in a host language containing embedded Structured Query Language (SQL) statements. (2) In Communications Manager, a program that runs on a host computer.

host prompt character pacing. A method in which a system transmitting a file sends only one block of data at a time and waits for the receiving system to send an agreed upon character before transmitting the next block of data.

host support. The facilities a host processor makes available to attached terminals, processors, and other devices, such as problem determination aids and database facilities.

host system. The controlling or highest level system in a data communication configuration.

host variable. In an application host program, a variable referenced by embedded Structured Query Language (SQL) statements. Host variables are programming variables in the application program and are the primary mechanism for transmitting data between Database Services tables and application program work areas.

hot carrier. Synonym for *continuous carrier*.

hot key. A key or combination of keys used to switch between sessions.

hot spot. The part of the pointer, usually the tip, that must touch an object before it can be selected. See also *action point*.

Hz. See *hertz*.

I

IBM AS/400 PC Support. The IBM licensed program that provides AS/400 system functions to an attached personal computer.

IBM C/2 Language. A language used to develop software applications in compact, efficient code that can be run on different types of computers with minimal change and was designed for use on an IBM Personal System/2 workstation.

IBM COBOL/2. Common business-oriented language. A high-level programming language, based on English, that is used primarily for business applications and was designed for use on an IBM Personal System/2 workstation.

IBM FORTRAN/2. A programming language primarily used to express computer programs by arithmetic formula and designed for use on the IBM Personal System/2 workstation. Note: FORTRAN means (FORmula TRANslation).

IBM Macro Assembler/2 (MASM). This language translates assembler language source code into an object module containing machine language understood by the computer.

IBM Operating System/2 Extended Edition. A program that contains the features of OS/2 Standard Edition Version 1.3. In addition, this program contains an advanced relational Database Manager component, a Communications Manager component, and a LAN Requester component that provide intersystems communications, improved connectivity, terminal emulation, and access to shared network resources.

IBM Operating System/2 LAN Server. A program that allows resources to be shared with other computers on the network. See *server*.

IBM Pascal/2. A high-level general-purpose programming language, related to ALGOL. Programs written in IBM Pascal/2 are block structured, consisting of independent routines. They can run on different computers with little or no modification and were primarily designed for use on an IBM Personal System/2 workstation.

IBM PC Network. IBM PC Network is a low-cost broadband network that allows attached IBM personal computers, such as IBM Personal System/2 workstations, IBM 5150 Personal Computers, IBM Personal Computer ATs, IBM PC XTs, and IBM

Portable Personal Computers to communicate and to share resources.

IBM ServiceLine. See *ServiceLine*.

IBM Support Center. The support center available to registered service coordinators to help resolve program defects on supported software. Synonymous with *Support Center*.

IBM Token-Ring Network. IBM Token-Ring Network is a high speed, star-wired local area network to which a variety of IBM products can be connected.

identifier. A token used to form a name of a Database Manager object or column name.

idles. In the IBM Token-Ring Network, the signals sent when neither frames nor tokens are being transmitted.

IEEE 802.2 interface. An interface adhering to the 802.2 logical link control (LLC) Standard of the Institute of Electrical and Electronics Engineers (IEEE). This standard is one of several standards for local area networks approved by the IEEE.

I format. See *information format*.

image. In OS/2 LAN Server, a binary file that is structured to look like the files used during a normal machine initial program load (IPL). Images are used to load software on machines that are not loaded from their own fixed disk or diskette drives. Synonymous with *IPL image*.

image definition file. An ASCII file that contains names of files used to produce an image. It consists of an image name, a description of the image, and how it is defined.

image profile. The details of an image that identifies it to the domain.

import. (1) To copy data from OS/2 files into tables in a database. This can be done using different options such as INSERT, CREATE, or REPLACE_CREATE. (2) In Query Manager, import can be done using options such as APPEND or REPLACE. In addition, Query Manager allows copying data from OS/2 files into Query Manager objects. Contrast with *export*.

inactive program. A program that has been started but is suspended so that it is no longer running. Contrast with *active program*.

incoming call packet. A call supervision packet transmitted by data circuit-terminating equipment (DCE) to inform the called data terminal equipment (DTE) that another DTE has requested a call.

increment. To increase by a constant value.

independent LU. A logical unit (LU) that is not controlled by a Systems Network Architecture (SNA) host system.

index. In Database Manager, a collection of data about the locations of records in a table, allowing faster access to a record using a specified key.

index help. General information listed by topic that is available to users who want more information for the current application. Index help is accessed by selecting the function key while within a help panel.

index key. In Database Manager, a column or an ordered collection of columns on which an index is defined. See *key*.

IND\$FILE. The default name for the IBM host file transfer program used by the host computer to communicate with Communications Manager.

indicator variable. In Database Manager, a variable used to represent the null value in an application program. In Query Manager, if the value for the selected column is the null character, as specified by the active Query Manager profile, a hyphen (-) is placed in the field in the appropriate Query Manager panel.

indirect. In Database Services, the condition where the system database directory is on a different OS/2 file than the volume database directory. See also *database directory*.

indirect authorization. A process of granting a privilege to a group of users. Each individual user belonging to the group indirectly assumes that authorization.

indirect directory. See also *indirect*. See *database directory*.

indirect privilege. In Database Manager, a privilege granted to users because they belong to a group that has been explicitly granted the privilege. Contrast with *direct privilege*. See *privilege*.

information format (I format). A format used for information transfer.

informational message. A message that is not the result of an error condition; for example, a message that gives the status of a job or operation. A message that provides information but does not require a response.

information device context. A logical description of a data destination other than the screen (for example, a printer or plotter), but where no output occurs. Its purpose is to satisfy queries. See *device context*.

information (I) frame. A frame in I format used for numbered information transfer.

information processing system. A system including computer systems and associated personnel that in conjunction with data processing operations performs operations on information; for example, automated office operations.

initial field value. The information in an entry field provided by an application when the field is first presented.

initial procedure. A procedure that will run automatically before displaying each panel instance and that can access or modify variables for the current panel instance. One procedure can be specified for Add mode and one can be specified for Change mode.

initial program load (IPL). (1) The initialization procedure that starts an operating system. (2) The process of loading programs and preparing a system to run jobs.

initial search. A panel operation in Query Manager that locates data for a panel that meets specified criteria.

initialize. (1) To set counters, switches, addresses, or contents of storage to 0 or other starting values at the beginning of, or at prescribed points in, the operation of a computer routine. (2) To prepare an adapter for use by a program.

inline code. In a program, instructions that are executed sequentially, without branching to routines, subroutines, or other programs.

input. The information entered into a computer for processing or storage.

input device. A device such as a keyboard in a data processing system through which data may be entered into the system.

input field. A field that accepts a value.

input focus. The area of the screen that receives input from an input device.

input mode. A mode where records can be read from a file.

input-output privilege level (IOPL). A statement in the CONFIG.SYS file that enables certain application programs to communicate directly with I/O devices.

insert (Ins) mode. An entry mode, obtained by pressing the Insert (Ins) key, that is used for adding information between characters without deleting existing characters.

installation. The process of placing one or more OS/2 components on the fixed disk of a workstation.

integer. A whole number; for example, one of the numbers 0, +1, -1.

integrity. The protection of systems, programs, and data from inadvertent or malicious destruction or alteration.

interactive. Pertaining to the exchange of information between people and computers.

interactive processing. (1) A processing method in which each user action causes a response from a program or the system. (2) In Database Manager, a method of processing that allows users to interact with the Query Manager panels and menus while a procedure is running.

interactive program. A program that is running (active) and ready to receive (or is currently receiving) input from the user. See *active program*. Contrast with *non-interactive program*.

interactive session. The group of processes or tasks that currently own the keyboard, mouse, and display, or other interactive input devices.

Interactive System Productivity Facility (ISPF). ISPF is an interactive panel-driven application that displays information a user can view and change. It provides a powerful editor as well as several useful utilities which allow users to allocate, rename, catalog, and delete data sets. Other utilities allow a user to print data sets or parts of a data set. ISPF also provides an online help and tutorial facility.

interchange file. Data that can be sent from one Presentation Interface application to another.

interface. (1) A set of verbs used by a program to communicate with another program. (2) A shared boundary between two or more entities. An interface might be a hardware component to link two devices together or it might be a portion of memory or registers accessed by two or more computer programs. See *user interface*.

intermediate block check. A check that verifies each record, rather than the contents of the total block, when large blocks of data are received.

intermediate node. A node that provides intermediate routing services in a Systems Network Architecture (SNA) network.

internal resource. Printers, files, and serial devices defined and controlled within a domain by a domain controller.

International Organization for Standardization (ISO). An organization of national standards bodies from various countries established to promote development of standards to facilitate international exchange of goods

and services, and develop cooperation in intellectual, scientific, technological, and economic activity.

International Telegraph and Telephone Consultative Committee (CCITT). An international organization that recommends and publishes standards for the interconnection of communications equipment.

interprocess communication. The exchange of information between processes.

interrupt. A suspension of a process, such as the execution of a computer program caused by an event external to that process, performed in such a way that the process can be resumed.

interrupt packet. A packet, used in an interrupt procedure, that allows data terminal equipment (DTE) to transmit data to a remote DTE without following the flow control procedure applying to data packets.

interrupt time. Refers to executing code as a result of an interrupt; the thread of execution does not belong to a process.

intersection. In Database Manager, at the center crossing of two relations is a third relation containing common items from the initial relations.

IOPL. See *input-output privilege level*.

ISO. See *International Organization for Standardization*.

IPL. See *initial program load*.

IPL image. Synonym for *image*.

ISPF. See *Interactive System Productivity Facility*.

J

jack. A connecting device to which a wire or wires of a circuit can be attached and arranged for insertion of a plug.

join. In Database Manager, a relational operation that allows for retrieval of data from two or more tables based on matching column values.

join condition. In Database Manager, a condition where two tables are brought together and compared; rows from one table are selected when columns from that table match columns (over a condition) from the other table. In Query Manager Prompted Query, this is called join tables.

journal. A file used to record changes made in a system. Synonymous for *log*.

K

KB. See *kilobyte*.

kernel. (1) The part of an operating system that performs basic functions such as allocating hardware resources. (2) In Database Services, a relational command processor.

key. (1) One or more characters or record fields used to identify the record and establish the order of the record within an indexed file. (2) In Database Manager, a column or an ordered set of columns on which an index may be created. (3) In database referential integrity, a column or an ordered set of columns in a table. The ordering of the columns within a key is not constrained by the ordering within the table; therefore, the same column can be any part of more than one key. (4) In Query Manager Panels, a usage field name (K usage) used for subtable columns. See *composite key*, *foreign key*, and *index key*.

keyboard. A systematic arrangement of keys by which a machine is operated or by which data is entered.

keyboard mapping. A table or profile containing the definitions assigned to keys on a keyboard for use in terminal emulation.

keyboard remapping. A Communications Manager facility that allows users to change the key assignments on the keyboard they are using in terminal emulation.

keyboard style. The manner in which the keyboard key assignments are changed to match a particular keyboard type or user-defined arrangement.

keylock. A Communications Manager function that controls access to some advanced functions. See also *lock* and *service key*.

keys help. An action in help panels that gives users a listing of the key assignments for the current application.

keyword. One of the predefined words of a computer, command language, or an application.

kilobyte (KB). A term meaning 1024 bytes.

L

LAN. See *local area network*.

LAN adapter. A card which is installed in a Personal Computer and is used to attach this device to a local area network.

LAN Requester. A component of the OS/2 program that allows users to access shared network resources made available by OS/2 LAN Servers. See *requester*.

LAN Server. See *IBM Operating System/2 LAN Server*.

language interface module (LIM). A module that allows applications to call EHLLAPI functions either directly or indirectly.

language support procedure. A function provided by Presentation Interface for applications that do not provide their own dialog or window procedures.

LAP. See *link access procedures*.

last-in, first-out (LIFO). A queuing technique in which the next item to be retrieved is the item most recently placed in the queue. See also *queue*.

LDT. See *local descriptor table*.

leading zero. A 0 that is displayed beside the leftmost digit in a number.

leased line. See *non-switched line*.

LIFO. See *last-in, first-out*.

LIM. See *language interface module*.

limited broadcast. In the IBM Token-Ring Network, the forwarding of specially designated broadcast frames only by bridges that are enabled to forward them.

line feed. A control character that causes an output device to move forward one line.

line speed. The rate at which data is transmitted from one point to another over a telecommunications line, expressed in bits per second (bps).

line switching. Synonym for *circuit switching*.

line type. A type of telecommunications link, either switched or non-switched.

link. (1) The physical medium of transmission, the protocol, and associated devices and programming used to communicate between computers. (2) To interconnect items of data or portions of one or more computer programs; for example, the linking of object programs by a linkage editor, or the linking of data items by pointers.

link access procedures (LAP). The link level elements used for data interchange between data circuit-terminating equipment (DCE) devices and data terminal equipment (DTE) devices operating in user classes of service 8 to 11, as specified in CCITT Recommendation X.1.

link connection. In Systems Network Architecture (SNA), the physical equipment providing two way communication between one link station and other link stations. Examples of the physical equipment are a telephone wire or microwave transmission equipment.

link control protocol data unit (LPDU). In a local area network (LAN), the unit of information exchanged between link stations in different nodes.

link level. A part of CCITT's X.25 Recommendation that defines the link protocol. The link protocol is used to get data into and out of the network across the full-duplex link connecting the subscriber's machine to the network node. Link access procedure (LAP) and link access protocol-balanced (LAPB) are the link access protocols recommended by the International Telegraph and Telephone Consultative Committee (CCITT). Synonymous with *frame level*.

link protocol. The rules for sending and receiving data at the link level.

link protocol converter (LPC). A device that changes one type of link-level protocol information to another type of link-level protocol information for processing.

link service access point (LSAP). In the IBM Token-Ring Network, the logical point at which an entity in the logical link control sublayer provides services to the next higher layer.

link station. (1) In Systems Network Architecture (SNA), the combination of hardware and software that allows a node to attach to and provide control for a link. (2) On a local area network (LAN), part of a service access point (SAP) that enables an adapter to communicate with another adapter.

link station role. In Systems Network Architecture (SNA), the role that a local node assumes for a link. Possible roles are primary (or controlling), secondary, or negotiable.

linked list. Synonym for *chained list*.

list. An action requested while in an entry field to search for valid choices for that entry field. The result is a panel from which the user can select a choice to be used in the entry field. See also *prompt*.

LLC. See *logical link control*.

LLC protocol. See *logical link control protocol*.

LLU. See *local logical unit*.

load. (1) To move data or programs into memory. (2) To place a diskette into a diskette drive.

load module. A computer program in a form suitable for loading into memory for execution.

lobe. In the IBM Token-Ring Network, the section of cable (which consists of several segments) that connects a device to an access unit.

local. Residing on the user's node or workstation.

local administrator. The second level of user type authority in User Profile Management. It assigns the user SYSADM (system administrator) authority for all Database Manager objects on the local workstation. A local administrator does not have the same User Profile Management authority as an administrator user type.

local area network (LAN). (1) Two or more computing units connected for local resource sharing. (2) A network in which communications are limited to a moderate-sized geographic area, such as a single office building, warehouse, or campus, and that do not extend across public rights-of-way.

local busy. In a local area network (LAN), a state that may occur in the adapter indicating that it can not handle additional frame activity for a given link station.

local controller. A functional unit within the system that controls the operation of one or more directly attached input/output devices or communications lines. Contrast with *remote controller*.

local database. A database physically located on the workstation in use. Contrast with *remote database*.

local descriptor table (LDT). A table that contains access information about the code and data segments for which a process has addressability.

local initiation. In Advanced Program-to-Program Communications (APPC), a conversation allocated by a local logical unit (LU).

local location name. The name by which a system is known to other systems in an Systems Network Architecture (SNA) network. It is equivalent to an SNA local logical unit (LLU) name.

local logical unit. See *logical unit*.

local logical unit profile. See *logical unit profile*.

local session identification. A field in a format identification 3 (FID3) field transmission header that indicates the type of session and the local address of the directly attached logical unit (LU) or physical unit (PU).

local station address. In communications, the location of a station that is attached by a data channel to a host node.

local transaction program. In Advanced Program-to-Program Communication (APPC), the transaction program at the local end of the

conversation. Contrast with *remote transaction program*.

local variable. (1) A parameter that is defined and used only within a specified portion of the program in which it is declared. (2) In Query Manager, a variable that exists as long as the object that created it is running. See *global variable*.

local workstation. A workstation that is connected directly to a system without the need of data transmission facilities. Contrast with *remote workstation*.

lock. (1) In Database Manager, (a) a means of serializing events or access to data; (b) a Structured Query Language (SQL) statement used to acquire control of tables prior to executing statements that use them. (2) In Communications Manager, a password-protection system that can be used to prevent access to some advanced functions. See also *keylock*.

lock escalation. In Database Services, the response that occurs when the number of locks issued exceeds the capacity specified in the database configuration. During a lock escalation, locks are freed by converting a lock on a record for a table into one lock on a table. This is repeated until enough locks are freed by one or more processes to meet the capacity specified in the database configuration.

locking. The process by which Database Services ensures integrity of data. Locking prevents users from accessing inconsistent data.

log. (1) A database object maintained by Database Services. It is a recovery log created by the system that contains the information needed to rollback uncommitted transactions, and to complete committed transactions. (2) To record; for example, to log all messages on the system printer. Synonymous with *journal*. See *message log* and *error log*.

log record. In Database Services, a record of an update to a database performed during a unit of work.

logging on. See *logon*.

logical channel. In packet mode operation, a means of two-way simultaneous transmission of data across a data link. A logical channel represents the path that data travels from its origin to the network or from the network to its destination. Several logical channels can be established on the same data link by interleaving the transmission of packets. Contrast with *data communications channel*.

logical connector. In Structured Query Language (SQL), a condition that connects expressions within a WHERE or HAVING clause. The valid logical connectors are *and* and *or*.

logical device. (1) An input/output (I/O) device identified in a program by a label or number that corresponds to the actual label or number assigned to the device. Contrast with *physical device*. (2) In the OS/2 program, a redirected disk, file, printer, or other specific device.

logical link. The conceptual joining of two nodes for direct communication. Several logical links may be able to utilize the same physical hardware.

logical link control (LLC). The DLC.LAN sub-layer that provides two types of Data Link Control (DLC) operations. The first type is connectionless service, which allows information to be sent and received without establishing a link. The LLC sub-layer does not perform error recovery or flow control for connectionless service. The second type of DLC operation is connection-oriented service, which requires the establishment of a link prior to the exchange of information. Connection-oriented service provides sequenced information transfer, flow control, and error recovery.

logical link control (LLC) protocol. In a local area network (LAN), the part of the protocol that governs the assembling of transmission frames and their exchange between data stations independently of how the transmission medium is shared. When doing SNA-SNA communications over a packet switched data network (PSDN), virtual circuits are viewed as communication lines with the ability to support multiple sessions. In this environment the logical link control function provides SNA adjacent mode functions similar to SDLC.

logical record. A set of related data or words considered to be a record from a logical viewpoint.

logical terminal. (1) A destination with a name that is related to one or more physical terminals. (2) The definition of a specific 3270 terminal emulation session.

logical unit (LU). In Systems Network Architecture (SNA), a port through which an end user accesses the SNA network in order to communicate with another end user and through which end users access the functions provided by system services control points (SSCPs).

logical unit 6.2 (LU 6.2). A particular type of Systems Network Architecture (SNA) logical unit (LU) that provides a connection between resources and transactions programs running on different network nodes. See *Advanced Program-to-Program Communications (APPC)*.

logical unit profile. A set of parameters that define a local and partner logical unit (LU).

logo. (1) A letter, combination of letters, or symbol used to represent an entire word or words. (2) The

display that identifies the IBM Corporation and the program name on licensed programs.

logoff. The procedure by which a user ends a terminal session.

logon. The process that allows a user to access the system after determining user ID. This user ID is then used to determine privileges and authorization to access protected resources, such as a database or other resources on a network.

long string. A fixed or variable-length string where the maximum length is greater than 254 bytes.

LONG VARCHAR. In Structured Query Language (SQL), a column data type where the character data varies in the number of characters. The maximum number of characters is 32,700.

lookup table. In Query Manager panel definition, a table from which columns can be presented in the panel as output fields only.

loop. A sequence of instructions executed repeatedly while a certain condition prevails.

LPC. See *link protocol converter*.

LPDU. See *link control protocol data unit*.

LPI. (1) lines per inch. (2) Licensed Program Information

LSAP. See *link service access point*.

LU. See *logical unit*.

LUA. See *conventional LU application (LUA)*.

LU 0. A LU that uses SNA Transmission Control and SNA Flow Control layers. Higher-layer protocols are end user and product-defined.

LU 1. Defined for application program communication with single or multiple device data processing workstations (printers or RJE stations). The data stream conforms to SNA Character String (SCS) or Document Content Architecture (DCA). See also *LU 2* and *LU 3*.

LU 2. In SNA, a type of LU for an application program that communicates with a single display workstation in an interactive environment using the SNA 3270 data stream.

LU 3. In SNA, a type of LU that communicates with a single printer using the SNA 3270 data stream. (SNA), a session between two logical units (LUs) in an SNA network. It provides communication between two end users, or between an end user and an LU services component.

LU 6.2. (1) Also known as APPC. Supports sessions between two applications. (2) See *logical unit 6.2*.

M

MAC. See *medium access control*.

MAC frame. See *medium access control frame*.

MAC protocol. See *medium access control protocol*.

MAC segment. See *medium access control segment*.

MAC service data unit (MSDU). The MSDU consists of the LPDU (the DSAP and SSAP address fields, the control field, and the LPDU information field, if present) and the routing information field (if the destination station is located on a different ring).

Macro Assembler/2 (MASM). See *IBM Macro Assembler/2 (MASM)*.

machine. A computer on a network.

machine ID. In OS/2 LAN Server, a unique name of up to eight characters that identifies a computer to the network.

machine language. A language that can be used directly by a computer without intermediate processing.

Main Frame Interactive (MFI) presentation space. The 3270 terminal emulation presentation interface.

main ring path. In the IBM Token-Ring Network, the part of the ring made up of access units and the cables connecting them.

Maintenance Analysis Procedure (MAP). A document that gives the customer or service representative a step-by-step procedure for tracing a symptom to the cause of failure.

major event code. A code (used for tracing) assigned to major system events, such as opening a file, writing to a file, and sending output to the display. Major event code values range from 0 to 255.

mandatory entry field. A field in which a user must type at least one character or number.

manual connection. A communications connection made by manually dialing or answering a phone.

MAP. See *Maintenance Analysis Procedure*.

mapped conversation. In Advanced Program-to-Program Communications (APPC), a conversation between two transaction programs using the APPC mapped conversation application programming interface (API). In typical situations,

end-user transaction programs use mapped conversation and service transaction programs use basic conversations. However, either type of program may use either type of conversation. contrast with *basic conversation*.

mapped conversation verb. A verb that a transaction program issues when using the Advanced Program-to-Program Communications (APPC) mapped conversation application programming interface (API). See also *basic conversation verb*.

mark parity. A data communications attribute that refers to sending a logical one (1) for the parity bit in a character frame.

marker. A symbol that replaces the cursor in a panel area that is no longer interactive. It marks where the cursor will return when the panel area is made interactive again.

marker symbol. A symbol centered on a point. Graphs and charts can use marker symbols to indicate the plotted points.

MASM. See *IBM Macro Assembler/2*.

master key. An access password used to unlock the keylock for Communications Manager. A user who has access to the master key can also change the service key. See *service key*. See also *keylock*.

MAU. See *multistation access unit*.

M-Bit. See *more data bit*

MDT. See *modified data tag*.

Media Access Control Service Access Point (MSAP). In the IBM Token-Ring Network, the logical point at which an entity in the medium access control (MAC) sublayer provides services to the logical link control sublayer.

medium access control (MAC). In local area network (LAN), the sub-component of IEEE 802.2 application programming interface (API) that supports medium-dependent functions and uses the services of the physical layer to provide services to logical link control. Medium access control (MAC) includes the medium access port.

medium access control (MAC) frame. The frame that controls the operation of the IBM Token-Ring Network and any ring station operations that affect the ring.

medium access control (MAC) protocol. In a local area network (LAN), the part of the protocol that governs access to the transmission medium independently of the physical characteristics of the medium, while taking into

account the topological aspects of the network in order to enable the exchange of data between data stations.

medium access control (MAC) segment. An individual local area network communicating through the medium access control (MAC) layer within this network.

medium access port. A hardware-addressable component (such as a communication adapter) of a Systems Network Architecture (SNA) node by which the node has access to a transmission medium and through which data passes into and out of the node.

memory. (1) The storage on electronic chips; for example, random access memory, read-only memory, or registers. (2) Program-addressable storage from which instructions and other data can be loaded directly into registers for subsequent execution or processing. See also *storage*.

memory allocation. An operating system function that assigns memory areas to tasks. Synonymous with *storage allocation*.

memory compaction. The relocating of allocated memory segments into contiguous locations in order to place all free memory in one large block.

memory device context. In Presentation Manager, a logical description of a data destination that is a memory bit map. See *device context*.

memory mapped I/O (MMIO). In an IBM Personal Computer or Personal System/2, a method of accessing an input or output port as if it were a memory location.

menu. (1) A displayed list of available machine functions for selection by a user. (2) A displayed list of items from which a user can make a selection. (3) In Database Manager, a customized selection screen created with Query Manager.

merge. (1) To combine the items of two or more sets that are each in the same given order into one set in that order. (2) To combine overrides for a file from the first call level up to and including a greater call level, producing the override to be applied when the file is used. (3) To combine or unite two sets of data.

mesh network. In local area network (LAN) communications, a multiple-ring network configuration providing more than one path through intermediate rings between source rings and destination rings. Contrast with *hierarchical network*.

message. (1) The information not requested by users but presented to users by the computer in response to a user action or internal process. (2) In Presentation Manager, a packet of data used for communication between Presentation Interface and windowed applications.

message log. A file used to save or log certain types of messages and status information. See *log*.

message queue. A sequenced collection of messages waiting to be read by the application.

metafile. In Presentation Interface, the generic name for the definition of the contents of a picture. Metafiles are used to allow pictures to be used by other applications.

metafile device context. In Presentation Interface, a logical description of a data destination that is a metafile, which is used to store a picture in editable form. See *device context*.

MFI presentation space. See *Main Frame Interactive presentation space*.

Micro Channel. The architecture used by IBM Personal System/2.

migrate. (1) To move data from one hierarchy of storage to another. (2) To move to a changed environment, usually to a new release or version of a system.

migration. The process of converting an earlier released Database Manager database to a current Database Manager database. Migration allows you to acquire the capabilities of the current or new database without losing the data you created on the earlier released database.

minimize. A window-sizing action that makes the window the smallest size allowed. Minimized windows are represented by icons.

mix. An attribute that determines how the foreground of a graphics primitive is combined with the existing color of the graphics presentation space. Synonymous with *foreground mix*. Contrast with *background mix*.

MMIO. See *memory mapped I/O*.

mnemonic. A single character, within the text of a choice, identified by an underscore beneath the character. When users type the mnemonic of a choice, that choice is selected. See also *fast path*.

mode. A method of operation; for example, see NumLock mode. Synonymous with *transaction service mode*.

mode name. In Advanced Program-to-Program Communications (APPC), a name that a program uses to request a specific set of network properties of a session the program wants to use for a conversation. These properties include, for example, the highest synchronization level for conversations on the sessions, the class of service for the sessions, and the session routing and delay characteristics.

model profile. In Communications Manager, a supplied configuration profile with preconfigured options intended for use in the creation of a new profile.

model space. Synonym for *graphics model space*.

modem. A device that converts digital data from a computer to an analog signal that can be transmitted on a telecommunication line and that converts the received analog signal to digital data for the computer. Contrast with *digital data service adapter*. Synonymous with *modulator/demodulator*. See also *data circuit-terminating equipment*.

modified data tag (MDT). An indicator, associated with each input or output field in a displayed record, that is automatically set on when data is typed in the field. The modified data tag is maintained by the display device and can be used by the program using the file.

modulator/demodulator. Synonym for *modem*.

module. A discrete programming unit that usually performs a specific task or set of tasks.

module definition file. A file used at link-edit time that describes the attributes for the executable file being built (for example, load-on-call or preload attributes for segments).

monitor. (1) In the OS/2 program, a routine that examines input to a character device driver and can delete, modify, or expand the character before passing it back to the device driver. (2) In the IBM Token-Ring Network, the function required to initiate the transmission of a token on the ring and to provide soft-error recovery in case of lost tokens, circulating frames, or other difficulties.

more data bit (M-bit). A bit in a data packet header that indicates that the following packet contains logically related data.

mouse. A device used to move a pointer on the screen.

MSAP. See *Media Access Control Service Access Point*.

MSDU. See *MAC service data unit*.

multiple-choice selection field. A type of selection field that allows users to select any number of items. Contrast with *single-choice selection field*.

Multiple Virtual Storage (MVS). A facility that allows each user a private address space.

Multiple Virtual Storage/Extended Architecture (MVS/XA). The operating system that manages System/370-XA computers.

multipoint line. A line or circuit connecting several stations. Contrast with *point-to-point line*.

multistation access unit (MAU). In the IBM Token-Ring Network, a wiring concentrator that can connect up to eight lobes to a ring network.

multitasking. A mode of operation that provides for concurrent performance or interleaved execution of two or more tasks.

MVS. See *Multiple Virtual Storage*.

MVS/XA. See *Multiple Virtual Storage/Extended Architecture*.

N

NAU. See *network addressable unit*.

NAUN. See *nearest active upstream neighbor*.

navigation. The process of moving through panels and menus.

NCP. See *Network Control Program*.

nearest active upstream neighbor (NAUN). In the IBM Token-Ring Network, the station sending data directly to a given station on the ring.

negotiable BIND. In Systems Network Architecture (SNA), a request unit (RU) that can enable two logical unit-logical unit (LU-LU) half-sessions to negotiate the parameters of a session when the LUs are activating the session.

NETBIOS. An application programming interface (API) between a local area network adapter and programs.

netname. The name used in conjunction with the server name to identify a resource on the network when it is shared. See also *universal naming convention (UNC)*.

network. A configuration of data processing devices and software connected for information interchange.

network address. An address consisting of subarea and element fields that identifies a link, a link station, or a network addressable unit. Subarea nodes use network addresses; peripheral nodes use local addresses. The boundary function in the subarea node to which a peripheral node is attached pairs local addresses with network addresses and vice versa.

network addressable unit (NAU). In Systems Network Architecture (SNA), a logical unit, physical unit, or system services control point (SSCP). An NAU is the origin or the destination of information transmitted through the path control network. See also *network name*.

network administrator. The person responsible for the installation, management, control, and configuration of a network. The network administrator defines the resources to be shared and user access to the shared resources, and determines the type of access those users can have.

network application. A network program, or combination of a program and data, that performs a task.

Network Control Program (NCP). An IBM-licensed program that provides communications controller support for single domain, multiple domain, and interconnected network capability.

network management. In the IBM Token-Ring Network, the conceptual control element of a data station that interfaces with all of the layers of that data station and is responsible for the resetting and setting of control parameters, obtaining reports of error conditions, and determining if the station should be connected to or disconnected from the medium.

network management vector transport (NMVT). The format used for Communications & System Management data, such as alerts and link statistics.

network name. In Systems Network Architecture (SNA), a symbolic name by which end users refer to a network addressable unit (NAU), a link station, or a link. See also *network addressable unit*.

network printer. A printer that is recognized by the host even after a 5250 emulation session for that printer is no longer active. A job to be printed can be sent to the spooler of a network printer and it will be printed when the session is activated.

Network Problem Determination Application (NPDA). A licensed program that helps the user identify network problems from a central control point using interactive display techniques.

network user address (NUA). Up to 15 decimal digits that serve to identify data terminal equipment (DTE). The first four digits (digits 0 to 3) of an NUA are known as the data network identification code (DNIC); they identify the country and the service within the country. Digits 4 to 12 indicate the national number. The final two digits may be used for a subaddress.

NMVT. See *network management vector transport*.

nickname. In Database Manager, when databases are cataloged on a workstation, the databases can be referred to by a nickname. This nickname allows users with SYSADM authority to catalog a database and give the database another name for use on the local workstation.

no carrier. On broadband networks, a condition in which a carrier signal is not being broadcast on a given frequency. In the absence of such a carrier, no information can be modulated on that frequency.

no parity. A data transmission attribute in which the sender and receiver agree that no parity bit is transmitted in the character frame.

node. An endpoint of a communications link or a junction common to two or more links in a network. Nodes can be processors, controllers, or workstations. See *peripheral node*.

node address. The address of a node in a network.

node directory. This directory contains the entries for all nodes referenced in the database directories on its particular node. The information in this directory is used for all communication network connections.

node type. A designation of a node according to the protocols it supports and the network addressable units (NAUs) that it can contain. Five types are defined: 1, 2.0, 2.1, 4, and 5. Type 1, type 2.0, and type 2.1 nodes are peripheral nodes; type 4 and type 5 nodes are subarea nodes.

non-delimited ASCII format. In Database Manager, a file format used to import data. Non-delimited ASCII is a sequential ASCII file with row delimiters used for data exchange with any ASCII product.

non-escaping key. A key that allows a character to be typed without the print position being changed. Synonymous with *dead key*.

non-interactive program. An active program that is running but cannot receive input from the keyboard or other interactive input device. Contrast with *interactive program*.

non-switched line. A connection between computers or devices using telephone switching equipment that does not have to be established by dialing. Contrast with *switched line*.

normalized floating point. A floating point number is normalized when the first digit of its mantissa (the decimal part of a floating point number) is not 0. For example, 2.5E--3 is normalized; .025E--1 is not normalized.

normal priority process. A process for which a designated time slice is sufficient for the process to be completed.

normal stop. In Communications Manager, to stop communications after current functions (for example, file transfer) have completed. Contrast with *abnormal stop*.

normal termination. The state of a program that has ended successfully. Contrast with *abnormal termination*.

notification message. (1) A message that describes a condition for which a program requires a reply from its caller, or else a default reply will be sent to the program. (2) A type of message that describes the status of the user's work or some state of the system.

NPDA. See *Network Problem Determination Application*.

NUA. See *network user address*.

null. A special value that indicates the absence of information.

null character. (1) A character defined in Query Manager profiles and used throughout Query Manager functions to indicate a field that has no value. (2) The character hex 00, used to represent the absence of a printed or displayed character.

null suppression. The bypassing of all null characters in order to reduce the amount of data to be transmitted.

number selection. A fast path selection method for a menu or pull-down where users type the number that precedes the choice.

numeric constant. A fixed value that is a number.

Numlock. A typing action that puts the keyboard into NumLock mode. As a result, the keys on the numeric keypad produce numbers when pressed rather than their base value. The keyboard remains in NumLock mode until the user presses the NumLock key a second time.

NumLock mode. A typing mode in which a dual-purpose numeric keypad on the keyboard is locked in the secondary purpose of entering numeric values for each key pressed.

O

OAF. See *origin address field*.

object. A table, view, index, query, form, procedure, panel, or menu created or manipulated by using Database Manager.

object code. The output from a compiler or assembler, which is itself executable machine code or is suitable for processing to produce executable machine code.

object file. The machine-level program produced as the output of an assembly or compiled operation. Synonymous with *object module*.

object module. Synonym for *object file*.

object name. A sequence of characters identifying an object created by a Database Manager user.

object names menu. In Query Manager, a menu listing objects such as tables and views, queries, forms, procedures, panels, or menus.

observer terminal. In problem determination for the IBM Token-Ring Network, the device used to run the ring diagnostic program or a network application program that is capable of providing ring status information.

odd parity. A data transmission attribute in which the parity bit of a character frame is set so that the sum of the digits in the character with the parity bit is odd.

office. Synonym for *work area*.

offset. The number of measuring units from an arbitrary starting point in a record, area, control block, or a segment to some other point.

OIA. See *operator information area*.

one-byte checksum error detection. The sum of a group of data items associated with the group for checking purposes. The data items are either numerals or other character strings regarded as numerals during the process of a checksum.

online. (1) Pertaining to a user's ability to interact with a computer. A description of a user's access to a computer by way of a screen. (2) Pertaining to the operation of a functional unit that is under the continuous control of a computer.

online information. The information stored in a computer system that can be displayed, used, and modified in an interactive manner without any need to obtain printed copy.

open. The function that connects a file, adapter, system resource, or database object to a program for processing.

open file. The status of a file when its contents are being accessed.

operand. (1) An entity on which an operation is performed. (2) Information entered with a command name to define the data on which a command processor operates and to control the execution of the command processor.

operating system. The software that controls the running of programs. An operating system may provide services such as resource allocation, scheduling, input/output (I/O) control, and data management.

Operating System/2 Extended Edition (OS/2). See *IBM Operating System/2 Extended Edition*.

Operating System/2 LAN Server. See *IBM Operating System/2 LAN Server*.

operation. (1) A well-defined action that, when applied to any permissible combination of known entities, produces a new entity; for example, the process of addition. (2) A program step performed by a computer.

operational diskette. Synonym for *working diskette*.

operational status. In Query Manager, the status of system or databases that is requested by the user with SYSADM or DBADM authority. This status information may be displayed and printed to help the user diagnose database problems or tune database performance.

operator. A symbol that represents an operation to be performed; for example, the plus sign (+).

operator information area (OIA). In 3270 terminal emulation, the bottom line of the screen where status about the communication session is displayed.

operator information line. In ASCII terminal emulation, the bottom line of the screen used to display messages and status information.

optimization. The determination of an efficient access strategy for satisfying a database access.

option. (1) A specification in a statement or command that can be used to influence the execution of the statement. (2) A selectable item on an action bar.

origin address field (OAF). In Systems Network Architecture (SNA), a field in a FID0 or FID1 transmission header that contains the address of the originating network addressable unit (NAU). Contrast with *destination address field (DAF)*.

originator. In Communications Manager, a component or user application reporting an error.

OS/2. See *IBM Operating System/2 Extended Edition*.

OS/2 Extended Edition. See *IBM Operating System/2 Extended Edition*.

OS/2 file system. A file system provided by the OS/2 program and accessible through the OS/2 file input/output (I/O) functions. A file system is restricted to a single medium, either an entire diskette or a single partition of one fixed disk.

OS/2 LAN Server. See *IBM Operating System/2 LAN Server*.

OS/2 program. See *IBM Operating System/2 Extended Edition*.

OS/2 screen group. See *screen group*.

output device. A device such as a printer or screen in a data processing system.

overflow. A point reached when the memory capacity of a computer is filled with more data than the computer can store.

P

padding. In data communications, a technique by which receiving equipment controls the transmission of data by sending equipment to prevent overrun. See also *flow control*, *receive pacing* and *send pacing*.

packet. In data communication, a sequence of binary digits, including data and control signals, that is transmitted and switched as a composite whole.

packet level. A part of CCITT Recommendation X.25 that defines the protocol for establishing logical connections between data terminal equipment (DTE) and data circuit-terminating equipment (DCE), and for transferring data on these connections.

packet-level data circuit-terminating equipment. In a packet switching data network, the equipment at the exchange that manages the network connection side of the protocol at the packet (or network) level.

packet switching. The process of routing and transferring data by means of addressed packets so that a channel is occupied only during the transmission of a packet. On completion of the transmission, the channel is made available for the transfer of other packets.

packet switching data network (PSDN). A communications network that uses packet switching as a means of transmitting data.

packet window. A specified number of packets that can be sent by the data terminal equipment (DTE) device before it receives an acknowledgement from the receiving station.

page. (1) In Database Manager, a unit of storage within a table or index whose size is 4KB. (2) In a virtual storage system, a fixed-length block that has a virtual address and is transferred as a unit between memory and disk storage.

page footing. Words located at the bottom of a text area of each page of a report.

page heading. Words located at the top of a text area of each page of a report.

page mode. The mode of operation in which the 3800 Printing Subsystem can accept a page of data from a host processor to be printed on an all-points-addressable output medium. Printed data can consist of pages

composed of text, images, overlays, and page segments. Contrast with *compatibility mode*.

panel. (1) A particular arrangement of information grouped together for presentation to the user. (2) A customized fill-in screen created by using Query Manager. See also *screen*.

panel action. A panel action is performed when a customized panel in Query Manager is run. The operation performed is designated in the Panel Operation field of the PANEL ACTIONS menu. Examples of these operations are: print, compute, add and next, and search.

panel body area. The part of a panel not occupied by the action bar or the function key area.

panel body area separator. A line or color boundary that provides users with a visual distinction between two adjacent areas of a panel. Synonymous with *separator*.

parallel device. A device that allows concurrent or simultaneous operation of two or more devices or concurrent performance of two or more activities in a single device.

parallel session. In Systems Network Architecture (SNA), two or more concurrently active sessions between the same two logical units (LUs). Each session can have different session parameters. Contrast with *single session*.

parallel port. On a personal computer, a port used to attach devices such as dot matrix printers and input/output (I/O) units; it transmits data 1 byte at a time. Contrast with *serial port*.

parameter. (1) The information supplied by a program or user to a command or function. (2) The data passed between programs or procedures.

parameter marker. The question mark symbol (?) used in a dynamic Structured Query Language (SQL) statement to indicate that an application program variable will be substituted for the marker at processing time.

parent process. A process that creates other processes. Contrast with *child process*.

parent window. A window that has one or more child windows positioned relative to it. Contrast with *child window*.

partner logical unit. In Systems Network Architecture (SNA), the remote participant in a session.

partner transaction program. An Advanced Program-to-Program Communications (APPC) transaction program located at the remote partner.

Pascal/2. See *IBM Pascal/2*.

password. A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to data.

path. (1) The route used to locate files on a disk or diskette. The route consists of a collection of drives and directories. (2) In the IBM Token-Ring Network, a route between any two nodes. (3) In Systems Network Architecture (SNA), the set of data links, data link control layers, and path control layers that a path information unit travels through when sent from transmission control of one half-session to transmission control of another half-session. Synonymous with *absolute path name*.

path information unit (PIU). In Systems Network Architecture (SNA), a message unit consisting of a transmission header (TH) alone, or a TH followed by a basic information unit (BIU) or a BIU segment. See also *transmission header*.

PBX. See *private branch exchange*.

PC-DOS. A disk operating system based on MS-DOS that operates with all IBM personal computers.

PC I/O channel. See *personal computer input/output (PC I/O) channel*.

PC/IXF. See *personal computer/integrated exchange format*.

PCLP. See *personal computer local area network program*.

PC Network. See *IBM PC Network*.

peer-to-peer. The communication between two Systems Network Architecture

performance problem. A situation in which unusually slow or delayed system execution or response time causes programs to take longer than usual to complete a task. (SNA) logical units (LUs) that is not managed by a host.

peripheral node. In Systems Network Architecture (SNA), a node that has no intermediate routing function and is dependent upon an intermediate or host node to provide certain network services for its dependent logical units (LUs). See *node*.

permanent virtual circuit (PVC). A virtual circuit that has a logical channel permanently assigned to it at each data terminal equipment (DTE). A call establishment protocol is not required. A permanent virtual circuit is the packet network equivalent of a leased line. See *switched virtual circuit* and *virtual circuit*.

personal computer input/output (PC I/O) channel. In a computing system, a functional unit, controlled by a processor, that handles transfer of data between processor storage and local peripheral devices.

personal computer/integrated exchange format (PC/IXF). An OS/2 file format used to export and import table data.

personal computer local area network program (PCLP). This product provides the ability to share programs, data, and printer resources among multiple personal computers connected to an IBM Token-Ring Network, IBM PC Network, or IBM PC Network Baseband.

physical device. An input/output (I/O) device identified in a program by its actual label or number. Contrast with *logical device*.

physical unit (PU). In Systems Network Architecture (SNA), the component that manages and monitors the resources of a node, as requested by a system services control point (SSCP) using a system services control point-physical unit (SSCP-PU) session. Each node of an SNA network contains a physical unit.

physical unit type. The classification of a physical unit according to the type of node in which it resides. The physical unit type is the same as its node type; that is, a type 1 physical unit resides in a type 1 node, and so on.

PIC. See *problem isolation chart*.

PIP. See *program initialization parameter*.

pipe. To direct the data so that the output from one process becomes the input to another process.

PIU. See *path information unit*.

placeholder. A symbol that can assume any of a given set of values.

plan. Synonym for *application plan*.

plan name. The name of an application plan. A Database Services application plan is the output from the bind process.

plotter. An output device that uses pens to draw on paper or transparencies.

PLU. See *primary logical unit*.

PMR. See *Problem Management Record number*.

point of consistency. In Database Manager, a point in time when all the recoverable data a program accesses is consistent. The point of consistency occurs when updates, inserts, and deletions are either committed to the physical database or rolled back (not committed and

discarded). Synonymous with *commit point* and *sync point*. See also *rollback*.

point-to-point. Pertaining to data transmission between two locations without use of any intermediate terminal or computer.

point-to-point line. A communications line that connects a single remote station to a computer. Contrast with *multipoint line*.

pointer. The symbol displayed on the screen, that is moved by a pointing device such as a mouse.

pointing device. An instrument such as a mouse, trackball, or joystick used to move a pointer on the screen.

port. Synonym for *communication port*.

positional parameter. A parameter that must be positioned in a specified location relative to other parameters.

positive response. A response indicating that a request arrived and was successfully received and processed.

post. (1) To note the occurrence of an event; for example, an operating system function informs an application when additional information is available. (2) To affix to a usual place. (3) In NETBIOS (network basic input/output system), providing items such as a return code at the end of a command or function, or defining an appendage routine.

POST. See *power-on self test*.

Post Telephone and Telegraph Administration (PTT). A generic term for a government-operated, common carriers service in countries other than the U.S. and Canada. Examples of the PTT are the Bundespost in Germany, and the Nippon Telephone and Telegraph Public Corporation in Japan.

power-on self test (POST). A series of diagnostic tests that are run each time the power of a device is turned on.

precision attribute. In Database Manager, the total number of digits in a decimal type column. The precision cannot be greater than 31, and it must be odd. If precision is specified as even, it is rounded up to the next odd value by Database Services. See *scale attribute*.

precompilation. The processing of a program containing Structured Query Language (SQL) statements that takes place before a compile starts. SQL statements are replaced with statements that are recognized by the host language compiler. See also *embedded SQL*.

precompiler. A program supporting precompilation of application programs with embedded Structured Query Language (SQL) statements.

predicate. In Database Manager, an element of a search condition expressing a comparison operation.

preempt. To take control away from; for example, to interrupt the execution of a process to allow another process to execute.

PRF. See *Problem Report Form*.

Presentation Interface. An application programming interface (API) that allows users to write graphics applications.

Presentation Manager. The interface of the OS/2 program that presents, in windows, a graphics-based interface to applications and files installed and running on the OS/2 program.

primary code page. (1) The code page that is active when the computer is started. (2) The first code page listed in the CODEPAGE= statement in the CONFIG.SYS file. See *code page*.

primary half-session. In Systems Network Architecture (SNA), the half-session on the node that sends the session activation request. See *primary logical unit*. See also *half-session* and *secondary half-session*.

primary key. A column or an ordered set of columns that contain non-null values and whose values uniquely identify a row. To be unique, a value cannot be duplicated in any other row. These columns are identified as the primary key in the table definition. The values in these columns are known as primary key values. A table cannot have more than one primary key. See *foreign key*. See also *referential constraint* and *relationship*.

primary logical unit (PLU). In Systems Network Architecture (SNA), the logical unit (LU) that contains the primary half-session for the LU-LU that sent the bind. See *secondary logical unit*. See also *secondary half-session* and *primary half-session*.

primitive. Synonym for *graphics primitive*.

print job. The result of sending a file to be printed.

print options. Used in Query Manager to specify print attributes such as line width, printed lines per page, printer nickname, page number, date and time, and print type.

print queue. A file containing a list of the names of files waiting to be printed.

print spooler. A program that allows output to be temporarily stored until it can be printed.

printer nickname. In Query Manager, a file that specifies which printer ID, printer type, and page size to use when printing.

printer pool. A group of printers in a network servicing a single spooler queue.

printer port. A connector on a printer to which cables for other devices are attached.

printer queue. Synonym for *spooler queue*.

priority. A rank assigned to a task that determines its precedence in receiving system resources.

privacy. The right of individuals and organizations to control collection and use of their data.

private application. An application maintained by an individual user and not available across a network. Contrast with *public application*.

private branch exchange (PBX). An automatic or manual private telephone exchange for transmission of calls to and from a public telephone network. If the exchange equipment contains an integral computer, it is called a computerized branch exchange. See *computerized branch exchange (CBX)*.

privilege. In Database Manager, the right or authority to access a specific database object in a specific way. These rights are controlled by users with SYSADM (system administrator) authority or DBADM (database administrator) authority or by creators of objects. Privileges include rights such as creating, deleting, browsing tables, or connecting to a database. See *direct privilege* and *indirect privilege*.

privilege level. (1) Privilege level is a protection mechanism of the processor that provides four hierarchical protection levels to ensure program reliability. At any one time, a task executes at one of the four levels. A task executing at one level cannot access data at a more privileged level, nor can it call a procedure at a less privileged level. The most trusted service procedures occupy the higher levels (levels 0, 1, and 2) while the less trusted application programs are placed at the lowest level of privilege (level 3). (2) In Database Manager, the degree or extent to which a user can access database objects. For example, a user with SYSADM (system administrator) authority may have more privileges than a database administrator. (3) This term is also used by the base operating system to indicate to what level of resources a piece of code has access to. See also *direct privilege* and *indirect privilege*.

problem isolation chart (PIC). A diagnostic procedure for finding problems with a personal computer or its options.

problem management focal point. An organization or designee that supplies management services that are responsible for problem analysis and diagnosis for a sphere of control. An alert focal point is a subset of a problem management focal point. See *alert focal point*.

Problem Management Record (PMR) number. A number that can be provided by ServiceLine or an IBM Support Center representative when a problem is reported by a registered service coordinator. Contrast with *APAR number*.

Problem Report Form (PRF). A form that can be used by registered service coordinators to record information about a problem for the purposes of: (a) maintaining a history of problems and resolutions, (b) determining status on a problem being investigated by IBM, and (c) if applicable, information sent to IBM for analysis.

PROC. See *procedure*.

procedure (PROC). (1) In a programming language, a block of code, with or without formal parameters, whose execution is invoked by means of a procedure call. (2) In Database Manager, a set consisting of Query Manager commands, panel commands, and procedure language statements, or all of these. A procedure allows a single command to initiate operations.

procedure language. See *procedure language statements*.

procedure language statements. In Query Manager, the programming statements that are used in procedures.

Procedures Language 2/REXX. A superset of the SAA Procedures Language.

process. A collection of system resources that include one or more threads of execution that perform a task.

process ID. See *process identification number*.

process identification number (process ID). A unique number assigned to a process by the operating system. The number is used internally by processes to communicate.

processor. In a computer, a functional unit that interprets and processes instructions.

profile. (1) An object that contains information about the characteristics of a computer system or application. (2) In Communications Manager, a part of a configuration file. (3) In Query Manager, a file that contains Query Manager defaults.

program block. (1) In program-oriented languages, a computer program subdivision that serves to group related statements, delimit routines, specify storage allocation, delineate the applicability of labels, or segment parts of the computer program for other

purposes. (2) The portion of a 3790 program stored in one sector of disk storage in a 3790 Controller. See also *record blocking*.

program group. In Presentation Manager, a set of several programs that can be acted upon as a single entity. For example, they can all be started together. See *group*.

program initialization parameter (PIP). An Advanced Program-to-Program Communications (APPC) parameter that is passed to a transaction program when it is started.

program updates. See also *Corrective Service diskette*.

prompt. (1) An action that users request while the cursor is in an entry field. (2) A displayed message that requests input from the user or gives operational information. See also *list*.

prompted interface. An interface consisting of messages, menus, pull-downs, and panels that guides the user through the steps necessary to perform a task.

prompted query. In Query Manager, a series of prompts, menus, panels, messages, and helps used to define queries.

protect mode. A mode in memory addressing where virtual addresses are mapped to physical addresses.

protect-mode application. An application program that runs in an OS/2 screen group. Contrast with *real-mode application*.

protected field. A display field in which a user cannot add, modify, or delete data. Contrast with *unprotected field*.

protocol. The set of rules governing the operation of functional units of a communication system that must be followed if communication is to take place.

protocol converter. A device that allows terminals to communicate with host systems by converting one data stream to another data stream; for example, ASCII data stream to IBM 3270 data stream.

protocol handler. The programming in an adapter that encodes and decodes the protocol used to send data over a network.

PSDN. See *packet switching data network*.

PTT. See *Post Telephone and Telegraph Administration*.

PU. See *physical unit*.

PUBLIC. In Database Manager, the authority for an object granted to all users.

public application. An application maintained by the network administrator and shared with users on a network. Contrast with *private application*.

pull-down. An extension of the action bar that displays a list of one or more choices that are available for a selected action bar choice.

pushbutton. A rounded-corner rectangle with text inside used in graphics applications for actions that occur when the pushbutton is selected.

PVC. See *permanent virtual circuit*.

Q

QBE. See *query-by-example*.

QLLC. See *qualified logical link control*.

QMF. See *Query Management Facility*.

qualified logical link control (QLLC). A logical link control protocol that allows the transfer of data link control information between two adjacent Systems Network Architecture (SNA) nodes that are connected through an X.25-based packet-switching data network.

qualifier. In Database Manager, a short identifier used to logically group objects together. In previous versions of Database Manager, this was known as authorization ID.

query. A request for information from the database based on specific conditions; for example, a request for a list of all customers in a customer table whose balance is greater than \$1000.

Query Management Facility (QMF). An IBM database management tool that allows extensive interactive query and report writing support. It runs under the control of the Interactive System Productivity Facility (ISPF), which in turn runs under Virtual Machine (VM/CMS) or Time Sharing Option (TSO) on host computers.

Query Manager. The part of Database Manager that provides menus, panels, pull-downs, and messages to assist, for example, in creating databases, editing data, generating reports, and making changes to Database Services configuration files. Query Manager also provides customization tasks like panels, menus, and procedures.

Query Manager Callable Interface. In Query Manager, the feature that provides a mechanism for functions. This is done through the use of a callable programming interface (CPI).

query-by-example (QBE). A language used to write queries graphically.

queue. A line or list formed by items waiting to be processed; for example, a list of print jobs waiting to be printed.

queued-device context. A logical description of a data destination that is a device other than the screen (for example, a printer or plotter) and where the output is to go through the Spooler. See *device context*.

R

radio button. A round button on the screen that is used to indicate items in a list from which only one item can be selected. Contrast with *check box*.

RAM. See *random access memory*.

random access memory (RAM). A memory device into which data is entered and from which data is retrieved in a nonsequential manner.

RAS programs. See *Reliability, availability, and serviceability programs*.

RDS. See *Remote Data Services*.

read-only. A type of access to data that allows it to be read but not copied, printed, or modified.

read-only memory (ROM). The memory of a computer where contents cannot be modified.

real-mode application. An application program that does not run in the OS/2 screen group. Contrast with *protect-mode application*.

Realtime Interface Co-processor (RIC). The generic name given to a family of IBM communication adapters.

receive. (1) To obtain a message or file from another computer. Contrast with *send*. (2) In Communications Manager, the command used to transfer a file from a host.

receive pacing. In Systems Network Architecture (SNA), the pacing of message units being received by a component. See *pacing*. Contrast with *send pacing*.

Recommendation X.25. See *X.25*.

record. (1) A set of data treated as a unit. (2) In Database Manager, the storage representation of a single row of a table. (3) See also *program block*.

record blocking. (1) In the 3790 Communication System, the basic storage and access unit of a record in a 3791 Controller. A relative data set record block contains one or more records (powers of 2), depending on the (fixed) record length. An indexed data set record may consist of from one to eight record blocks and be

variable in length within the data set. A buffer can contain only one record block at a time. (2) In Distributed Processing Control Executive (DPCX), two or more records, a single record, or a portion of a record stored in one sector of disk storage.

Note: Distributed Processing Control Executive (DPCX) is an IBM licensed program designed to control the IBM 8100 Information System. (3) See also *program block*.

record format. The definition of how data is structured in the records contained in a file. The definition includes record names, field names, and field descriptions such as length and data type.

recovery. (1) The act of resetting a system or data stored in a system to an operable state following damage. (2) In Database Manager, the process of rebuilding databases after a system failure.

recovery log. A collection of records describing the sequence of events that occur while running Database Manager. The information is used for recovery in the event of a system failure while Database Manager is running.

redirection. The assigning of a local device name to a remote shared resource on the network.

referential constraint. In Database Manager, an assertion that non-null values of a designated foreign key are valid only if they also appear as values of the primary key of a designated primary table. See also *foreign key*, *primary key*, *relationship*, and *referential integrity*.

referential integrity. In Database Manager, the enforcement of referential constraints on insert, add, update, change, and delete operations for database tables. See also *referential constraint*.

refresh. (1) To update a window or panel with information changed to its current status. (2) To return a Query Manager object to a default state.

register. A storage device, having a specified storage capacity such as a bit, a byte, or a computer word, and usually intended for a special purpose.

relational command processor. In Database Services, a structure used to process Structured Query Language (SQL) statements.

relational database. (1) A database that is organized and accessed according to relationships between data items. (2) A data structure perceived by its users as a collection of tables.

relationship. As defined by a referential constraint, a set of connections between the rows of a table or between the rows of two tables determined by the values

of a primary key and a foreign key. See also *referential constraint*, *primary key*, and *foreign key*.

Reliability, availability, and serviceability (RAS) programs. The programs that facilitate problem determination.

remote. (1) Pertaining to a system, program, or device that is accessed through a telecommunication line. (2) In Advanced Program-to-Program Communications (APPC), indicates that the partner logical unit (PLU) or transaction program is not at the local node.

remote controller. A device or system, attached to a communications line, that controls the operation of one or more remote devices. Contrast with *local controller*.

remote database. A database physically located on some workstation other than the one currently in use. Contrast with *local database*.

Remote Data Services (RDS). Enables an application using the Database Services Application Programming Interface to access Database Services and a database on a remote workstation. The application does not need to know the physical location of the database. Remote Data Services determines the database location and manages the transmission of the request to Database Services and the reply back to the application.

remote initial program load (IPL). The initial program load of a remote requester by a server on which the appropriate image is located.

remote IPL. See *remote initial program load*.

remote IPL requester. A DOS machine requiring its startup from a remote IPL (initial program load) server.

remote IPL server. A server that provides remote IPL (initial program load) support for one or more remote IPL requesters.

remote transaction program. In Advanced Program-to-Program Communications (APPC), the transaction program at the remote end of the conversation. Contrast with *local transaction program*.

remote workstation. A workstation that is indirectly connected to the system and needs data transmission facilities. See also *remote equipment*. Contrast with *local workstation*.

remove. On a local area network (LAN), the command used to disconnect an adapter from a network.

repeatable read. In Database Services, the isolation level providing maximum protection from other active application programs. When a program uses repeatable read protection, rows referenced by the program cannot be changed by other programs until the program reaches a commit point.

replace. To substitute one record or file for another record or file. Contrast with *append*.

report. In Query Manager, the displayed or printed data generated by a query and formatted by a form.

request. In Systems Network Architecture (SNA), a message unit that signals initiation of an action or protocol.

request to send (RTS). This signal is raised by ACDI prior to establishing a connection, and it is lowered when the connection is brought down. This signal works in concert with data terminal ready (DTR) in that it is always raised after DTR and lowered before DTR.

request header (RH). A 3-byte header preceding a request unit (RU). See *request/response header*. Contrast with *response header*.

request unit (RU). (1) In Systems Network Architecture (SNA), a message unit that signals initiation of a particular action or protocol. (2) A message unit that contains control information such as

record format. The definition of how data is structured in the records contained in a file. The definition includes record names, field names, and field descriptions such as length and data type.

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request header (RH). A 3-byte header preceding a request unit (RU). See *request/response header*. Contrast with *response header*.

request unit (RU). (1) In Systems Network Architecture (SNA), a message unit that signals initiation of a particular action or protocol. (2) A message unit that contains control information such as a request code, function management header (FMH), end-user data, or a combination of these types of information. (3) If positive, the response unit may contain additional information (such as session parameters in response to BIND SESSION), or if negative, the response unit contains sense data defining the exception condition. In Systems Network Architecture (SNA), a term used for a request unit or a response unit. Contrast with *response unit*.

request/response header (RH). Control information preceding a request/response unit that specifies the type of request/response unit and contains information associated with that unit. See also *request unit*. See *request header* and *response header*.

requester. (1) In Server-Requester Programming Interface (SRPI), the application program that relays a request to host computer. Contrast with *server*. (2) A computer that accesses shared network resources made

available by other computers running as servers on the network. See *LAN Requester*.

reserved words. In Database Manager, reserved words are words that cannot be used as the name of a table, view, column, index, or qualifier.

reset. To return a device or process to a clear or initial state.

resource. (1) Any facility of a computing system or operating system required by a job or task, and including memory, input/output (I/O) devices, processing unit, data files, and control or processing programs. (2) In OS/2 LAN Server, a directory (files resource), printer, or serial device shared by other computers on the network. (3) In Presentation Manager, the means of providing extra information used in the definition of a window. A resource can contain definitions of fonts, templates, accelerators, and mnemonics; the definitions are held in a resource file. (4) In Database Manager, the objects in a system or database, such as tables and access plans, that can be controlled by the authorization mechanisms.

response. A message unit that acknowledges receipt of a request; a response consists of a response header (RH), a response unit (RU), or both.

response header (RH). A header, optionally followed by a response unit, that indicates whether the response is positive or negative, and which may contain a pacing response. See *request/response header*. Contrast with *request header*.

response unit (RU). In Systems Network Architecture (SNA), a message that acknowledges a request unit. Contrast with *request unit*.

restore. (1) In Presentation Manager, to return a window to its original size or position following a sizing or moving action. (2) An OS/2 command that restores files that have been backed up. (3) In Database Manager, a utility that restores a database that has been backed up. See also *save* and *back up*.

RESTRICT. In Database Manager, a referential constraint that can be applied to the DELETE rule. RESTRICT prevents deletion of any rows of the parent table that have dependent rows.

results table. In Database Manager, the set of rows resulting from a query on one or more base tables or views.

return. A dialog control action that saves data, if appropriate, and causes a transition to an application-defined dialog state. See also *exit* and *cancel*.

return code. (1) A value returned to a program to indicate the results of an operation requested by that

program. (2) In Query Manager, a global variable that indicates the status of the last function requested.

REXX. See *Procedures Language 2/REXX*.

RH. See *request header*.

RIC. See *Realtime Interface Co-processor*.

ring. A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path.

rollback. In Database Services, the process of restoring data changed by Structured Query Language (SQL) statements to the state at its last commit point. See also *point of consistency*.

ROM. See *read only memory*.

root table. In Query Manager panel definition, the table on which the panel is based. See also *subtable*.

routine. A program or a sequence of instructions called by a program that may have some general or frequent use.

routing. In communications, the assignment of the path by which data will reach its destination.

routing table. In X.25 support, a table that controls the routing of incoming calls to applications.

row. In Database Manager, the horizontal component of a table consisting of a sequence of values, one for each column of the table.

RTS. See *request to send*.

RU. See *request unit* and *response unit*.

run. To cause a program, object, utility, or other machine function to be performed.

run time. (1) The elapsed time taken for the execution of a computer program. (2) The time during which a program is active.

run-time dynamic linking. A mechanism for delaying the binding of external references in a program module beyond load time.

S

SAA. See *Systems Application Architecture*.

sample tables. The tables that are shipped with Database Manager (STAFF and ORG).

SAP. See *service access point*.

save. (1) To retain a copy for future use while continuing operations. (2) Retains window size or position following a sizing or moving action. See also *restore*.

SBCS. See *single-byte character set*.

scalar function. In Database Services, a Structured Query Language (SQL) operation producing a single value from another value and expressed in the form of a function name, such as SUBSTR followed by a list of arguments enclosed in parentheses. A scalar function applies its operation to the argument or arguments for each row being returned in the results table by a SELECT statement.

scale attribute. In Database Manager, the number of digits in the fractional part of a decimal type column. Scale can range from 0 to the precision of the column. See *precision attribute*.

scientific notation. A set of symbols and the rules for their use for the representation of scientific data. See also *FLOAT*.

screen. The physical surface of a display device upon which information is presented to the user. See also *panel*.

screen device context. A logical description of data destination that is a particular window on the screen. See *device context*.

screen group. An OS/2 or DOS session. The OS/2 program allows multiple applications to run concurrently; where each application can access the display screen. Synonymous with *session* in the OS/2 program.

SCS. See *SNA character string*.

SDLC. See *Synchronous Data Link Control*.

search. (1) The process of looking for a specific item. (2) In Database Manager, used to locate rows or sets of rows in a table that meet specific criteria. (3) To scan one or more data elements of a set in order to find elements that have a certain property.

search argument. See *search condition*.

search condition. In Database Manager, a criterion for selecting rows from a table. A search condition consists of one or more predicates.

secondary half-session. In Systems Network Architecture (SNA), the half-session on the node that receives the session-activation request. See also *secondary logical unit*. See *half-session* and *primary half-session*.

segment. (1) In the OS/2 program, a variable-length area of contiguous storage addresses not exceeding 64KB. Synonymous with *code segment*. (2) In Presentation Manager, see *graphics segment*. (3) In the IBM Token-Ring Network, a portion of a network that can contain cables, components, or lobes. Synonymous with *code segment*. See *code page*.

segment attributes. In Presentation Interface, the attributes that apply to the segment as an entity, as opposed to the individual graphics primitive within the segment; for example, the visibility, transformability, or detectability of a segment. See *graphics attributes*.

select. (1) To mark or choose an item in a panel, action bar, or menu.

select button. The button on a pointing device, such as a mouse, that is pressed to select a menu choice. Also known as button 1. See *button*.

selection cursor. A type of cursor whereby users indicate the choice they want to interact with. The selection cursor is represented by highlighting the choice on which the selection cursor is currently positioned. Synonym for *cursor*. See *text cursor*.

send. (1) To send a message or file to another computer. Contrast with *receive*. (2) For Communications Manager, the command used to transfer a file to a host.

send pacing. In SNA, the pacing of message units that a component is sending. See *pacing*. Contrast with *receive pacing*.

separator. Synonym for *panel body area separator*.

sequence. In Query Manager form definition, the order in which each column is displayed or printed in a report.

serial device. In OS/2 LAN Server, a resource (such as a modem or plotter) attached to an LPT or COM port for direct input/output (I/O) use.

serial device pool. In local area network (LAN) communications, a group of similar serial devices, created by the network administrator, to satisfy simultaneous demands for use by requesters.

serial device queue. In local area network (LAN) communications, an ordered list of network requests from users waiting to access a serial device.

serial port. A connector on a serial device to which cables for other devices are attached. Contrast with *parallel port*.

server. (1) On a local area network (LAN), a data station that provides facilities to other data stations. (2) An application on the host that processes

Server-Requester Programming Interface (SRPI) requests. Contrast with *requester*. (3) A computer that shares its resources with other computers on the network. See *IBM Operating System/2 LAN Server*.

server alias. A locally known pseudonym (or nickname) for a Server-Requester Programming Interface (SRPI) server.

Server-Requester Programming Interface (SRPI). An application programming interface (API) used by requester and server programs to communicate with the personal computer or host routers.

service access point (SAP). In local area network (LAN), the logical point at which an n = 1-layer entity acquires the services of the n-layer. A single SAP can have many links ending it.

service clearance. The minimum space required to allow working room for the person installing or servicing a unit.

service coordinator. A person responsible for ensuring problem determination support for the OS/2 program.

service key. One of two access passwords used to unlock the keylock for Communications Manager. See *master key*. See also *keylock*.

ServiceLine. An electronic database and problem-reporting utility available to IBM registered service coordinators.

ServiceLine Access diskette. An IBM-provided diskette that allows the service coordinator access to ServiceLine.

service transaction program (service TP). (1) A transaction program implemented by a transaction processing system. Service transaction programs perform such functions as providing access to remote DL/1 databases and remote queues. (2) Transaction programs that provide a system or generic service.

session. (1) A logical connection between two stations or network addressable units (NAUs) that allows them to communicate. (2) The period of time during which a user can communicate with an interactive system. (3) For the OS/2 program, a synonym for *screen group*. (4) In Database Manager, a group of processes (or tasks) associated with an application. (5) In OS/2 LAN Server, a logical connection between a server and a requester that begins with a successful request for a shared resource. (6) See *half-session*.

session limit. In Systems Network Architecture (SNA), the maximum number of concurrently active logical unit-logical unit (LU-LU) sessions a particular logical unit (LU) can support.

session partner. In Systems Network Architecture (SNA), one of the two network addressable units (NAUs) participating in an active session.

session security. A Systems Network Architecture (SNA) function that allows data to be transmitted in encrypted form.

session-termination request. In communications, a Terminate-Self (TERM_SELF) or Shutdown (SHUTD) request from a logical unit (LU) to a control point or session partner, respectively, that asks for the LU-LU session to be deactivated.

shared resource. A directory (files resource), printer, or serial device made available to users on a network. The shared resources are directly attached to servers that share them but are not attached to the requesters asking to use them.

short string. A string whose actual length, or a varying-length string whose maximum length, is 254 bytes (127 double-byte characters) or less.

short name. In Communications Manager, the one-letter name (A through Z) of the host presentation space or terminal emulation session. Synonymous with *short-session ID*.

short-session ID. Synonym for *short name*.

shutdown. In Task Manager, the procedure required before the computer is switched off to ensure that data and configuration information is not lost. See also *Task Manager*.

sibling window. In Presentation Manager, the child windows that have the same parent window. See *child window*.

single-byte character set (SBCS). A graphic character set in which each character is represented by 1 byte. Contrast with *double-byte character set*.

single-choice selection field. A type of selection field that allows users to select only one choice. Contrast with *multiple-choice selection field*.

single session. In Systems Network Architecture (SNA), a session that is the only session connecting two logical units (LUs). Contrast with *parallel session*.

SNA. See *Systems Network Architecture*.

SNA character string (SCS). In SNA, a character string composed of EBCDIC controls, optionally intermixed with end-user data, that is carried within a request/response unit.

SNA controller. A device in Systems Network Architecture (SNA) that directs the transmission of information over the data links of a network. Its

operation can be controlled by a program executed in a processor to which the controller is connected or it can be controlled by a program executed within the device.

SNA gateway. A feature that allows an OS/2 workstation to act as a communications controller between a support workstation, such as a personal computer on a LAN, and an SNA host. To the individual workstation, the SNA gateway is transparent.

SNA LU session type 6.2 protocol. A Systems Network Architecture (SNA) application protocol for communications between peer systems.

SNA network. The part of the user application network that conforms to the formats and protocols of Systems Network Architecture (SNA). It enables reliable transfer of data among users and provides protocols for controlling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

soft checkpoint. The process of writing some information to the log that is used to determine the starting point in the log in case database restart is required.

soft error. An intermittent error on a network that causes data to be transmitted more than once before it is received accurately.

sort. To arrange a set of items according to keys used as a basis for determining the sequence of the items; for example, to arrange the records of a personnel file in alphabetical sequence by using the employee names as sort keys.

source address. (1) The address of the Media Access Control Service Access Point (MSAP) from which a medium access control (MAC) frame is originated. (2) A field in the MAC frame.

source code. Synonym for *source program*.

source file. A file that contains source statements for such items as high-level language programs.

source program. A set of instructions written in a programming language that must be translated to machine language and compiled before the program can be run. Synonymous with *source code*.

source service access point (SSAP) address. (1) The address of the link service access point (LSAP) from which a link protocol data unit (LPDU) is originated. (2) A field in the LPDU.

space parity. A data communications attribute that refers to sending a logical zero (0) for the parity bit in a character frame.

spawn. To create or generate an object; for example, to spawn a task.

special character. A graphic character that is not a letter, digit, or blank character, and which is usually not an ideogram; for example, a punctuation mark, general currency symbol, or a percent sign. Synonymous with *accented character*.

special register. In Database Services, a storage area whose primary use is to store information produced in conjunction with the use of specific Structured Query Language (SQL) features. The special registers are USER, CURRENT TIME, CURRENT DATE, and CURRENT TIMESTAMP.

Spooler. A program that intercepts the data going to a device driver and writes it to disk. The data is later printed or plotted when the required device is available. A Spooler prevents output from different sources from being intermixed.

spooler queue. An ordered list of print jobs waiting to access a printer. Synonymous with *printer queue*.

SQL. See *Structured Query Language*.

SQL communication area (SQLCA). In Database Services, a collection of variables that provides an application program with information about the execution of its Structured Query Language (SQL) statements or its Database Services request.

SQL descriptor area (SQLDA). In Database Services, a collection of variables used in the processing of certain Structured Query Language (SQL) statements. The SQLDA is intended for dynamic SQL statements.

SQL escape character. In Database Services, the symbol used to enclose an Structured Query Language (SQL) delimited identifier. This symbol is the quotation mark (").

SQL query. A query using the Structured Query Language (SQL).

SQL statement. In Database Services, a statement written in Structured Query Language (SQL). See also *Structured Query Language*.

SQL string delimiter. A symbol used to enclose an Structured Query Language (SQL) string constant. This symbol is the quotation mark (").

SQLCA. See *SQL communication area*.

SQLDA. See *SQL descriptor area*.

SRPI. See *Server-Requester Programming Interface*.

SSAP address. See *source service access point address*.

SSCP. See *system services control point*.

SSCP-LU session. In Systems Network Architecture (SNA), a session between a system services control point (SSCP) and a logical unit (LU); the session enables the LU to request the SSCP to help initiate LU-LU sessions.

SSCP-PU session. In Systems Network Architecture (SNA), a session between a systems services control point (SSCP) and a physical unit (PU); SSCP-PU sessions enable SSCPs to send requests to and receive status information from individual nodes to control the network configuration.

stack. An area in memory that stores temporary register information, parameters, and return addresses of subroutines. See also *first-in, first-out*.

standalone. Pertaining to operations that are independent of another device, program, or system.

standalone dump. A dump performed separately from normal system operations that does not require the system to be in a condition for normal operations.

start delimiter. In the IBM Token-Ring Network, the first byte of a token or frame. It consists of a special, recognizable bit arrangement.

statement. A language construct that represents a step in a sequence of actions.

static SQL. The Structured Query Language (SQL) statements that are embedded within a program and are prepared during the program preparation process before the program is executed.

station. (1) A workstation. (2) An input or output point in a system that uses telecommunications facilities. Synonymous with *data station*.

statistics. In Database Manager, the characteristic physical attributes about tables; for example, the number of records or the number of pages. Statistics are used during optimization as a basis for selecting accesses to tables. In Query Manager, users can select Run Statistics to determine optimal access to data within a table.

stop bits. In asynchronous communications, the bit or bits used to end the character frame transmission.

storage. A media used to save information, such as a fixed disk. See also *memory*.

storage allocation. Synonym for *memory allocation*.

string. A sequence of elements of the same nature, such as characters, considered as a whole.

Structured Query Language (SQL). An established set of statements used to manage information stored in a database. By using these statements, users can add, delete, or update information in a table, request information through a query, and display the results in a report. See also *SQL statement*.

subdirectory. A directory contained within another directory in a file system hierarchy.

subquery. A fullselect that appears in the WHERE or HAVING clause of an SQL statement. See also *fullselect*.

subselect. A SELECT statement that is part of another statement such as INSERT. That form of the SELECT statement that does not include an ORDER BY, FOR UPDATE OF, UNION, INTERSECT, or EXCEPT.

subtable. In Query Manager panel definition, a subordinate table connected to the root table. See also *root table*.

subvector. A subcomponent of the medium access control (MAC) major vector.

summary functions. Used in queries and views to apply column functions that work on several rows together. Some column functions include SUM, AVG, MIN, MAX, and COUNT.

Support Center. Synonym for *IBM Support Center*.

SVC. See *switched virtual circuit*.

switch. An action that moves the input focus from one area to another. A switch can be within the same window or from one window to another. See also *toggle*.

switched line. A telecommunication line in which the connection is established by dialing. Contrast with *non-switched line*.

switched virtual circuit (SVC). A virtual circuit that is requested by a virtual call. It is released when the virtual circuit is cleared. See *permanent virtual circuit* and *virtual circuit*.

sync point. Synonym for *point of consistency*.

synchronization level. In Advanced Program-to-Program Communications (APPC), the specification indicating whether the corresponding transaction programs exchange configuration requests and replies.

synchronous. Pertaining to two or more processes that depend upon the occurrences of specific events such as a common timing signal. Contrast with *asynchronous*.

Synchronous Data Link Control (SDLC). A communications protocol for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges can be duplex or half-duplex, over switched or non-switched links. Contrast with *binary synchronous communication*.

synchronous data transfer. A physical transfer of data to or from a device that has a predictable time relationship with the execution of an input/output (I/O) request.

synchronous transmission. In data communication, a method of transmission in which the sending and receiving of characters are controlled by timing signals. Contrast with *asynchronous transmission*.

SYSADM. See *system administrator*.

system. A computer and its associated devices and programs. See also *workstation*.

system administrator (SYSADM). (1) In Database Manager, a user with SYSADM authority. Such users can grant other users or groups the right to access objects and can revoke such rights. Only a SYSADM can create or drop a database and grant database administrator authority to other users. (2) In Communications Manager, the person with responsibility for installing, configuring, and setting up local communications networks, and ensuring the proper use of Communications Manager on all supported hardware.

system database directory. Synonym for *database directory*.

system diskette. A fixed disk or diskette that can be used to start a system or workstation.

system name. (1) An IBM-supplied name that uniquely identifies the system. It is used as a network attribute for certain communications applications such as Advanced Program-to-Program Communications (APPC). (2) An IBM-defined name that has a predefined meaning to the COBOL compiler. System names include computer names, language names, device names, and function names.

system services control point (SSCP). In Systems Network Architecture (SNA), a control point in a host node that provides network services for dependent nodes.

system storage. The program-addressable memory from which instructions and other data can be loaded directly into registers for subsequent processing. See *extended storage*.

system trace. A historical record of specific events in the execution of the Extended Edition. The record is

usually produced for debugging purposes. See also *trace buffer*.

system trace formatter. In the OS/2 program, a diagnostic tool used to retrieve system trace data from the system trace buffer and format the data for a display, printer, or a file. See also *system trace utility*.

system trace utility. In the OS/2 program, a diagnostic tool used to capture a sequence of system events, function calls, or data for analysis. See also *system trace formatter* and *trace buffer*.

Systems Application Architecture (SAA). A set of software interfaces, conventions, and protocols that provide a framework for designing and developing applications across multiple computing environments.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through the networks and also the operational sequences for controlling the configuration and operation of networks.

T

table. In Database Manager, a named collection of data consisting of rows and columns.

table fields. In Query Manager, the two types of fields found in panels: output and input.

Task Manager. In the OS/2 program, the function that controls the starting and stopping of programs and controls which program has the input focus. It also allows the user to shut down the system. See also *shutdown*.

TDLC. See *twinaxial data link control*.

telecommunication facility. Transmission capabilities, or the means for providing such capabilities, made available by a communication common carrier or by a telecommunication administration. Synonymous with *transmission facility*.

telecommunication line. Any physical medium, such as a wire or microwave beam, that is used to transmit data.

template. (1) In Query Manager, a copy of an existing table or view that is modified and saved to create a new table or view. (2) In Presentation Manager, a data structure that defines the size, position, and appearance of a collection of windows. Templates can be defined for dialog boxes and menus. (3) On an IBM personal computer, a line entered from the keyboard and stored in memory from which the line can be retrieved, used again, or modified.

temporary storage. In computer programming, the memory locations reserved for intermediate results. Synonymous with *working storage*.

terminal. In data communication, a device, usually equipped with a keyboard and display screen, capable of sending and receiving information.

text. A set of characters or symbols.

text cursor. A symbol, displayed in an entry field, that shows users where typed input will be displayed. Synonym for *cursor*. See *selection cursor*.

thousands separator. A character with a value greater than 999 that separates on numeric fields.

thrashing. A condition in which the system can do little useful work because of system overloads such as swapping, or starting and stopping communication links.

thread. The smallest unit of execution within a process that is not identifiable outside of its parent process.

throughput class negotiation. A packet switching data network optional facility that allows data terminal equipment (DTE) to negotiate the speed at which its packets travel through the packet switching data network.

TIME. In Database Manager, a column data type in the form of a value that designates a time of day in hours, minutes, and possibly seconds (a two- or three-part value).

time out. A time interval allotted for certain operations to occur.

time sharing option (TSO). An IBM MVS host facility that allows terminal users to share time on a mainframe.

TIMESTAMP. In Database Services, a column data type in the form of a value that designates a date, time, and optionally, a number of microseconds (a six- or seven-part value).

toggle. (1) The ability to switch between two modes; for example, insert and replace. (2) To switch between two modes; for example, on a personal computer connected to a network, to switch between the data entry and command entry modes or between standalone operation and terminal emulation. See also *switch*.

token. (1) In a local area network (LAN), the symbol of authority passed among data stations to indicate the station temporarily in control of the transmission medium. It consists of a starting delimiter, a frame control field, and an ending delimiter. The frame control field contains a token indicator bit that indicates to a receiving station that the token is ready to accept information. If the station has data to send along the network, it appends the data to the token. The token

then becomes a frame. (2) A character string in a specific format that has some defined significance in Structured Query Language (SQL).

token monitor. Synonym for *active monitor*.

token-ring. A network with a ring topology that passes tokens from one attaching device to another.

Token-Ring Network. See *IBM Token-Ring Network*.

TP. See *transaction program*.

trace. (1) A record of data that provides a history of events that occurred in a system. (2) The process of recording the sequence in which the statements in a program are executed and, optionally, are the values of the program variables used in the statements.

trace buffer. An allocation of space on a system for trace information. See also *system trace*.

trace services. In Communications Manager, a menu-driven utility used to trace application programming interfaces (APIs) and data transmitted on communication links.

transaction. (1) In Database Services, a unit of processing that guarantees that all requests within the unit of processing are either complete or undone. (2) In Communications Manager, an exchange between a workstation and a program, between two workstations, or between two programs that accomplishes a particular action or result.

transaction program (TP). A program that uses the Advanced Program-to-Program Communications (APPC) application programming interface (API) to communicate with a partner application program at a remote node.

transaction service mode. Synonym for *mode*.

transfer file. To send a file from one computer to another.

transfer request. A description of the file you want to transfer to your personal computer from the AS/400 system or from your personal computer to the AS/400 system.

transmission facility. Synonym for *telecommunication facility*.

transmission frame. In data transmission, the data transported from one node to another in a particular format that can be recognized by the receiving node.

transmission header (TH). In Systems Network Architecture (SNA), the control information, optionally followed by a basic information unit (BIU), or a BIU segment that is created and used by path control to

route message units and to control their flow within the network. See also *path information*.

transmit. To send information from one place for reception elsewhere.

truncation. (1) The process of discarding part of a result from an operation when it exceeds memory or storage capacity. (2) In Query Manager, the C edit code can cause some data to be discarded.

TSO. See *time sharing option*.

twinaxial. See *twinaxial data link control (TDLC)*.

twinaxial data link control (TDLC). A communications function that allows personal computers, attached to the workstation controller by way of twinaxial cable, to use Advanced Program-to-Program Communications (APPC).

twinaxial feature. See *twinaxial data link control*.

U

UA. See *unnumbered acknowledgement*.

UAC. See *universal access control*.

UART. See *universal asynchronous receiver/transmitter*.

UL. See *Underwriters Laboratories*.

unavailable choice. A choice that the current state of the application does not allow users to select because its selection would violate some condition of selection. Contrast with *available choice*.

Unbind Session (UNBIND). A request to deactivate a session between two logical units (LUs).

UNC. See *universal naming convention*.

Underwriters Laboratories (UL). The Underwriters Laboratories, Inc. examines, tests, and determines the suitability of materials and equipment to be used according to all National Electric Safety Code and National Electric Code regulations.

unformatted diskette. A diskette that contains no data and no track or sector format information. Contrast with *formatted diskette*.

unformatted program interface. The part of 3270 terminal emulation support that allows user application programs to use the 3270 data stream in the form it is received from the host system. Contrast with *formatted program interface*.

uniformly-spaced font. A font with graphic characters contained in character cells of uniform size.

unique index. (1) In Database Services, an index that assures that no identical key values are stored in a table. (2) In Query Manager, this is referred to as duplicates not allowed. See also *duplicates*.

unit of recovery. In Database Manager, a sequence of operations within a unit of work between points of consistency.

unit of work. The unit of processing that involves the execution of one or more programs and to which the database manager allocates resources and locks.

universal access authority. A portion of the access control profile that contains the level of authority given to all users that are not covered by any user or group entries in the profile.

universal access control (UAC). A portion of the access control profile that contains the level of authority given to all users not covered by user or group entries in the profile.

universal asynchronous receiver/transmitter (UART). An integrated circuit chip used in asynchronous communications hardware that provides all the necessary logic to receive data in a serial-in parallel-out fashion and to transmit data in a parallel-in serial-out fashion.

universal naming convention (UNC). A name used to identify the server and netname of a resource, taking the form: \\servername\netname\path and filename, or \\servername\netname\devicename. See also *netname*.

unlock. To release an object or system resource that was previously locked and return it to general availability.

unnumbered acknowledgment (UA). A Synchronous Data Link Control (SDLC) command used in establishing a link and in answering receipt of SDLC frames.

unprotected field. A displayed field in which a user can add, modify, or delete data. Contrast with *protected field*.

upload. To move data or programs from a workstation to a host. Contrast with *download*.

upstream. In the IBM Token-Ring Network, the direction opposite that of data flow. Contrast with *downstream*.

usage code. A code used in Query Manager to determine how a column is used in a report.

user. A person who uses a resource on a computer.

user access list. A list that defines individual users and their access authorities.

user ID. A unique name that identifies a user to the network.

user interface. The hardware, software, or both that allows a user to interact with and perform operations on a system, program, or device. See *interface*.

user profile. In OS/2 LAN Server, an OS/2 command file containing commands that set environment values and run programs automatically when a user logs on.

User Profile Management. User Profile Management is automatically installed with the IBM Operating System/2 program. It provides user ID validation and user and group management facilities that are used by both Database Manager and Communications Manager. Each installation of User Profile Management is local to the particular workstation where it is installed and validates users accessing controlled data or using programs that reside on that particular workstation. It also provides the mechanism for users to LOGON to the system and LOGOFF from the system to identify and authenticate system users.

user types. Users and network administrators. A user is any person who uses a resource on a computer. See also *network administrator*.

utility. The capability of a system, program, or device to perform the functions for which it is designed.

V

V.24. In data communications, a recommendation of the CCITT that lists the definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE).

V.35. In data communications, a recommendation of the CCITT that defines data transmission at 48 Kb per second using 60-180 kHz group band circuits.

valid choice symbol. A symbol to the left of a choice in a panel that indicates the choices available for selection.

value. (1) A specific occurrence of an attribute; for example, blue for the attribute color. (2) A quantity assigned to a constant, a variable, parameter, or symbol. See also *argument*. (3) In Database Services, a data element with an assigned row and column in a table.

VARCHAR. In Database Services, a column data type where the character data varies in the number of characters. No specific number of characters are reserved for each entry. The maximum is 4000.

variable. An entity that can assume a value.

variable length string. A character or graphic string whose length is not fixed but variable within set limits.

vary active. Synonym for *vary on*.

vary inactive. Synonym for *vary off*.

vary off. To make a device, controller, or line unavailable for its normal, intended use. Synonymous with *vary inactive*. Contrast with *vary on*.

vary on. To make a device, controller, or line available for its normal, intended use. Synonymous with *vary active*. Contrast with *vary off*.

verb. (1) An application programming interface (API) command. (2) In Query Manager prompted query, the verbs **Is** or **Is not** can be selected with each operator specified in the Comparison Operators menu in order to do select processing.

verification. The act of determining whether an operation has been accomplished correctly.

view. An object maintained by Database Manager that is a logical table but does not exist in physical storage but consists of data generated by a query that can be obtained from one or more tables.

virtual circuit. (1) In packet switching, the facilities provided by a network that give the appearance to the user of an actual connection. See *permanent virtual circuit* and *switched virtual circuit*. (2) A logical connection established between data terminal equipment (DTE).

virtual machine (VM). A functional simulation of a computer and its associated devices. Each virtual machine is controlled by a suitable operating system. See *Conversational Monitor System*.

Virtual Machine/Conversational Monitoring System (VM/CMS). A time sharing system control program (CP) that consists of a control program that manages the resources of an IBM System/370 computing system in such a way that multiple remote terminal users have a functional simulation of a computing system at their disposal. It also contains the Conversational Monitoring System (CMS) that provides general time sharing, program development, and problem solving facilities.

Virtual Machine/System Product (VM/SP). An IBM-licensed program that manages the resources of a single computer so that multiple computing systems appear to exist. Each virtual machine is the functional equivalent of a real machine.

Virtual Storage Extended (VSE). An operating system that is an extension of Disk Operating System/Virtual Storage. A VSE consists of: (a) licensed VSE/Advanced Functions support and (b) any IBM-supplied and user-written programs that are required to meet the data processing needs of a user. VSE and the hardware it controls form a complete computing system.

Virtual Telecommunications Access Method (VTAM). A set of programs that control communications between nodes and application programs running on a host (System/370) system.

VM. See *virtual machine*.

VM/CMS. See *Virtual Machine/Conversational Monitoring System*.

VM/SP. See *Virtual Machine/System Product*.

volume database directory. Synonym for *database directory*.

VSE. See *Virtual Storage Extended*.

VTAM. See *Virtual Telecommunications Access Method*.

VT100. A Digital Equipment Corporation (DEC) ASCII terminal.

W

wait. A condition characterized by the suspension of normal program or keyboard functions.

WAN. See *wide area network*.

warning message. A message that provides information to users to alert them to a possible error condition in the system. Warning messages are also sent to warn users that the action they are attempting can cause an undesirable condition or consequence.

wide area network (WAN). A network that provides data communication capability in geographic areas larger than those serviced by local area networks.

window. (1) An area of the screen with visible boundaries through which a panel or portion of a panel is displayed. (2) In data communication, the number of data packets a DTE or DCE can send across a logical channel before waiting for authorization to send another data packet. The window is the main mechanism of pacing, or flow control, of packets and frames.

window count. In communications, the maximum number of information frames that can be sent or received by the link station before acknowledgement is sent or received.

work area. (1) An area in which terminal devices (such as displays, keyboards, and printers) are located. Synonymous with *office*. (2) An area reserved for temporary storage of data.

work sheet formats (WSF). An OS/2 file format used to import and export data in work-sheet formats supported by the Lotus products.

working directory. The directory in which an application program is found. The working directory becomes the current directory when the application is started unless otherwise set.

working diskette. A computer fixed disk or diskette to which files are copied from an original diskette for use in everyday operation. Synonymous with *operational diskette*.

working storage. Synonym for *temporary storage*.

workstation. A terminal or personal computer, usually one that is connected to a mainframe or within a network, at which a user can run applications. See also *system*.

workstation address. (1) A number used in a configuration file to identify a workstation attached to a computer port. (2) The address to which the switches on a workstation are set, or the internal address assumed by the system, if no address is specified.

wrap. A condition that occurs when a file or buffer is full and new data overlays existing data. In Query Manager, if the length of the value to be displayed or printed exceeds the specified width, and the data is numeric, the value is replaced with a row of asterisks (****). If the data is character data, it can be truncated or wrapped depending on the edit code specified. Column edit codes are used in specifying these values.

write protection. The restriction of writing into a file or memory area by a user or program not authorized to do so. See also *read-only*.

WSF. (1) See *work sheet formats*. (2) Work Station Feature, as in 5250 WSF.

X

X.21. In data communication, a recommendation of the CCITT that defines the interface between data terminal equipment and public data networks for digital-leased and circuit-switched synchronous services.

X.21 bis. In data communication, a recommendation of the CCITT that defines the use on public data networks of data terminal equipment (DTE) that is designed for interfacing to synchronous V-series modems.

X.21 feature. A feature that allows a system to be connected to an X.21 network.

X.25. In data communication, a recommendation of the CCITT that defines the interface between data terminal equipment and packet switching networks. Recommendations X.25 (Geneva 1980) and X.25 (Malaga-Torremolinos 1984) have been published.

X.25 feature. A feature that allows a system to be connected to an X.25 network.

X.25 network. A service providing packet-switched data transmission that conforms to Recommendation X.25 adopted by the CCITT.

X.25 verb. In X.25, support library routine provided by the X.25 application programming interface (API) to manage, control, or use an X.25 network.

X.25 verb request control block (XVRB). A data structure passed to the X.25 support to request the execution of an X.25 API verb.

X.32. In data communications, a recommendation of the CCITT that defines the interface between data terminal equipment (DTE) and packet switching networks through a public switched network, such as a public telephone network.

XID. See *exchange station ID*.

xmodem. An asynchronous communications data transfer protocol where data is transferred in 128-byte blocks.

XOFF. In communications, a flow control value used to signal the remote transmitter to suspend data transmission.

XON. In communications, a flow control value used to signal the remote transmitter to start or resume data transmission.

XVRB. See *X.25 verb request control block*.

Z

z-order. In Presentation Interface, the order in which sibling windows are presented. The topmost sibling window obscures any portion of the siblings that it overlaps; the same effect occurs down through the order of lower sibling windows.

Numerics

3101. An IBM ASCII terminal.

3270 terminal emulation. A feature of Communications Manager that emulates the function of a 3270 workstation.

5250 WSF. See *5250 Work Station Feature*.

5250 Work Station Feature. A feature of Communications Manager that allows a personal computer to perform like a 5250 display station and use the functions of an IBM AS/400, IBM System/36, or IBM System/38 system.

Index

A

ABEND

See abnormal termination

abnormal termination

problem definition 2-13
problem source identification 2-13

ACDI (Asynchronous Communications Device Interface)

equivalent circuit names I-16

ACS messages

how to use B-1
using reference information
MACH messages C-1

ACSLAN.LOG text file

preliminary considerations 3-10

activate dump 3-54, 3-55

activated 3-29

active traces 3-56

adapter

communications I-4
IBM Personal Computer AT I-3
IBM Personal System/2 I-3

ADM messages

GDDM (ADM) Messages E-1
using reference information
LAN Requester or OS/2 LAN Server
messages F-1

administrator roles 1-4

advanced problem determination for communications

keylock 3-42
preliminary considerations 3-42
recommended procedure for a communications trace
and dump 3-57
trace and dump services 3-41
using dump services menus 3-53

advanced problem determination for the base operating system, LAN Requester, and Database Manager

preliminary considerations 3-31
samples of formatted trace events 3-35
using system trace commands 3-32
using the system trace utility 3-31

assistance for system users

Communications Manager system
administrator 1-4
related information 1-3
sources of assistance
related information 1-3
support personnel 1-3
support personnel
application programmers 1-5, 1-6
Communications Manager system
administrator 1-6
database manager system administrator 1-4, 1-6
host computer 1-5, 1-6

assistance for system users (*continued*)

support personnel (*continued*)
local hardware 1-3, 1-6
network administrator 1-5, 1-6
summary of roles 1-6
when to seek assistance 1-2

asynchronous adapter limitations I-7

AS/400

software considerations I-21

audit trail

accessing
from main panel 3-16
from OS/2 command prompt 3-15
description of utility 3-2
OS/2 LAN Server problems
audit trail information 3-14
parameters 3-14
printing 3-17

Authorized Program Analysis Report (APAR) mailing labels

Austin mailing label K-3
Boca Raton mailing label K-3
how to use an APAR label K-2
preliminary considerations K-1

Authorized Program Analysis Report (APAR) number J-1

B

base operating system messages

base operating system (SYS) error messages A-1
Communications Manager messages B-1
file transfer (TRANS) messages D-1
Query Manager messages G-1
using reference information B-1

base operating system return codes H-6

base operating system (SYS) error messages A-1

C

C & SM (Communications and Systems Management)

host programs I-22
classifying a software problem 2-12
communications adapter I-4
communications cable I-16, I-17
Communications Manager
host communications software I-19
modems I-13
X.25 connection types I-17

Communications Manager system administrator 1-4

Communications Manager(ACS) messages B-1

communications problems

display messages (selection criteria) 3-20
display messages (selection criteria) menu 3-19

- communications problems (*continued*)
 - dump services 3-4
 - message log
 - displaying messages 3-2
 - logging messages 3-2
 - using 3-17
 - messages with a MACH prefix C-1
 - messages with a NET prefix F-1
 - messages with a TRANS prefix D-1
 - messages with an ACS prefix B-1
 - problem determination information of potential interest to IBM 4-7
 - problems 2-30
 - selecting display messages menu 3-18
 - selecting message services 3-17
 - trace services 3-3
- configuration 3-5, 3-23
- configuration file
 - CONFIG.SYS file 2-11
 - TRACE statement 3-33
- CONFIG.SYS 3-5, 3-32, 3-34
- CONFIG.SYS file 2-11
- connect types 1-17
- contacting IBM 4-1
- contacting the IBM Support Center 4-4
- controllers 1-10
- conversation ID 3-27, 3-29
- copy storage trace to file 3-57
- corrective service
 - Corrective Service diskette 5-1
 - definition 5-1
 - determining the current level (SYSLEVEL) 5-2
 - installing program updates 5-2
- Corrective Service diskette 5-1
- CREATEDD 3-37, 3-38
- CREATEDD command 3-37
- creating a dump diskette (CREATEDD) 3-37
- customer number 4-4

D

- Database Manager logging 3-2, 3-5
- Database Manager messages G-1
- database manager system administrator 1-4
- Database Manager trace 3-3
- database problems 2-24
- date 3-26, 3-29
- deficient documentation problem definition 2-14
- destination for dump data 3-55
- determining if the problem is hardware or software 2-2
- diagnostic tools 3-1
- discovering problem patterns 1-7
- diskette drives 1-1, 1-2
- display error log 3-25
- display messages pull-down 3-18
- displaying messages 3-2
- displays 1-3

- dump data file name 3-54
- dump diskette
 - ending standalone dump 3-39
 - formatting 3-37
 - standalone dump 3-36
 - starting standalone dump 3-38
- dump in process status 3-56
- dump services
 - definition 3-41
 - using dump services menus
 - accessing the dump services menus 3-53
 - specifying the destination for dump data 3-55
 - using the dump services menu 3-54
- dump utilities
 - dump services for communications 3-4
 - standalone dump 3-3

E

- equal sign 3-5, 3-32
- error data 3-27, 3-29
- error description 3-26
- error log
 - audit trail 3-2
 - error log 3-2
- error log display 3-26
- error log display panel 3-26
- error log file 3-5, 3-23
- error log for communications
 - accessing the error log services menu 3-24
 - error log display criteria 3-25
 - error log file 3-23
 - error log output format 3-29
 - information presented 3-26
 - preliminary considerations 3-23
 - printing the contents 3-28
 - scrolling through an error log 3-26
 - using error log services 3-24
 - wrap or extend error log 3-23
- error log name 3-25
- error log output format 3-29
- error log services 3-25
- error messages
 - User Profile Management error messages H-1
 - using reference information
 - GDDM messages E-1
- error originator 3-26
- error type 3-26
- extend error log 3-5, 3-23

F

- file transfer (TRANS) messages D-1
- fixed disk
 - IBM Personal Computer AT 1-2
 - IBM Personal System/2 1-1
 - OS/2 workstation requirements 1-1

formatting a dump diskette 3-37
from date 3-26
from time 3-26

G

GDDM (ADM) Messages E-1
GDDM-OS/2 Link trace 3-36
general information
 problems 2-32
getting started 2-1

H

hardware
 adapter limitations I-7
 controllers I-10
 determining requirements I-1
 IBM Personal Computer AT displays and
 adapters I-3
 IBM Personal Computer AT drives I-2
 IBM Personal System/2 displays and adapters I-3
 IBM Personal System/2 drives I-1
 keyboards I-8
 modems I-11
 parallel pointing devices I-9
 plotters I-10
 pointing devices I-9
 printers I-9
 protocol converters I-11
hardware check 2-3
hardware diagnostics 2-4
hardware personnel and procedures 1-3
hardware problem determination 2-2
hardware problems
 determination 2-3
 flow chart 2-3
 hardware check 2-3
 hardware diagnostics 2-4
host
 C & SM programs I-22
 communications software I-21
 file transfer programs I-22
 software considerations I-20
host computer personnel 1-5
how to contact IBM
 IBM Support Center 4-1
 ServiceLine 4-1

I

IBM Operating System/2 Extended Edition Version 1.3
 diagnostic tools
 standalone dump 3-3
 system trace formatter 3-3
 system trace utility 3-3
IBM Personal Computer AT displays and adapters I-3

IBM Personal Computer AT drives I-2
IBM Personal System/2 displays and adapters I-3
IBM Personal System/2 drives I-1
IBM Support Center
 contacting the IBM Support Center 4-4
 how the IBM Support Center works 4-5
 related procedures 4-5
IBM 5841 modem I-14
import and export message files
 accessing information 3-30
 description 3-3
 import and export message files 3-3
 messages with a QRW or SQL prefix G-1
 preliminary considerations for using 3-30
 problem determination information of potential
 interest to IBM 4-7
 standalone dump utility 3-3
 system trace 3-3
 system trace formatter 3-3
incorrect output problem definition 2-14
installation
 install problems 2-13
 problem source identification 2-13
installing program updates
 corrective service
 Corrective Service diskette 5-1
 definition 5-1
 determining the current level (SYSLEVEL) 5-2
 how to install program updates 5-2
 process definition 5-1
intermittent problems 2-20
investigating hardware problems 2-3
investigating software problems 2-5

J

job logs 3-23

K

keyboards and templates I-8
keylock
 key 3-43
 lock 3-43
 open lock 3-43

L

LAN error log
 audit trail 3-2
 Communications Manager error log 3-2
 LAN Requester or OS/2 LAN Server error log
 contents 3-11
 preliminary considerations 3-10
LAN Requester or OS/2 LAN Server problems 2-21
LAN Requester or OS/2 LAN Server (NET)
 messages F-1

- LAN Requester (NET) messages F-1
- LAN (Local Area Network)
 - adapter limitations I-7
- local hardware personnel and procedures 1-3
- LOG
 - CREATEDD 3-37
 - LOG 3-6
 - SYSLEVEL 5-2
 - TRACE OFF 3-33
 - TRACE ON 3-32
 - TRACEBUF 3-32
 - TRACEFMT 3-33
- log buffer size 3-6
- log name 3-25, 3-26, 3-29
- log type 3-26
- logging facility commands
 - enabling the logging facility 3-5
 - specifying log buffer size 3-6
 - specifying minimum free space 3-5
 - specifying wrap size 3-6
 - using OS/2 logging facility commands 3-5
 - using the equal sign 3-5
- logging messages 3-2
- logging utilities
 - ACSLAN.LOG text file 3-2
 - Communications Manager error log 3-2
 - definitions 3-2
 - import and export message files 3-3
 - LAN Requester or OS/2 LAN Server error log 3-2
 - LAN server audit trail 3-2
 - OS/2 logging facility 3-2
 - problem determination aids 3-2
- LOG = 3-5
- LOG = command 3-6
- LOG = statement 3-5
- LOG = OFF 3-5
- LOG = ON 3-5
- loop problem definition 2-13

M

- MACH messages C-1
 - using reference information
 - TRANS messages D-1
- Machine Check (MACH) Messages C-1
- maintaining records
 - problems and solutions 1-2
 - users and environments 1-2
- message date and time 3-20
- message log
 - audit trail 3-2
- message log display
 - message log display 3-22
 - message log display panel 3-22
 - message number 3-22
 - originator 3-22
- message log file 3-18

- message log for communications
 - accessing the message log 3-18
 - preliminary considerations 3-18
 - printing or displaying the contents 3-22
 - scrolling through 3-21
 - understanding the contents 3-22
- message log name 3-20
- message services 3-2
- messages
 - ACS messages B-1
 - general response 2-8
 - MACH messages C-1
 - NET messages F-1
 - Problem Report Form information 2-9
 - QRW messages G-2
 - responding to a message to contact the service coordinator 2-10
 - responding to ABEND (abnormal termination) 2-10
 - responding to inappropriate time 2-10
 - SQL messages G-10
 - SYS messages A-1
 - TRANS messages D-1
 - User Profile Management messages H-1
- messages that appear at an inappropriate time 2-10
- MicroCom AX/1200 I-15
- MicroCom AX/2400 I-15
- minimum free space 3-5
- modem
 - asynchronous I-11, I-13
 - Communications Manager I-13
 - IBM 5841 I-14
 - MicroCom AX/1200 I-15
 - MicroCom AX/2400 I-15
 - Racal-Vadic VI2422S I-15
 - ROLMphone 244PC I-14
 - SDLC synchronous I-11
 - switch settings I-14-I-16
- mouse devices I-9

N

- NET messages F-1
- network administrator 1-5
- non-switched connections I-12

O

- operating system problems 2-16
- originator 3-20, 3-27, 3-29
- originator list 3-21, 3-27
- OS/2 LAN Server (NET) messages F-1
- OS/2 logging facility
 - error log file 3-5
 - preliminary considerations 3-5
 - wrap or extend error log 3-5
- OS/2 mode commands
 - CREATEDD 3-37
 - statement in CONFIG.SYS 3-33

OS/2 mode commands (*continued*)
TRACEFMT 3-33
OS/2 workstation hardware requirements I-1
other message sources 2-12

P

parallel attached printer I-10
parallel pointing devices I-9
performance problem
 problem definition 2-14
 problem source identification 2-14
planning
 keyboards and templates I-8
plotters I-10
pointing devices I-9
print error log 3-28
printer I-9
prioritizing the problem
 priority checklist J-3
problem determination
 hardware 2-2
 hardware problem 2-3
 process 2-1
 software 2-2
 software problem 2-5
 where to start 2-2
problem determination aids
 advanced function menu 3-44, 3-53
 Advanced pull-down 3-24
 auto-trace services panel 3-49, 3-51
 copy storage trace to file panel 3-48, 3-51
 Dump Activation Warning menu 3-55
 Dump Destination menu 3-55
 Dump in Process Status menu 3-56
 dump services 3-53
 dump services for communications 3-4
 Dump Services menu 3-54
 Error Log Display 3-26
 Error Log Display Criteria menu 3-25
 error log output format 3-29
 Error Log Output Format panel 3-29
 Error Log Print Criteria menu 3-28
 Error Log Print Criteria (print error log) 3-28
 error log services 3-2, 3-23
 Error Log Services menu 3-25
 logging facility 3-5
 problem determination aids 3-2, 3-5, 3-23
 Problem Determination Aids menu 3-43
 select items to dump menu 3-54
 selecting Problem Determination Aids menu 3-24, 3-44, 3-53
 selecting the Advanced menu 3-24, 3-53
 selecting the Advanced Options panel 3-44
 trace selections menu 3-47, 3-50
 trace services 3-3, 3-42
 trace services menu 3-45
 trace type selection panel 3-47, 3-50

Problem Management Record Number J-1
Problem Report Form
 classifying a software problem 2-12
 communications problems 2-30
 database problems 2-24
 deficient documentation 2-14
 describing a software problem 2-5
 discovering problem patterns 1-7
 dumps 3-39
 explanation of the items on the form
 Part A: Background Information J-1
 Part B: Problem Description J-5
 Part C: Workstation Hardware Configuration J-5
 Part D: Host Computer and Network Information J-5
 Part E: LAN Requester-Server Information J-6
 Part F: Problem Resolution J-6
 problem priority J-3
 how to complete 2-2
 information to include for all messages 2-9
 LAN Requester or OS/2 LAN Server 2-21
 maintaining records 1-2
 message at inappropriate time 2-10
 messages 2-9
 performance problems 2-18
 traces 3-35
 when, why, and how to use J-1
process ID 3-27, 3-29
process status information 3-40
protocol converters I-11
PSTAT
 PSTAT 3-40
PSTAT utility 3-40

Q

QRW messages G-2
Query Manager
 abnormal termination 2-25
 error messages G-1
Query Manager messages
 with the prefix QRW G-2
 with the prefix SQL G-10

R

Racal-Vadic VI2422S I-15
re-creating a software problem
 events at the time of problem 2-6
 operating circumstances 2-7
 problem description 2-6
recommended procedure for collecting and formatting system trace information 3-34
recommended procedure for performing a standalone dump 3-38
redirecting a problem 1-2

- responding to error messages
 - ABEND (abnormal termination) 2-10
 - contact the service coordinator 2-10
 - inappropriate time 2-10
 - Problem Report Form information 2-9
- return codes H-6
 - base operating system H-6
- role
 - contacting IBM 4-1
 - record keeping 1-2
 - role 1-1
- role of Communications Manager system administrator 1-4
- role of database manager system administrator 1-4
- role of local hardware personnel 1-3
- role of network administrator 1-5
- role of your host computer personnel 1-5
- roles of other system support personnel 1-6
- ROLMphone 244PC I-14

S

- SDLC (Synchronous Data Link Control)
 - adapter limitations I-7
- security 3-42, 3-53
- select items to dump 3-54
- selecting items to dump 3-57
- selecting traces 3-45, 3-54
- Service Coordinator's Role
- ServiceLine
 - how to use 4-3
 - installation and access 4-3
 - preliminary considerations
 - problems using ServiceLine 4-4
 - process description 4-3
 - software requirements 4-3
 - using ServiceLine 4-2
 - when and why to use 4-2
- software
 - C & SM host programs I-22
 - host communications I-20
 - host file transfer I-22
- software problem determination 2-2
- software problems
 - application program 2-5
 - communications problems 2-30
 - database problems 2-24
 - description 2-5
 - determination 2-5
 - determining the nature of the software problem 2-12
 - flow chart 2-5
 - general problem description 2-6
 - LAN Requester or OS/2 LAN Server problems 2-21
 - messages that appear at an inappropriate time 2-10
 - operating system problems 2-16
 - prioritizing the problem J-3

- software problems (*continued*)
 - re-creating 2-6
 - responding to error messages 2-8
 - software problem description 2-5
 - symptoms of problems 2-13
- SQL messages G-10
- standalone dump
 - CREATEDD command syntax 3-37
 - description 3-3
 - ending the standalone dump 3-38
 - preliminary considerations 3-36
 - preparing a stand-alone dump diskette (CREATDD) 3-37
 - recommended procedure for initializing system dump diskettes 3-37
 - recommended procedure for performing a standalone dump 3-38
 - starting the standalone dump 3-38
 - using the standalone dump 3-36
- start selected traces 3-57
- subtype 3-26, 3-29
- Support Center 4-1
- switched connections I-11
- SYS messages A-1
- SYSLOG command 3-6
- system trace 3-3
- system trace commands
 - enabling the system trace utility 3-32
 - formatting trace records (TRACEFMT) 3-33
 - samples of formatted trace events 3-35
 - selectively stopping a trace (TRACE OFF) 3-33
 - specifying major event codes (TRACE ON) 3-32
 - specifying trace buffer size (TRACEBUF) 3-32
 - TRACE command syntax 3-33
 - TRACEBUF command syntax 3-34
 - TRACEFMT command syntax 3-34
 - using the equal sign 3-32
- system trace utility 3-31
- system tracing 3-33, 3-34
- system tuning 2-14

T

- time 3-27, 3-29
- to date 3-28
- to time 3-28
- tools
 - ACSLAN.LOG text file 3-2
 - base operating system 3-1
 - Communications Manager 3-1, 3-2
 - Database Manager 3-1
 - diagnostic 3-1
 - dump utilities 3-3
 - LAN Requester or OS/2 LAN Server 3-2
 - LAN server audit trail 3-2
 - logging utilities 3-2
 - OS/2 logging facility 3-2
 - problem determination aids 3-2

tools (*continued*)
 trace utilities 3-3
 TRACE 3-32
 trace buffer 3-31, 3-32
 TRACE OFF 3-32, 3-34
 TRACE OFF command 3-33
 TRACE ON command 3-32
 trace selections menu 3-57, 3-58
 trace services
 definition 3-41
 messages with a SYS prefix A-1
 preliminary considerations 3-42
 problem determination information of potential
 interest to IBM 4-7
 standalone dump utility 3-3
 trace services 3-3
 trace services for communications 3-3
 Trace Type Selection panel 3-58
 trace utility
 ending the trace 3-34
 formatting the trace data 3-34
 preliminary considerations 3-31
 starting the system trace 3-34
 TRACEBUF 3-32
 TRACEBUF command 3-32
 TRACEBUF statement in CONFIG.SYS 3-34
 TRACEFMT 3-34, 3-35
 TRACEFMT command 3-33
 TRACE=ON 3-32
 TRANS messages D-1
 TRAP error sample 2-9
 TRAP errors 2-17
 type 3-26, 3-29
 types of software problems
 abnormal termination 2-13
 deficient documentation 2-14
 incorrect output 2-14
 installation 2-13
 loop 2-13
 performance problem 2-14
 wait 2-13

U

UPM messages H-1
 user environments 1-2
 User Profile Management error messages H-1
 using the problem report form 2-13

W

wait problem definition 2-13
 when and how to contact IBM
 IBM Support Center 4-1, 4-4
 ServiceLine 4-1, 4-2
 who should call 4-1
 when to use this guide 1-7

where to start problem determination 2-2
 workstation
 hardware requirements I-1
 wrap error log 3-5, 3-23
 wrap size 3-6
 wsf job logs 3-23

X

X.25
 adapter limitations I-7
 cables I-17
 connection types I-17

Numerics

3270 adapter limitations I-7
 3270 terminal emulation
 software considerations I-21
 3278/3279 adapter limitations I-7
 5250 WSF job logs 3-23

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