Tivoli NetView for OS/390 APPN Topology and Accounting Agent Guide

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Programming Interfaces

This publication primarily documents information that is NOT intended to be used as Programming Interfaces of Tivoli NetView for OS/390.
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Preface

This document is intended to help you plan and implement the IBM® Tivoli®
NetView® for OS/390® (NetView) Advanced Peer-to-Peer Networking® (APPN)
Topology and Accounting Agent (APPNTAA) on agent nodes.

This document applies only to the Graphical Enterprise feature.

Who Should Read This Document

This document is for data processing managers and their technical staff who are
responsible for the following:
• Installing the APPNTAA on workstation
• Using the agent workstation
• Performing workstation and system diagnosis

Prerequisite and Related Documents

To read about the new functions offered in this release, refer to the Tivoli NetView
for OS/390 Installation: Migration Guide.

You can find additional product information on these Internet sites:

<table>
<thead>
<tr>
<th>Resource Address (URL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
</tr>
<tr>
<td>Tivoli Systems</td>
</tr>
<tr>
<td>Tivoli NetView for OS/390</td>
</tr>
</tbody>
</table>

The Tivoli NetView for OS/390 home page offers demonstrations of NetView, related
products, and several free NetView applications you can download. These
applications can help you with tasks such as:
• Getting statistics for your automation table and merging the statistics with a
  listing of the automation table
• Displaying the status of a JES job or cancelling a specified JES job
• Sending alerts to NetView using the program-to-program interface (PPI)
• Sending and receiving MVS commands using the PPI
• Sending TSO commands and receiving responses

What This Document Contains

This document includes the following parts, which contain chapters, and
appendixes:
• "Chapter 1. Introducing the APPN Topology and Accounting Agent" on page 1
  provides introductory information about the APPNTAA application of the NetView
  program and describes the agent’s relationship to the APPNTAA topology
  manager and accounting manager.
• "Chapter 2. Planning and Storage Requirements" on page 5
  provides information for planning the installation of the APPNTAA application. This chapter discusses
  hardware and software requirements, and space requirement calculations for
both topology and accounting agent functions, and provides an installation worksheet for recording calculations and defaults.

- "Chapter 3. Installing the APPN Topology and Accounting Agent" on page 11 describes how to install the APPNTAA application from the MVS host and from diskette. It also includes a sample accounting initialization file.
- "Chapter 4. Using the APPN Topology and Accounting Agent" on page 15 describes how to perform tasks using the APPNTAA interface.
- "Chapter 5. Problem Determination" on page 29 describes typical problem determination procedures for the APPNTAA application.
- "Appendix A. APPNMGMT Command Syntax" on page 35 contains formats, syntax diagrams, and explanatory information for the commands used by the APPNTAA.
- "Appendix B. Messages" on page 49 contains all APPNTAA messages.
- "Appendix C. System Error Log Entries" on page 63 contains all APPNTAA system error log entries.
- "Appendix D. CMIP Services Error Codes" on page 79 contains CMIP services error codes.

### Conventions Used in This Document

The document uses several typeface conventions for special terms and actions. These conventions have the following meaning:

- **Bold** Commands, keywords, flags, and other information that you must use literally appear like this, in bold.
- **Italics** Variables and new terms appear like this, in italics. Words and phrases that are emphasized also appear like this, in italics.
- **Monospace** Code examples, output, and system messages appear like this, in a monospace font.
- **ALL CAPS** Tivoli NetView for OS/390 commands are in ALL CAPITAL letters.

### Platform-specific Information

For more information about the hardware and software requirements for NetView components, refer to the Tivoli Netview for OS/390 Licensed Program Specification.

### Terminology

For a list of Tivoli NetView OS/390 terms and definitions, refer to http://www.networking.ibm.com/nsg/nsgmain.html.

For brevity and readability, the following terms are used in this document:

- **NetView**
  - Tivoli NetView for OS/390 Version 1 Release 4
  - Tivoli NetView for OS/390 Version 1 Release 3
  - TME® 10 NetView for OS/390 Version 1 Release 2
  - TME 10 NetView for OS/390 Version 1 Release 1
  - IBM NetView for MVS Version 3
  - IBM NetView for MVS Version 2 Release 4
  - IBM NetView Version 2 Release 3
MVS MVS/ESA™, OS/390, or z/OS operating systems.

Tivoli Enterprise™ software
Tivoli software that manages large business networks.

Tivoli environment
The Tivoli applications, based upon the Tivoli Management Framework, that are installed at a specific customer location and that address network computing management issues across many platforms. In a Tivoli environment, a system administrator can distribute software, manage user configurations, change access privileges, automate operations, monitor resources, and schedule jobs. You may have used TME 10 environment in the past.

TME 10
In most product names, TME 10 has been changed to Tivoli.

V and R
Specifies the version and release.

VTAM® and TCP/IP
VTAM and TCP/IP for OS/390 are included in the IBM Communications Server for OS/390 element of the OS/390 operating system. Refer to http://www.software.ibm.com/enetwork/commserver/about/csos390.html.

Unless otherwise indicated, references to programs indicate the latest version and release of the programs. If only a version is indicated, the reference is to all releases within that version.

When a reference is made about using a personal computer or workstation, any programmable workstation can be used.

Reading Syntax Diagrams
Syntax diagrams start with double arrowheads on the left (↩️) and move along the main line until they end with two arrowheads facing each other (↩️).

As shown in the following table, syntax diagrams use position to indicate the required, optional, and default values for keywords, variables, and operands.

<table>
<thead>
<tr>
<th>Element Position</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the command line</td>
<td>Required</td>
</tr>
<tr>
<td>Above the command line</td>
<td>Default</td>
</tr>
<tr>
<td>Below the command line</td>
<td>Optional</td>
</tr>
</tbody>
</table>

Required Syntax
The command name, required keywords, variables, and operands are always on the main syntax line. Figure 1 on page viii specifies that the resname variable must be used for the CCPLOADF command.
Keywords and operands are written in uppercase letters. Lowercase letters indicate variables such as values or names that you supply. In Figure 2, MEMBER is an operand and membername is a variable that defines the name of the data set member for that operand.

Optional Keywords and Variables

Optional keywords, variables, and operands are below the main syntax line. Figure 3 specifies that the ID operand can be used for the DISPREG command, but is not required.

Default Values

Default values are above the main syntax line. If the default is a keyword, it appears only above the main line. You can specify this keyword or allow it to default.

If an operand has a default value, the operand appears both above and below the main line. A value below the main line indicates that if you choose to specify the operand, you must also specify either the default value or another value shown. If you do not specify an operand, the default value above the main line is used.

Figure 4 on page ix shows the default keyword STEP above the main line and the rest of the optional keywords below the main line. It also shows the default values for operands MODNAME= and OPTION= above and below the main line.
Long Syntax Diagrams

When more than one line is needed for a syntax diagram, the continued lines end with a single arrowhead (🔺). The following lines begin with a single arrowhead (🔺), as shown in Figure 4.

Syntax Fragments

Commands that contain lengthy groups or a section that is used more than once in a command are shown as separate fragments following the main diagram. The fragment name is shown in mixed case. See Figure 5 on page x for a syntax with the fragments ReMote and FromTo.

Figure 4. Sample of Defaults Syntax
Commas and Parentheses

Required commas and parentheses are included in the syntax diagram. When an operand has more than one value, the values are typically enclosed in parentheses and separated by commas. In Figure 6 on page xi, the OP operand, for example, contains commas to indicate that you can specify multiple values for the testop variable.
If a command requires positional commas to separate keywords and variables, the commas are shown before the keyword or variable, as in Figure 4 on page ix.

For example, to specify the BOSESS command with the sessid variable, enter:

```
NCCF BOSESS applid,,sessid
```

You do not need to specify the trailing positional commas. Positional and non-positional trailing commas either are ignored or cause the command to be rejected. Restrictions for each command state whether trailing commas cause the command to be rejected.

Highlighting, Brackets, and Braces

Syntax diagrams do not rely on highlighting, underscores, brackets, or braces; variables are shown italicized in hardcopy or in a differentiating color for NetView help and BookManager® online books.

In parameter descriptions, the appearance of syntax elements in a diagram immediately tells you the type of element. See Table 3 for the appearance of syntax elements.

<table>
<thead>
<tr>
<th>This element...</th>
<th>Looks like this...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword</td>
<td>CCPLOADF</td>
</tr>
<tr>
<td>Variable</td>
<td>resname</td>
</tr>
<tr>
<td>Operand</td>
<td>MEMBER=membername</td>
</tr>
<tr>
<td>Default</td>
<td>today or INCL</td>
</tr>
</tbody>
</table>

Abbreviations

Command and keyword abbreviations are described in synonym tables after each command description.
Accessing Publications Online

The Tivoli Customer Support Web site (http://www.tivoli.com/support/) offers a guide to support services (the Customer Support Handbook); frequently asked questions (FAQs); and technical information, including release notes, user’s guides, redbooks, and white papers. You can access Tivoli publications online at http://www.tivoli.com/support/documents/. The documentation for some products is available in PDF and HTML formats. Translated documents are also available for some products.

To access most of the documentation, you need an ID and a password. To obtain an ID for use on the support Web site, go to http://www.tivoli.com/support/getting/.

Resellers should refer to http://www.tivoli.com/support/smb/index.html for more information about obtaining Tivoli technical documentation and support.

Business Partners should refer to [Ordering Publications] for more information about obtaining Tivoli technical documentation.

Note: Additional support is also available on the NETVIEW CFORUM (Customer Forum) through the IBMLink™ system. This forum is monitored by NetView developers who answer questions and provide guidance. When a problem with the code is found, you are asked to open an official problem management record (PMR) to get resolution.

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- Fill out our customer feedback survey at http://www.tivoli.com/support/survey/.

Contacting Customer Support

The Tivoli Customer Support Handbook at http://www.tivoli.com/support/handbook/ provides information about all aspects of Tivoli Customer Support, including the following:

- Registration and eligibility
- How to contact support, depending on the severity of your problem
- Telephone numbers and e-mail addresses, depending on the country you are in
- What information you should gather before contacting support
What Is New in This Release?

This document has been updated to reflect minor changes. Changes to this document are marked with revision bars (|).
Chapter 1. Introducing the APPN Topology and Accounting Agent

The APPN® topology and accounting agent (APPNTAA) is an application that runs on any Operating System/2® (OS/2) 2.0 or higher workstation with Communications Manager/2 1.1 or later. Together with the NetView SNA topology manager and APPN accounting manager, APPN topology and accounting agent provides for the management of APPN topology and the collection of advanced program-to-program communication (APPC) accounting data from an APPN network.

SNA topology manager and APPN accounting manager provides APPN management functions according to a manager-agent relationship. This relationship is defined by the International Standards Organization (ISO) in terms of a managing system and a managed system, respectively. The manager applications for APPN topology and accounting are NetView applications. Agent applications that collect information for transmission to NetView reside on APPN network nodes and end nodes that use the OS/2® Communications Manager/2 platform. Communication between the manager and agent applications is over APPC sessions using Open System Interconnection (OSI) common management information protocols (CMIP) and the Systems Network Architecture (SNA) multiple-domain support (MDS). To support the CMIP services, APPN topology and accounting agent uses the management services (MS) transport.

Information in this chapter includes:
• Manager-agent data flow
• Introduction to the APPN topology agent
• Introduction to the APPN accounting agent
• Introduction to the APPN topology and accounting agent CMIP services
• Introduction to APPN topology and accounting agent commands and interfaces
• APPN topology and accounting agent installation

The agent function is installed, started, and maintained separately from the manager function. For more information about the manager function, refer to the Tivoli NetView for OS/390 SNA Topology Manager and APPN Accounting Manager Implementation Guide.

How Data Flows between Manager and Agent

The manager and agent communicate data and data requests across APPC sessions. A component called APPN topology and accounting agent CMIP services supports these transactions. For more information about CMIP services, see APPN Topology and Accounting Agent CMIP Services on page 3.

Accounting data is transferred between agent and manager based on a series of notifications and requests. In each case, the data transfer applies to a specified type of data; that is, conversation data, session data, or intermediate session data.

The APPN topology agent application supplies information about nodes, links, and ports in response to requests from the manager application.
Introduction to the APPN Topology Agent

Upon request, the APPN topology agent forwards APPN topology and status information to the topology manager. The manager stores the information in the Resource Object Data Manager (RODM) data cache at the NetView host, enabling the Graphic Monitor Facility host subsystem (GMFHS) to graphically display the information about the NetView management console (NMC). The topology information consists of the SNA nodes in an APPN network, the APPN transmission groups (TGs) between them, and the underlying logical links and ports supporting the TGs.

How the Topology Manager and Agent Work Together

The topology manager application works with one or more agent applications to gather topology from the SNA network. APPN topology and accounting agent applications can be located on APPN network nodes (NNs) and end nodes (ENs). NNs provide network and local topology; ENs provide local topology.

When an operator issues a command to start monitoring topology, the topology manager sends a request to the APPN topology and accounting agent. The agent obtains the requested network or local topology data from Communications Manager/2 and sends the data to the manager, then continues to send status and configuration updates to the manager. The agent also activates and deactivates ports and links when it receives requests from the manager to do so.

Introduction to the APPN Accounting Agent

The APPN accounting agent collects APPC session and conversation accounting data from Communications Manager/2, stores the collected data in a buffer file, and forwards the data upon request to the accounting manager. The manager stores the data in an external log at the NetView host, enabling the customer to determine the usage of resources, such as a database that uses APPC sessions or conversations for communications.

How the Accounting Manager and Agent Work Together

The NetView APPN accounting manager application works with a corresponding agent application to retrieve accounting data. The agent application collects APPC accounting information in response to requests from the manager application. You can set scheduled times or intervals for the manager to retrieve accounting data from a specified agent node, or set thresholds related to the number of records stored in the buffer file to trigger the retrieval of the data.

Assume the NetView operator has issued commands to start collecting session and conversation data at the agent. The agent creates separate accounting management control objects (AMCOs) to manage the collection of session endpoint data, intermediate session data, and conversation data. The AMCOs contain all the instructions for managing the data collection, such as under what conditions to notify the manager that data is ready to be retrieved.
APPN Topology and Accounting Agent CMIP Services

Common Management Information Protocol (CMIP) services is a component of APPN topology and accounting agent that provides communication between the topology and accounting managers and this agent application. Communication is over APPC sessions and uses the OSI CMIP and MDS. The CMIP requests and responses are enveloped inside multiple-domain support message units (MDS-MUs). CMIP services is the management services application that encodes an accounting manager or topology manager request into an OSI CMIP message and packages the request in an MDS-MU. Incoming responses to the request are unwrapped and decoded by CMIP services and sent to the accounting manager or topology manager.

Figure 7 shows APPN topology and accounting agent CMIP services in relationship to other components that are critical to its operation.

APPN Topology and Accounting Agent Commands and Interfaces

The APPN topology and accounting agent has two commands: APPNMGPM and APPNMGMT. The APPNMGPM command is used to start the APPN Management Presentation Manager® (APPNMGPM) program. APPNMGPM provides a graphical user interface (GUI) for the APPNTAA. Performing tasks using this interface is described in "Chapter 4. Using the APPN Topology and Accounting Agent" on page 15.

The APPNMGMT command is used on the OS/2 command line with parameters and options to perform user APPN topology and accounting agent tasks. For more information about the APPNMGMT command, see "Appendix A. APPNMGMT Command Syntax" on page 35.
The agent application of the APPN topology and accounting agent is needed to provide APPN topology and accounting information from OS/2 nodes. It is available to download at http://www.tivoli.com/nv390_supported.
Chapter 2. Planning and Storage Requirements

This chapter contains information used in planning APPN topology and accounting agent application implementation.
- Workstation hardware and software requirements
- Storage requirements
- Installation worksheet

Workstation Requirements

The workstation where the APPN topology and accounting agent application is installed should meet or exceed the hardware and software requirements indicated in the following sections.

Software Requirements

Prerequisite software for an agent workstation includes:
- OS/2 Warp 4.0 or later
- Communications Server/4.0 or higher
- Personal Communicator 4.1 or higher

Hardware Requirements

The APPN topology and accounting agent operates on the same hardware required for OS/2 Warp 4.0 and Communications Server 4.0. To determine the amount of additional disk space the APPN topology and accounting agent requires, see "Storage Requirements".

Workstation Application Priority Considerations

The APPN accounting agent thread that receives accounting information from Communications Manager/2 operates at a fixed-high (foreground server) priority class, with a priority level of one. This allows the APPN accounting agent adequate computer time for processing accounting records if other applications on the agent workstation are running at the regular priority class. If user applications are running at a higher priority class and level, the APPN accounting agent might not receive adequate computer time to process accounting information from Communications Manager/2 and accounting records could be lost.

If the APPN accounting agent cannot process records from Communications Manager/2 quickly enough, Communications Manager/2 stops sending accounting information for that particular data type. If this happens, stop and restart all AMCOs for the accounting data type using the NetView ACCTSNAA STOP command, which is issued at the manager node. For more information about this command, refer to NetView online help.

Storage Requirements

When you are planning to install the APPN topology and accounting agent application on a workstation, consider the following disk storage requirements:
- APPNTAA program files
- Accounting agent generated files
- Trace buffer files
- Other dynamic files
- Multiple manager requests
Before installing the APPN topology and accounting agent application on a workstation, use the worksheet in Figure 8 on page 9 to record information needed during the installation. Refer to "APPN Topology and Accounting Agent Installation Worksheet" on page 7 for information on using the installation worksheet.

APPN Topology and Accounting Agent Program Storage Requirements

During installation the Software Installer for OS/2 provides space requirements to install the APPNTAA program application. This is approximately 1,600,000 bytes. If you are installing the APPN topology and accounting agent from the mainframe, the Software Installer for OS/2 requires an additional 800,000 bytes.

While the application is running, additional storage is required for dynamic files. The dynamic files include data and index files generated by the APPN accounting agent, trace buffer files, and the SWAPPER.DAT file generated by OS/2.

Accounting Agent Storage Requirements

Table 4 summarizes the estimated dynamic storage requirements for the APPNTAA APPN accounting agent.

<table>
<thead>
<tr>
<th>Element</th>
<th>Disk Storage Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data files (Note 1)</td>
<td>512 bytes multiplied by the MaxBufRecs value. (See Note 1 and &quot;Estimating Data File Storage&quot;)</td>
</tr>
<tr>
<td>Index files (Note 2)</td>
<td>4 Bytes for each record collected (See Note 2)</td>
</tr>
<tr>
<td>AMCO</td>
<td>1280 bytes for each AMCO</td>
</tr>
</tbody>
</table>

Notes:
1. Each data type requires a separate data file buffer. The agent’s MaxBufRecs parameter regulates the size of the data file. Multiple AMCOs of the same data type share the same data file. Data is deleted after all accounting managers acknowledge receipt of that data. If more than one manager is requesting data, this can increase the amount of time data remains in the buffer.
2. Each AMCO has a separate index file. Each record collected by an AMCO adds one 4-byte entry to the file. The accounting agent compresses the index files at the following times to remove entries for records that have been deleted:
   - When the accounting agent is started
   - Every 24-hour period in which the agent remains active

To calculate the storage required for the dynamic APPN accounting agent files, see "Estimating Data File Storage".

Estimating Data File Storage

The following factors influence the amount of dynamic storage space needed on a disk to operate the APPN topology and accounting agent application:

• Allow 512 bytes per record for each type of accounting data (session, intermediate session, or conversation) the agent node is collecting. For each data type, multiply this amount by the MaxBufRecs value the node is using (the default is 1000). For more information about setting the MaxBufRecs value, see "Setting Maximum Logical Buffer Size for AMCOs" on page 17.

• For each data type, multiply the available accounting buffer file space calculated above by the number of managers using the agent. The available space needs to be up to twice as large if two managers collect that data from the same agent, three times as large for three managers, and so on.
A formula for calculating storage as previously described is shown in "Formula for Estimating Dynamic Storage".

- Allow enough storage for dumping requested traces to a file. Each trace block uses 64 KB. If the agent runs many types of traces at the same time, or traces for long periods of time, this buffer size might need to be larger than the default of 1. The maximum number of blocks is 32. For more information about setting trace blocks, see "Setting Trace Blocks" on page 23.

**Formula for Estimating Dynamic Storage**

The following formula summarizes the basic considerations for calculating dynamic APPNTAA storage:

\[
\text{Available Disk Space} \geq (512) \times (\text{MaxBufRecs value}) \times (\text{number of AMCOs}) \text{ bytes}
\]

### Storage Estimate Examples

If your agent workstation records approximately 1,000 conversations per day, is reporting to two managers that are retrieving accounting data once every 24 hours, and you want a 3-block trace buffer, your estimate might be:

\[
512 \times 1000 \times 2 = 1,024,000 \text{ bytes (dynamic storage)}
\]

\[
3 \times 65536 = 196,608 \text{ bytes (storage for dumping trace buffer)}
\]

\[
= 1,600,000 \text{ bytes (program files)}
\]

\[
= 2,820,608 \text{ bytes}
\]

If your agent workstation records approximately 10,000 conversations per day, is reporting to three managers that are retrieving accounting data twice every 24 hours, and you want a 10-block trace buffer, your estimate might be:

\[
512 \times 10000 \times 3 \div 2 = 7,680,000 \text{ bytes (dynamic storage)}
\]

\[
10 \times 65536 = 655,360 \text{ bytes (storage for dumping trace buffer)}
\]

\[
= 1,600,000 \text{ bytes (program files)}
\]

\[
= 9,935,360 \text{ bytes}
\]

**Note:** When agents and managers are in place, adjustments to retrieval frequencies can help control the amount of agent workstation disk space required.

### APPN Topology and Accounting Agent Installation Worksheet

During APPN topology and accounting agent installation on the workstation, you must know the following:

#### NetView data set name

You must know the fully qualified data set name where your NetView programs are located. Installation instructions use the default NetView data set names shipped with the program code. If your facility has changed these default names, substitute your data set name.

#### Accounting work directory

Each APPN topology and accounting agent using a shared LAN server for accounting work directories must have a unique accounting work directory on that server. It must be a subdirectory of the directory that contains the BNTACCT.EXE APPN accounting agent program unless you have set an APPNACCT environment variable in the CONFIG.SYS file. The default installation (to the hard drive) assigns \IBMBNT\ACCTWRK.
Planning and Storage Requirements

Record the unique directory for a shared LAN server and use the information when you assign the APPNACCT environment variable during installation.

If the workstation has multiple fixed disks, consider placing the accounting work directory on a drive that does not contain the CONFIG.SYS and SWAPPER.DAT files.

**MaxBufRecs value**
The MaxBufRecs value that is specified when starting the APPN accounting agent on the workstation. For more information about the MaxBufRecs value, see "Setting Maximum Logical Buffer Size for AMCOs" on page 17.

**Number of AMCOs**
Each AMCO collects accounting data records of one type for one manager. For example, you have six AMCOs if the agent is collecting all three types of data for one manager, two types of data for a second manager, and one type of data for a third manager.

**Trace dump file maximum**
This value indicates how much space is being allocated for dumping trace records. For more information about trace blocks, see "Setting Trace Blocks" on page 23.
APPN Topology and Accounting Agent Installation Worksheet

NetView data set name

Accounting work directory (for shared LAN server)

1. Accounting buffer file space needed:

   Record length in bytes       A.  512
   MaxBufRecs value (default 1000)  B. 
   Number of AMCOs           C. 

   Total Accounting data buffer file size (Multiply A x B x C)  Bytes

2. Trace dump file maximum (1 to 32 x 64KB)  Bytes

3. Total disk space needed (Add lines 1 and 2)  Bytes

4. Program storage  1600000 Bytes

5. Total estimated disk storage needed (Add lines 3 and 4)  Bytes

Figure 8. APPN Topology and Accounting Agent Installation Worksheet
Chapter 3. Installing the APPN Topology and Accounting Agent

Before installing the APPN Topology and Accounting Agent, you must have the following required software and hardware.

Software Requirements

The following software is required:

1. IBM Operating System/2(*) (OS/2) Version 4.0 operating system or higher with REXX installed.

2. Communications Server 4.0 or higher, and Personal Communications 4.1 or higher, and one of the following:
   - APPC communications and any communication adapter that the Communications Server 4.0, or higher, supports for APPC.
   - 3270 emulator communications, for supporting NetView 3270 interfaces on the workstation, and any 3270 emulator adapter supported by Personal Communications 4.1 or higher.

Hardware Requirements

The minimum hardware requirements beyond those required for OS/2 4.0 or higher, and other currently running programs are the following:

1. A personal computer that operates OS/2 Version 4.0 or higher.

2. One MB of additional fixed disk space for the APPNTAA.


4. A two-button mouse or other pointing device.

The selection of computer model size, DASD, and memory depends on performance factors, such as the size of the supported network, the number of views, and the amount of network activity.

Installing the APPNTAA

To use the APPN topology and accounting agent, you must install it on workstations end nodes (ENs) or network nodes (NNs) in the network. Use the following instructions to install the APPN topology and accounting agent.

The APPN topology and accounting agent program is installed onto the workstation using the Software Installer for OS/2. Download and install the APPN topology and accounting agent program from our web site:

1. With your web browser, go to the following URL: http://www.tivoli.com/nv390_supported.

2. Download the APPN Topology and Accounting application into a temporary directory and save it as bntappne.exe.

The Software Installer for OS/2 can be used to update or delete the APPN topology and accounting agent program after it has been installed. See the workstation file BNTREAD1.ME (English) or BNTREAD3.ME (Japanese) for complete installation instructions, Software Installer hints and tips, and late-breaking news.
Installing the APPN Topology and Accounting Agent

The entire set of APPN topology and accounting agent code is available in self extracting .exe files from the Tivoli NetView for OS/390 Web page. The files can be copied and run to unpack all of the files that are needed to do an APPN topology and accounting agent install.

BNTAPPNE.EXE (English) or BNTAPPNJ.EXE (Japanese) can be copied to a directory (the suggested directory is \IBMBNT\IMAGES) and run to unpack all the files. When the files have been unpacked, installation can proceed.

Before you begin the APPN topology and accounting agent program installation, make sure you are in the directory where you unpacked either of these two files: BNTAPPNE.EXE or BNTAPPNJ.EXE.

Once in the directory, enter the following command:

BNTINSTS

The command you entered above brings up the Software Installer. Once it is running, perform the following steps:

1. From the File menu, select the Open catalog—>Drive.
2. Select the appropriate drive and directory for either the DNT001CB.ICF (English) or BNT081CB.ICF (Japanese) catalog file, then select Open.
3. Double-click on the package displayed or select the package and then select Action—>Install to begin the install.

Accounting Initialization File (BNTACCT.INI)

Included with the APPNTAA files is a sample accounting initialization file (BNTACCT.INI). The example shown is a duplicate of the BNTACCT.INI file installed with the APPNTAA files. It contains a description of accounting initialization file, rules for editing the file, AMCO name syntax, commented examples of AMCO entries, and error log information.

All lines in the sample BNTACCT.INI file supplied with the APPNTAA are comment lines (including those specifying AMCOs). The file does not function as supplied. To activate the BNTACCT.INI file, modify the sample AMCO entries with correct AMCO information for your facility and remove the double slashes to the left of these AMCOs.

You must stop and restart the APPN accounting agent to have your changes to the BNTACCT.INI file take effect.
command is issued at the manager system, specifying the network-qualified control point name of the accounting agent using this BNTACCT.INI file.

The accounting initialization file has the following format rules:

1. It is an ASCII file and can be created or edited by the OS/2 system editor, the OS/2 enhanced editor, or your favorite ASCII editor.
2. Comment lines are specified by using the "//" delimiter in the first two columns of the line.
3. Each non-comment line must contain one valid and unique LU 6.2 AMCO name.
4. An LU 6.2 AMCO name has the following syntax:

   MGR-NETID.MGR-SYSTEM-NAME.DATA-TYPE

   where,

   MGR-NETID is the 1-8 character network identifier of the NetView node at which the accounting manager is located.
   MGR-SYSTEM-NAME is the 1-8 character unqualified name of either the NetView VTAM control point name of the NetView system or NetView's LU, depending on the manager-system configuration.
   DATA-TYPE is one of the following: "CONVERSATION", "SESSION", "INTERMEDIATE-SESSION" in uppercase.

--------------------------- Examples --------------------------

The following AMCO collects conversation data for a manager whose NETID is APPNNET1, and SYSTEM name is NV0001.

APPNNET1.NV0001.CONVERSATION

The following AMCO collects conversation data for another manager, whose NETID is APPNNET1, and SYSTEM name is NV0002.

APPNNET1.NV0002.CONVERSATION

The following AMCO collects session data for a manager whose NETID is APPNNET1, and SYSTEM name is NV0001.

APPNNET1.NV0001.SESSION

The following AMCO collects intermediate session data for a manager whose NETID is APPNNET1, and SYSTEM name is NV0001. This AMCO is valid only if the accounting agent is installed on a network node.

APPNNET1.NV0001.INTERMEDIATE-SESSION

--------------------------- Logging Errors --------------------------

Any errors encountered by the APPN TAM accounting agent while starting AMCOs defined in the BNTACCT.INI file are written to the OS/2 system error log. After the accounting agent initialization has completed, check the system error log for any AMCO auto-start errors. If errors associated
Accounting Initialization File

// with the auto-started AMCOs are logged, change your BNTACCT.INI file to
// correct the errors. Then stop the accounting agent program and start it
// again.
//
// The most common errors are duplicate AMCO definitions, invalid name syntax,
// and intermediate-session AMCOs on an end-node agent.
Chapter 4. Using the APPN Topology and Accounting Agent

You can perform APPN topology and accounting agent tasks using a graphical user interface (GUI) or by issuing commands at the OS/2 command line. This chapter shows how to access the APPN Management Control window, which is used for the following procedures:

- Starting components ("Starting Components" on page 16)
- Stopping components ("Stopping Components" on page 18)
- Controlling trace functions ("Controlling Trace Functions" on page 18)
- Resetting accounting agent data files ("Resetting the Accounting Agent Data Files" on page 25)
- Determining agent status ("Determining Agent Status" on page 25)
- Clearing messages ("Clearing Messages" on page 26)

If you perform agent functions using OS/2 commands, see "Appendix A. APPNMGMT Command Syntax" on page 35. This appendix also contains detailed information about parameters and options you can choose from the windows. In this chapter, when parameter and option information is not provided, you are referred to detailed information in Appendix A.

Accessing the APPN Management Control Window

You can access the APPN Management Control window on an agent workstation in the following ways:

- If the program is already running, press Ctrl+Esc and select APPN Management Control on the Window List.
- At the OS/2 command line, enter APPNMGPM.
- At the OS/2 command line, enter APPNMGMT with noparameters.

A Copyright window appears briefly and the APPN Management Control window shown in Figure 9 is displayed.

![APPN Management Control Window](image)

Figure 9. APPN Management Control Window

The APPN Management Control window shows the status for the three APPNTAA components. To get help with the interface, select Help on the menu bar. To continue with other user tasks, select Options. The Options menu, shown in Figure 10 on page 16, is displayed.
### Accessing APPNMGPM

**Attention:** The Reset accounting option discards all accounting data files. See “Resetting the Accounting Agent Data Files” on page 25 before selecting this option.

### Starting Components

APPNTAA components are usually started at the agent workstation. The APPNTAA managers cannot start the agent or its components. However, by using the NetView RUNCMD command and specifying APPNMGMT and its parameters, you can start the APPNTAA. The agent workstation must have the Communications Manager/2 Remote Operations Services facility running to process the RUNCMD command. For more information about the APPNMGMT command, see Appendix A: APPNMGMT Command Syntax on page 35.

To start APPN topology and accounting agent components:

1. Select Options on the APPN Management Control window. The Options menu (Figure 10) is displayed.

   ![Figure 10. APPN Management Control Window Options Menu](image)

2. Click Start.... The Start APPN Management Programs window (Figure 11) is displayed.

   ![Figure 11. Start APPN Management Programs Window](image)

3. Select the components you want to start.

   **Note:** If you start the APPN accounting agent or the APPN topology agent without starting CMIP services, CMIP services starts automatically.
4. Choose whether each component is to run in the foreground or background. Background is the default. See "Foreground or Background Operation".

5. If you are starting the APPN Accounting Agent, set the MaxBufRecs value. See "Setting Maximum Logical Buffer Size for AMCOs".

6. Click Start.

As the requested components start, messages are displayed on the bottom of the APPN Management Control window.

**APPN Accounting Agent Startup**

Accounting management control objects (AMCOs) that are active when the APPN accounting agent component is stopped are created again when the APPN accounting agent is restarted, unless a reset accounting operation is performed. The APPN accounting agent also automatically starts all AMCOs listed in the BNTACCT.INI APPN accounting agent initialization file. A sample BNTACCT.INI file is shipped with APPNTAA. For more information about the BNTACCT.INI file, see "Accounting Initialization File (BNTACCT.INI)" on page 12. AMCOs that are created again or automatically started begin collecting accounting information immediately; however, no data can be sent to the manager until the ACCTSNA START command is issued at the manager system for each AMCO.

**Foreground or Background Operation**

When you start any component, you can operate in the foreground or in the background. When started in the foreground, a component is given a minimized window on the OS/2 desktop. The APPN accounting agent and APPN topology agent each have one window (BNTACCT.EXE and BNTTA.EXE). The CMIP services component has three separate windows, one each for the BNTINFRA.EXE, BNTRGSN.EXE, and BNTDISCR.EXE programs. No information is displayed in the program windows. When the three components are running in the foreground, you can see windows for the five .EXE programs on the OS/2 Window List.

**Note:** Closing individual APPNTAA windows causes components to stop or become unusable.

When started as a background session (the default), no window or icon is displayed for the component. Only the APPN Management Control window is listed on the OS/2 Window List.

**Setting Maximum Logical Buffer Size for AMCOs**

The value you type in the MaxBufRecs field specifies the maximum number of completed accounting records each accounting management control object (AMCO) can hold in its file buffer. The number of records you specify is used as the maximum logical buffer size for each AMCO.

You can specify any number in the range of 100–65 535 records. The default is 1000 records.

**Note:** Each accounting record is 512 bytes. Do not specify a MaxBufRecs value that is too large for your installation. For example, 10 000 records requires a file of approximately 5 megabytes.

Before selecting a number of records, consider the following:
Setting MaxBufRecs

- Amount of network traffic the agent node is expected to encounter. For example, a heavily-used print server can generate significant accounting data.
- Frequency of data transmissions to managers. For example, if three managers request the same data from one agent, and their collection interval is 1, 2, and 24 hours respectively, at least 24 hours must elapse before the data can be deleted from the buffer.

For more information about estimating the disk space required for operating the APPNTAA, see "Estimating Data File Storage" on page 6.

Stopping Components

On some occasions, you must stop an APPN topology and accounting agent agent component. For example, before you can reset the APPN accounting agent data files, you must stop it. To stop components:

1. Select Options on the APPN Management Control window. The Options menu (Figure 10 on page 16) is displayed.
2. Click Stop. The Stop APPN Management Programs window (Figure 12) is displayed.
3. Select the components you want to stop.
4. Click Stop.

As the requested components stop, messages appear on the bottom of the APPN Management Control window.

Stopping CMIP services: Stopping CMIP services causes the APPN topology agent to stop. The APPN accounting agent continues collecting data, but is unable to respond to manager requests. Also, if both the APPN accounting agent and APPN topology agent are stopped, CMIP services is not needed and stops.

Traces: Traces that are running when components are stopped resume when the components are restarted. This can be useful for problem determination related to starting or stopping components.

Controlling Trace Functions

Trace functions are usually requested by network operators or IBM Service to obtain information to be used for problem determination.
When you select **Trace** on the APPN Management Control Options menu, the **Trace** menu (Figure 13) is displayed.

From the trace menu, you can:
- Start tracing ("Starting Trace Functions")
- Stop tracing ("Stopping Trace Functions" on page 21)
- Set trace blocks ("Setting Trace Blocks" on page 23)
- Dump trace records to a file ("Dumping Trace Buffers" on page 23)
- Determine trace status ("Determining Trace Block and Trace Event Status" on page 24)
- Purge trace records ("Purging Trace Buffers" on page 25)

### Starting Trace Functions

When you select **Trace→Start**, the start menu shown in **Figure 14** is displayed.

You can start tracing for the following choices:
- Accounting
- Topology
- CMIP services
- All (See Note)
### Starting Traces

**Note:** If you select **All** you are requesting to trace all events on all components. Unrestricted tracing of components can cause reduced workstation performance, and rapid filling of trace buffers. See "Setting Trace Blocks" on page 23.

When you select **Accounting** the Start Accounting Agent Traces window (Figure 15) is displayed.

<table>
<thead>
<tr>
<th>Start Accounting Agent Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Select All]</td>
</tr>
<tr>
<td>[Deselect All]</td>
</tr>
<tr>
<td>AMCO</td>
</tr>
<tr>
<td>AMCODUMP</td>
</tr>
<tr>
<td>FILE</td>
</tr>
<tr>
<td>FILEDUMP</td>
</tr>
<tr>
<td>CMPSRV</td>
</tr>
<tr>
<td>SIGNALS</td>
</tr>
<tr>
<td>SNACP</td>
</tr>
</tbody>
</table>

**Figure 15. Start Accounting Agent Traces Window**

When you select **Start → Topology** the Start Topology Agent Traces window (Figure 16) is displayed.

<table>
<thead>
<tr>
<th>Start Topology Agent Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Select All]</td>
</tr>
<tr>
<td>[Deselect All]</td>
</tr>
<tr>
<td>CMPSRV</td>
</tr>
<tr>
<td>SNACP</td>
</tr>
</tbody>
</table>

**Figure 16. Start Topology Agent Traces Window**

When you select **Start → CMIP Services** the Start CMIP Services Traces window (Figure 17) is displayed.

<table>
<thead>
<tr>
<th>Start CMIP Services Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Select All]</td>
</tr>
<tr>
<td>[Deselect All]</td>
</tr>
<tr>
<td>ACF</td>
</tr>
<tr>
<td>ACSE</td>
</tr>
<tr>
<td>BER</td>
</tr>
<tr>
<td>CMISE</td>
</tr>
<tr>
<td>CMOS</td>
</tr>
<tr>
<td>DISPATCH</td>
</tr>
<tr>
<td>DISCR</td>
</tr>
<tr>
<td>MIBCTL</td>
</tr>
<tr>
<td>PRES</td>
</tr>
<tr>
<td>REPL</td>
</tr>
<tr>
<td>MESSAGEs</td>
</tr>
<tr>
<td>SESSION</td>
</tr>
<tr>
<td>UTILS</td>
</tr>
</tbody>
</table>

**Figure 17. Start CMIP Services Traces Window**
Starting Traces

On any of the three Start Traces windows, select the check boxes for each type of event you want to trace. If you want to trace all events, click **Select All**. To remove or undo all selections, click **Deselect All**. The checked boxes are cleared.

Traces that are currently running appear lighter and are not selectable. When your selections are correct, click **Start** to begin tracing those events. If you do not want to start any traces, click **Cancel**.

For detailed trace event option information, see “Syntax” on page 42.

Stopping Trace Functions

When you select **Stop** from the Options menu, the stop menu shown in **Figure 18** is displayed.

![Figure 18. Trace Stop Menu](image)

You can stop tracing for the following functions:

- Accounting
- Topology
- CMIP services
- All (See Note)

**Note:** If you click All you are requesting to stop tracing all events on all components.

When you click **Stop + Accounting** the Stop Accounting Agent Traces window (**Figure 19 on page 22**) is displayed.
Stopping Traces

When you select **Stop → Topology** the Stop Topology Agent Traces window (Figure 20) is displayed.

When you select **Stop → CMIP Services** the Stop CMIP Services Traces window (Figure 21) is displayed.

On any of the three Stop Traces windows, select the check boxes for trace events you want to stop. If you want to stop all traces, click **Select All**. To remove or undo all selections, click **Deselect All**. The check boxes are cleared.

Traces that are not running appear lighter and are not selectable. When your selections are correct, click **Stop** to stop tracing those events. If you do not want to stop any traces, click **Cancel**.
Setting Trace Blocks

When you select Blocks the Set Trace Blocks window (Figure 22) is displayed.

Type a number from 1–32 in the Number of trace blocks field. Each block allocates 65,536 bytes to the trace buffer. If you are going to perform multiple event tracing, adjust this value before starting the traces (trace blocks cannot be set while traces are running). The default is one block. Click OK to set your value.

How Many Blocks? If you do not know how many blocks to allocate for tracing, start the trace with the default (or a small number of blocks). Use the Status option described in Determining Trace Block and Trace Event Status on page 24 to determine the buffer status so you can make adjustments.

For detailed information about trace blocks, see BLOCKS in Operand Descriptions on page 41.

Dumping Trace Buffers

To use trace records for problem determination, dump the records being gathered in the trace buffers to a disk.

When to Dump: If the trace buffer is almost full or has been overwritten, you might want to dump the buffer. Use the Status option described in Determining Trace Block and Trace Event Status on page 24 to determine the buffer status.

All tracing activity must be stopped before you can dump the trace buffer.

When you select Trace + Dump the Trace Dump Buffer window (Figure 23 on page 24) is displayed.
Dumping Trace Buffers

Type the name of the file to which you want to dump the trace records.

**Default:** If you do not specify a drive or path, the drive and path specified for the APPNMGMT environment variable is used. The default installation sets this to C:\IBMBNT.

If you have used the file name before, select the **Replace existing file** check box. You cannot append trace records to an existing dump file. If you do not want to replace the existing file, type a different file name in the **Dump filename** field. Click **OK** to start the dump process.

**Determining Trace Block and Trace Event Status**

To determine tracing status and which event categories are being traced on an agent workstation:

Select **Trace → Status** on the APPN Management Control window **Options** menu. The Trace Status window (Figure 24) is displayed.

The current status of your trace blocks is indicated at the top of the window. For example, if you took the system default of one trace block for running traces, you might see:

**Trace used 1 of 1 blocks and wrapped 3 times.**
Trace Status

This indicates that you ran traces with one block allocated and that trace information was overwritten three times. To reduce the chance of trace data being overwritten, do one or more of the following:

- Increase the number of blocks for the trace.
- Dump your trace buffer more frequently.
- Reduce the number of events being traced.

The second statement tells whether tracing is active. If tracing is active, the scrollable list box lists the events that are being traced for each of the APPNTAA components.

This window is for displaying information only. When you are finished viewing the information, click OK.

Purging Trace Buffers

If you have collected unnecessary trace records, or want to empty old trace records from the buffer, you can purge the buffers.

When you select Trace → Status a pop-up window appears. Click Yes to purge the trace buffers. If you do not want to purge the trace buffers, (for example, if you intended to select Dump) click No.

Resetting the Accounting Agent Data Files

Reset the APPN accounting agent data files any time you want to discard all accounting data (for example, after running a test sample collection), or if you receive an error message indicating that a cleanup failed (for example, BNT0206E or BNT0210E).

To reset the APPN accounting agent data files:

Note: If the APPN accounting agent is already inactive, go to step 4.

1. Click Stop on the APPN Management Control window Options menu.
2. Select Accounting Agent check box on the Stop APPN Management Programs window.
3. Click Stop. You are returned to the APPN Management Control window. Messages indicate that the APPN accounting agent is stopping.
4. Select Reset accounting on the APPN Management Control window Options menu.
5. On the Reset Accounting pop-up window, click Yes to begin the reset process, or click No (the default) to keep all data files.
6. Restart the APPN accounting agent. (See Starting Components on page 16.)

Note: To avoid data loss, try to start an inactive APPN accounting agent without resetting accounting data files. This is not always possible, especially after a cleanup error, which occurs when the data is unusable.

Determining Agent Status

If a manager program is not receiving requested data from your agent workstation, verify the status of your agent components.
Determining Agent Status

To determine the status of agent components, access the APPN Management Control window as shown in "Accessing the APPN Management Control Window" on page 15.

On the APPN Management Control window, component status can be one of the following:

**active** The component is started and ready for use.

**inactive** The component is not started, or successfully stopped. Start the component for it to become usable.

**unusable** The component is not usable because it did not complete initialization. In addition, CMIP services is unusable when at least one of its three programs is not active.

**Possible Causes:** An unusable status can result from an incomplete initialization. One cause of incomplete initialization of CMIP services is stopping CMIP services before it has become active. Closing one of the three CMIP services program windows, which are accessible during foreground operation, also causes an unusable status.

To make an unusable component active, stop and then restart the component. (See "Stopping Components" on page 18 and "Starting Components" on page 16.) To make an unusable component inactive, stop the component.

For information about component statuses, see "APPNMGMT DISPLAY" on page 45.

Clearing Messages

Messages are displayed on the bottom of the APPN Management Control window (Figure 25) when you start or stop components, enter a value that is not valid, and so on.

```
Figure 25. APPN Management Control Window with Messages
```

New messages are added to the bottom of the display area. To view messages that have scrolled upward, use the scroll bar at the right of the message area.
Clearing Messages

To remove all messages from the display area, select **Options • Clear messages** from the APPN Management Control window. The message area is cleared.
Chapter 5. Problem Determination

This chapter contains user information to aid in problem determination for the APPN agent components and programs.

The APPN topology and accounting agent uses diagnostic tools provided by Communications Manager/2 and OS/2 to help you identify and resolve problems, including Communications Manager/2 First Failure Support.

For more information about using the diagnostic tools, including the FFST/2™ message log formatter and the system error log formatter, and information about SNA sense data, refer to the IBM Communications Manager/2 Problem Determination Guide.

Problem Determination Procedures

The problem determination procedures describe how to diagnose problems encountered while attempting to use the APPNMGMT and APPNMGPM programs. These problems include the following:

- Configuration errors
- Network errors
- Program errors
- Communication errors

The procedures in this chapter lead you through the diagnostic process in a logical manner and attempt to help you identify and solve problems.

All problem determination for the APPNMGMT and APPNMGPM programs begins with Figure 26 on page 30.
OS/2 System Error Log

**FFST/2 Diagnostics**

001

Messages can be either displayed in the message area at the bottom of a window or written to an error log.

Was an error message displayed in a window?
Yes  No

002

Continue with Step 006.

003

Perform the action indicated in the help for the error message.

Did you correct the problem?
Yes  No

004

Continue with Step 006.

005

You have corrected the problem. To minimize your problem determination efforts in the future, keep records of the solutions for all APPNMGMT and APPNMGP problems.

006

Record the time that the problem occurred so that you can refer to possible system error log entries. Any errors logged around the failure time can be relevant. To save time, check for and read any associated messages before attempting to solve the problem.

Are there any entries in the error logs corresponding to the failure time?
Yes  No

007

Contact Tivoli Customer Support.

008

Record the error codes found in the logs and see Appendix C, “System Error Log Entries” for information on error recovery.

For information about accessing and extracting information from the system error log, see “OS/2 System Error Log”.

---

**OS/2 System Error Log**

The CMIP services, APPN accounting agent, and APPN topology agent components log errors in the OS/2 system error log. The format of error log entries for these components is different from that of Communications Manager/2 entries.

This section discusses the following:

- Accessing error log records
- Extracting problem determination information from the error log for agent components
- Selecting APPNTAA agent error log records
Printing error log records

For additional information about the OS/2 system error log, refer to OS/2 Command Reference.

Accessing Error Log Records

To access the system error log, select System Error Log from the FFST/2 folder or type SYSLOG at an OS/2 command line. The OS/2 Error Log Formatter window is displayed.

Figure 27 shows the OS/2 Error Log Formatter window containing a sample APPNTAA error log record.

The system error log shows the most recent record first. Click Prev Rec to view older records and click Next Rec to view newer records. You can also use function keys F7 to select older records and F8 to select newer records.

If you do not see expected records, your error log might be overwritten. Change the system error log buffer size. See README file for instructions.

Extracting Problem Determination Information from the Error Log

The reference keys in Figure 27 identify fields containing valuable information for performing problem determination.

1 Date and time of the error. This information is useful when comparing information from other FFST/2 services and other diagnostic tools to get a complete picture of system events at a particular time.

2 Error originator. This is the code which represents the APPNTAA function that reported the error. Table 5 on page 32 shows valid APPNTAA error originators.

Chapter 5. Problem Determination 31
OS/2 System Error Log

Table 5. Error Originators and Associated Functions

<table>
<thead>
<tr>
<th>Originator</th>
<th>Associated Function</th>
<th>Program (.EXE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPN-OSI CMIP services component</td>
<td>BNTINFRA, BNTRGSN, BNTDISCR</td>
<td></td>
</tr>
<tr>
<td>APPN-AA APPN Accounting agent component</td>
<td>BNTACCT</td>
<td></td>
</tr>
<tr>
<td>APPN-TA APPN Topology agent component</td>
<td>BNTTA</td>
<td></td>
</tr>
</tbody>
</table>

3  Name of the process that was running when the error occurred.

4  Error code. The first eight digits to the left are the major error code, and the remaining eight digits are the minor error code. Table 6 shows where you can find information about the minor error codes for each major error code.

Table 6. Minor Error Code Information for Major Error Codes

<table>
<thead>
<tr>
<th>Major Code (Source)</th>
<th>Minor Code Log Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000022 (OS/2)</td>
<td>&quot;Major Code=22&quot; on page 63</td>
</tr>
<tr>
<td>00000076 (CMIP services)</td>
<td>&quot;Major Code=76&quot; on page 63</td>
</tr>
<tr>
<td>00000077 (APPN Accounting Agent)</td>
<td>&quot;Major Code=77&quot; on page 68</td>
</tr>
<tr>
<td>00000078 (APPN Topology Agent)</td>
<td>&quot;Major Code=78&quot; on page 75</td>
</tr>
<tr>
<td>00000079 (Utilities)</td>
<td>&quot;Major Code=79&quot; on page 77</td>
</tr>
</tbody>
</table>

5  The dump file name, and whether the error log record is (Y) or not (N) an SNA alert. If the error log record is not an alert, NO DUMP REQUESTED is displayed in place of the file name.

6  Additional problem data provided by the application.

The Additional Data section can consist of up to 16 columns of paired hexadecimal digits (0–9 and A–F). Each pair of hexadecimal digits represents a byte. The first pair of hexadecimal digits on the first row is at offset 0. The first pair of hexadecimal digits on the second row is at offset 16. The number of bytes associated with a field is referred to as the length.

For example, if an error log description states that the error code is located in the Additional Data section at offset 2 with length 2, count pairs of hexadecimal digits until you reach offset 2 and note that the two pairs (length) of hexadecimal digits beginning at offset 2 are the error code.

Refer to the message associated with the error entry for information about deciphering this data for a specific error.

Selecting Error Log Records

The error log can contain many records. You can choose to limit the records you view to those records that occurred at a specified date and time or that have a particular qualifier.

Use the following procedure to view selected records in the error log:

1. From the OS/2 Error Log Formatter menu bar, select **Options → Display Options**.

   The Log File Search Criteria window appears (see Figure 28 on page 33).
2. Use the Log File Search Criteria window to enter search criteria to select the error records you want to view. Enter a starting date and time or a unique qualifier to limit the number of records shown.

3. Click Display to display the most recent error log record that meets the search criteria you specified.

The Error Log Formatter window is displayed again with records meeting the search criteria you specified.

**Printing Error Log Records**

You might want a printout of the error log for your records.

Use the following procedure to print selected error records.

1. Use the Log File Search Criteria window to display the records you want to print.

2. From the OS/2 Error Log Formatter menu bar, select File and select Print. The Print window appears.

3. Select the printer and click Print.

**Viewing the Message Log**

If you want to view the OS/2 message log (for example, if you want to see the extended help for an information message), type the following command at an OS/2 prompt:

```
MSGLOGF C:\OS2\SYSTEM\OS2MLOG.DAT
```

**Note:** You can also select the Message Log from the FFST/2 folder on the Desktop.

On the Message Log Formatter window, double-click the informational message for which you want extended help. The complete help text is displayed in the Full Details for Entry window.
Appendix A. APPNMGMT Command Syntax

The APPNMGMT command enables you to control APPN management functions from the OS/2 command line. APPNMGMT accepts command line arguments and responds by issuing messages to the command (OS/2) window.

The following shows the general syntax for the APPNMGMT command:

```
APPNMGMT
  -START
  -STOP
  -TRACE
  -DISPLAY
  -RESET ACCOUNTING
```

When the APPNMGMT command is issued with no parameters, the APPN Management Presentation Manager (APPNMGPM) program is started. APPNMGPM starts the APPN Management Control window, which provides a menu-driven interface for the APPNMGMT command functions.

Because the APPNMGMT command has several parameters, the command descriptions are based on the command name (APPNMGMT) and first parameter. Each command description includes the purpose of the command, a syntax diagram, a list of parameters, a discussion of the options, remarks, and examples.

For a list of shortened forms of the APPNMGMT command parameters and options, see "Abbreviations for APPNMGMT Command Parameters and Options" on page 47.
APPNMGMT START

Purpose of Command

Starts one or more components or starts all components. You can specify individual parameters for each component.

See “Starting Components” on page 16 for more information.

Comments

APPNMGMT START

ACCOUNTING

MaxBufRecs:

Notes:

1 Although only a comma is shown as a repetition separator, one or more spaces can be used instead of the comma; either is valid.

Operand Descriptions

ACCOUNTING

Specifies to start the APPN accounting agent component. When the APPN
accounting agent is started, the CMIP services component starts automatically if it is not already started.

**TOPOLOGY**
Specifies to start the APPN topology agent component. When the APPN topology agent is started, the CMIP services component starts automatically if it is not already started.

**CMIPSRV**
Specifies to start the CMIP services component. If not already started, the CMIP services component starts automatically when the APPN accounting agent or APPN topology agent is started.

**ALL**
Specifies to start all components.

**Syntax**

The following parts of the command are the options. The options are separated from parameters by a required left parenthesis, with either one or more spaces or a comma between each option. The last option for a parameter must be followed by a right parenthesis. In the examples for this command, FOREGROUND and MAXBUFRECS are the options.

**FOREGROUND**
Causes the APPN accounting agent, APPN topology agent, and CMIP services components to be started in foreground sessions. When started in the foreground, a component is given a visible window on the OS/2 desktop. The APPN accounting agent and APPN topology agent each have one window. The CMIP services component has three separate windows, one each for the BNTINFRA.EXE, BNTRGSN.EXE, and BNTDISCR.EXE programs.

When started as a background session (the default), a component has no appearance on the desktop. No entry appears on the Window List, nor is an icon displayed for the component.

See ["Foreground or Background Operation" on page 17](#) for more information.

**MAXBUFRECS=n**
Specifies the maximum number of completed accounting records each accounting management control object (AMCO) can hold in its file buffer, where \( n \) is the number of records for each AMCO’s logical buffer. The number of records specified for this option is used as the maximum logical buffer size for all AMCOs.

You can specify any number in the range of \( 100–65535 \) records. The default is \( 1000 \) records.

**How Large?** Each accounting record is 512 bytes. Make sure you do not specify a MaxBufRecs value that is too large for your installation. For example, \( 10000 \) records requires a file of approximately 5 MB.

See and ["Setting Maximum Logical Buffer Size for AMCOs" on page 17](#) for more information.

**Results**
The MAXBUFRECS option is only valid when starting the APPN accounting agent component with the ACCOUNTING or ALL parameter.
When started, the APPN accounting agent component creates AMCOs again that were active when the APPN accounting agent was last stopped unless a reset accounting operation was performed. The APPN accounting agent also automatically starts all AMCOs listed in the BNTACCT.INI APPN accounting agent initialization file. AMCOs that are created again or automatically started begin collecting accounting information immediately.

Examples

The following are examples of APPNMGMT START command usage:

- To start all components in the background using the default value for the MAXBUFRECS option, enter:
  
  APPNMGMT START ALL

- To start all components as foreground sessions and set the maximum logical buffer size of each AMCO to 2000, enter:
  
  APPNMGMT START ALL(FOREGROUND MAXBUFRECS=2000)

- To start the CMIP services component as a foreground session and the APPN topology agent component in the background, enter:
  
  APPNMGMT START CMIPSRV(FOREGROUND) TOPOLOGY

- To start the APPN topology agent component in the background, the APPN accounting agent component in the background with a maximum logical buffer size of 2000, and the CMIP services component as a foreground session, enter:
  
  APPNMGMT START TOPOLOGY() ACCOUNTING(MAXBUFRECS=2000) CMIPSRV(FOREGROUND)
APPNMGMT STOP

Purpose of Command

Stops one or more components or stops all components.

Comments

APPNMGMT STOP

Notes:

1. Although only a comma is shown as a repetition separator, one or more spaces can be used instead of the comma; either is valid.

Operand Descriptions

ACCOUNTING

Specifies to stop the APPN accounting agent component.

TOPOLOGY

Specifies to stop the APPN topology agent component.

CMIPSRV

Specifies to stop the CMIP services component. If there are no remaining active agents, the CMIP services component stops automatically when you stop the APPN accounting agent or APPN topology agent. Therefore, you normally do not need to explicitly stop the CMIP services component.

ALL

Specifies to stop all components.

Results

When started, the APPN agent components run until you explicitly stop them.

Stopping CMIP services causes the APPN topology agent to stop. The APPN accounting agent continues collecting data, but is unable to respond to manager requests. Also, if both the APPN accounting agent and APPN topology agent are stopped, CMIP services is not needed and stops.

Examples

The following are examples of APPNMGMT STOP command usage:

- To stop only the APPN topology agent component, enter:
  APPNMGMT STOP TOPOLOGY
- To stop all components, enter:
  APPNMGMT STOP ALL
APPNMGMT TRACE

Purpose of Command

Controls tracing by performing the following functions:
- Start tracing for one or more components or start tracing for all components.
- Stop tracing for one or more components or stop tracing for all components.
- Dump records in the trace buffer to a file.
- Purge the trace buffer from memory.

You can specify individual trace categories for each component.

When APPNMGMT TRACE is issued without a START, STOP, DUMP, or PURGE parameter, APPNMGMT TRACE START is assumed.

See "Controlling Trace Functions" on page 18 for more information.

APPNMGMT TRACE

Accounting Agent:

Topology Agent:
CMIP Services:

Notes:
1. Although only a comma is shown as a repetition separator, one or more spaces can be used instead of the comma; either is valid.

Operand Descriptions

START
Specifies to start tracing for one or more components. If the STOP, DUMP, or PURGE parameter is not used on the APPNMGMT TRACE command, START is assumed.

BLOCKS=n
Specifies the number of trace blocks to use for the trace buffer, where n is the number of blocks to allocate. Each trace block occupies 65536 bytes of main memory.

You can specify any number in the range of 1–32. The default is 1.

Note: When the trace buffer fills up, older trace records are overwritten as new records are accumulated. If trace records are being overwritten, increase the number of blocks allocated to the trace buffer.

See "Setting Trace Blocks" on page 23 for more information.

ACCOUNTING
Specifies to start or stop tracing for the APPN accounting agent component, depending on whether the START or STOP parameter is used with APPNMGMT TRACE.
TOPOLOGY
Specifies to start or stop tracing for the APPN topology agent component, depending on whether the START or STOP parameter is used with APPNMGMT TRACE.

CMIPSRV
Specifies to start or stop tracing for the CMIP services component, depending on whether the START or STOP parameter is used with APPNMGMT TRACE.

STOP
Specifies to stop tracing for one or more components.

ALL
Specifies to stop tracing for all components at once, when the STOP parameter is used with APPNMGMT TRACE. If no components are specified, ALL is assumed.

DUMP
Specifies to format trace records collected in the trace buffer and to write them to a file. The DUMP parameter is valid only after all tracing is stopped.

Note: The trace buffer is purged after trace records are written to the file.

FILENAME
Specifies the name of the file to receive the trace records, where filespec indicates the drive, path, and file name. Any valid OS/2 file name can be specified. The drive and path in filespec are optional. If you are using APPNMGPM, the drive and path default to the SET APPNMGMT environment variable set during installation. The default installation sets this variable to C:\IBMBNT. If you are using an OS/2 command, the drive and path default to the current drive and current working directory on the drive.

REPLACE
Specifies to replace the trace dump file indicated by filespec, if it exists. If the file does not exist, the trace facility creates it.

PURGE
Specifies to delete all trace records in the trace buffer from memory.

Syntax
The following parts of the command are options that indicate the event categories to be traced. The options are grouped by component.

Options are separated from parameters by a required left parenthesis with either one or more spaces or a comma between each option. The last option for a parameter must be followed by a right parenthesis.

APPN Accounting Agent Event Options:

ALL
Starts or stops tracing for all APPN accounting agent event categories.

AMCO
Starts or stops tracing for execution of the accounting management control object (AMCO) finite state machine.

AMCODUMP
Starts or stops a snapshot of the AMCO control block for each AMCO trace entry.

FILE
Starts or stops tracing for execution of the APPN accounting agent’s file management services (FMS) element.
FILEDUMP
Starts or stops a snapshot of the FMS control blocks for each FILE trace entry.

CMIPSRV
Starts or stops tracing for all calls from the APPN accounting agent to CMIP services, along with all data sent and received.

SIGNALS
Starts or stops tracing for all APPN accounting agent inter-component command signals and response signals.

SNACP
Starts or stops tracing for all calls from the APPN accounting agent to the APPN control point (Communications Manager/2), along with all data sent and received.

**APPN Topology Agent Event Options:**

ALL Starts or stops tracing for all APPN topology agent event categories.

CMIPSRV Starts or stops tracing for all calls from the APPN topology agent to CMIP services, along with all data sent and received.

SNACP Starts or stops tracing for all calls from the APPN topology agent to the APPN control point (Communications Manager/2), along with all data sent and received.

**CMIP Services Event Options:**

ALL Starts or stops tracing for all CMIP services event categories.

ACF Starts or stops tracing for interactions in the association control function (ACF).

ACSE Starts or stops tracing for interactions in the association control service element (ACSE).

BER Starts or stops tracing for interactions in the basic encoding rules (BER) element.

CMISE Starts or stops tracing for interactions in the common management information service element (CMISE).

CMOS Starts or stops tracing for interactions in the CMIP-over-SNA (CMOS) element.

DISCR Starts or stops tracing for interactions in the discriminator element.

DISPATCH Starts or stops tracing for interactions in the CMIP services dispatcher.

MESSAGES Starts or stops tracing for messages issued by CMIP services. These messages are also logged to the OS/2 system error log.

MIBCTL Starts or stops tracing for interactions in the management information base control (MIBCTL) element.
PRES  Starts or stops tracing for interactions in the presentation layer.

REPL  Starts or stops tracing for interactions in the replication element.

SESSION  Starts or stops tracing for interactions in the session layer.

UTILS  Starts or stops tracing for interactions in the utility functions.

Examples

The following are examples of APPNMGMT TRACE command usage:

- To start tracing for all APPN accounting agent event categories and the SNACP APPN topology agent event category using 4 blocks for the trace buffer, enter:
  ```
  APPNMGMT TRACE START BLOCKS=4 ACCOUNTING(ALL) TOPOLOGY(SNACP)
  ```

- To stop all tracing, enter the following:
  ```
  APPNMGMT TRACE STOP
  ```

- To stop tracing for all APPN accounting agent event categories and the SNACP APPN topology agent event category, enter the following:
  ```
  APPNMGMT TRACE STOP ACCOUNTING(ALL) TOPOLOGY(SNACP)
  ```

- To stop tracing for all APPN accounting agent event categories and the ACF and CMOS CMIP services event categories, enter the following:
  ```
  APPNMGMT TRACE STOP ACCOUNTING(ALL) CMIPSrv(ACF CMOS)
  ```

- To dump trace records to a file named MYFILE.TRC in the root directory of the C drive, enter the following:
  ```
  APPNMGMT TRACE DUMP FILENAME=C:\MYFILE.TRC
  ```

- To dump trace records to a file named MYFILE.TRC on the C drive and replace an existing file with the same name, enter the following:
  ```
  APPNMGMT TRACE DUMP FILENAME=C:\MYFILE.TRC REPLACE
  ```

- To dump trace records to a file named MYFILE.TRC on the current drive and directory, enter the following:
  ```
  APPNMGMT TRACE DUMP FILENAME=MYFILE.TRC
  ```

- To delete all trace records in the trace buffer, enter the following:
  ```
  APPNMGMT TRACE PURGE
  ```
APPNMGMT DISPLAY

Purpose of Command
Displays the status of the APPN accounting agent, APPN topology agent, and CMIP services components.

Comments

APPNMGMT DISPLAY

Operand Descriptions

STATUS
Specifies to display the status of components.

Results
You can use this command to query the status of components running in a background session.

The following status values are displayed:
active The component is started and ready for use.
inactive The component has not been started. Start the component for it to become usable.
unusable The component is not usable because it did not complete initialization. In addition, CMIP services is unusable when at least one of its three programs is not active.

Note: An unusable status can result from an incomplete initialization. One cause of incomplete initialization of CMIP services is stopping CMIP services before it is active. Closing one of the three CMIP services program windows, which are accessible during foreground operation, also causes an unusable status.

To make an unusable component active, stop and then restart the component.

Examples
The following are examples of APPNMGMT DISPLAY command usage:
• To display the status of components, enter one of the following commands. Both commands display the same results:
APPNMGMT DISPLAY

APPNMGMT DISPLAY STATUS

Typical screen output:
Status of topology agent component : inactive
Status of accounting agent component : active
Status of CMIP services component : active
APPNMGMT RESET ACCOUNTING

Purpose of Command

Deletes all accounting records and AMCO files stored in the accounting work directory. Files with the extensions .AMC, .BAK, .NDX, and .DAT are deleted. This command does not affect the BNTACCT.INI APPN accounting agent initialization file or the trace files.

Note: If you delete files in the accounting work directory either manually or with another procedure, do not delete the BNTACCT.INI APPN accounting agent initialization file. For more information about the BNTACCT.INI file, see "Accounting Initialization File (BNTACCT.INI)" on page 13.

See "Resetting the Accounting Agent Data Files" on page 25 for more information.

Comments

APPNMGMT RESET ACCOUNTING

Operand Descriptions

ACCOUNTING

Specifies to reset the APPN accounting agent data files.

Results

Use this command only if you want to discard the accounting records collected by the previous run of the APPN accounting agent. The APPN accounting agent component must be inactive to use this command.

Examples

The following is an example of using the APPNMGMT RESET ACCOUNTING command:

To delete all accounting records and AMCO files stored in the accounting work directory, enter:

APPNMGMT RESET ACCOUNTING

Abbreviations for APPNMGMT Command Parameters and Options

Table 7 shows the minimum abbreviations and the synonyms (in parentheses) you can use for the APPNMGMT command parameters and options.

Table 7. APPNMGMT Abbreviations and Synonyms

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Minimum Abbreviation (Synonym)</th>
</tr>
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<tbody>
<tr>
<td>ACCOUNTING</td>
<td>ACC (ACCT)</td>
</tr>
<tr>
<td>ACF</td>
<td>ACF</td>
</tr>
<tr>
<td>ACSE</td>
<td>ACS</td>
</tr>
<tr>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>AMCO</td>
<td>AMCO</td>
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</table>
### APPNMGMT Command Abbreviations

Table 7. APPNMGMT Abbreviations and Synonyms (continued)

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Minimum Abbreviation (Synonym)</th>
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<td>AMCODUMP</td>
<td>AMCOD</td>
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<tr>
<td>BER</td>
<td>BER</td>
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<td>BLOCKS</td>
<td>BLO (BLKS)</td>
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<td>CMIPSRV</td>
<td>CMIP</td>
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<td>CMISE</td>
<td>CMISE</td>
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<td>CMOS</td>
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<td>STATUS</td>
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</tr>
<tr>
<td>STOP</td>
<td>STO</td>
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<tr>
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<td>TRA</td>
</tr>
<tr>
<td>UTILS</td>
<td>UTI</td>
</tr>
</tbody>
</table>
Appendix B. Messages

All APPNTAA messages start with the prefix BNT.

Note: APPNTAA manager messages begin with the prefix FLB; refer to Tivoli NetView for OS/390 Messages and Codes.

To see the complete error message help while using the APPNTAA, at the OS/2 window command prompt enter the following:

HELP BNTxxxx

where xxxx is the 4-digit message number displayed on the OS/2 window or in the message area of the APPN Management Control window. Help text for the message is displayed in the OS/2 window.

To see extended help for information messages (messages without numbers), see "Viewing the Message Log" on page 33.

Message Descriptions

BNT0002I  CMIP services program 'programname' is initializing.

Explanation: The CMIP services program is beginning its initialization processing.

Message Variables:  

programname  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: Message BNT0003I is logged in the message log to verify that initialization has completed successfully.

BNT0003I  CMIP services program 'programname' successfully completed initialization.

Explanation: The CMIP services program has completed initialization processing.

Message Variables:  

programname  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: When all three programs are active, CMIP services is ready to process work.

BNT0004E  Initialization of CMIP services program 'programname' failed.

Explanation: The CMIP services program cannot complete its initialization because of a processing error.

Message Variables:  

programname  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

fileame  The name of the file that cannot be opened.

System Action: The CMIP services program logs an error in the system error log, and then stops.

Response: See the system error log to get information to help you diagnose and correct the problem. Restart the component. If you cannot restart the component, contact IBM Service.

BNT0005E  CMIP services program 'programname' cannot open input file 'filename'.

Explanation: The CMIP services program cannot open the initialization file.

The probable cause of the error is:
• The file does not exist.
• An error occurred when attempting to open the file.
• The initialization file is not in the current working directory.

Message Variables:  

programname  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

filename  The name of the file that cannot be opened.

System Action: The CMIP services program logs an error in the system error log, and then stops.

Response: See the system error log to get information to help you diagnose and correct the problem. Restart the component. If you cannot restart the component, contact IBM Service.
BNT0006E  CMIP services program 'programname' cannot read input file 'filename'.

Explanation: The CMIP services program cannot read the initialization file. Either the file is unreadable or the file is damaged.

Message Variables:

programname
The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

filename
The name of the file that cannot be read.

System Action: The CMIP services program logs an error in the system error log and then stops.

Response: See the system error log to get information to help you diagnose and correct the problem. Restart the component. If you cannot restart the component, contact IBM Service. If the file is damaged, install APPNTAA again.

BNT0007E  Insufficient memory for CMIP services program 'programname' to process request.

Explanation: The CMIP services program cannot obtain enough memory to process a request from another component or process an incoming message.

Message Variables:

programname
The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: Processing of the request or message is canceled. The CMIP services program attempts to log an error in the system error log. If the error occurred during initialization, the CMIP services program stops.

Response: This condition can be temporary. To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

Restart the CMIP services component using APPN Management Control.

BNT0008E  CMIP services program 'programname' encountered a processing error.

Explanation: In the course of its processing, the CMIP services program encountered an internal processing error. This message is issued for both normal and abnormal shutdown of the indicated CMIP services program.

Message Variables:

programname
The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: The CMIP services program stops. If programname is BNTINFRA.EXE, CMIP services programs BNTDISCR and BNTRGSN and the topology agent component also shut down. The accounting agent component does not shut down when BNTINFRA shuts down; the accounting agent component continues to collect any specified accounting records until the accounting buffers are filled.

Response: Contact IBM Service. If accounting data collection is no longer wanted, stop the accounting agent component.

BNT0009I  CMIP services program 'programname' is shutting down.

Explanation: This message is issued in response to a request to stop the CMIP services program. This message is issued for both normal and abnormal shutdown of the indicated CMIP services program.

Message Variables:

programname
The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: If programname is BNTINFRA.EXE, CMIP services programs BNTDISCR and BNTRGSN and the topology agent component also shut down. The accounting agent component does not shut down when BNTINFRA shuts down; the accounting agent component continues to collect any specified accounting records until the accounting buffers are filled. Message BNT0010I verifies that shutdown completed normally.

Response: If accounting data collection is no longer wanted, stop the accounting agent component.

BNT0010I  CMIP services program 'programname' successfully completed shutdown.

Explanation: The CMIP services program has successfully shut down. This message is issued for both normal and abnormal shutdown of the indicated CMIP services program.

Message Variables:

programname
The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: If programname is BNTINFRA.EXE, CMIP services programs BNTDISCR and BNTRGSN and the topology agent component also shut down. The
accounting agent component does not shut down when BNTINFRA shuts down; the accounting agent component continues to collect any specified accounting records until the accounting buffers are filled.

Response: If accounting data collection is no longer wanted, stop the accounting agent component.

BNT0012E CMIP services program 'programname' was started improperly.

Explanation: The CMIP services program was started without using APPNMGMT or APPNMGPM.

Message Variables:

- programname
  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: Initialization fails.

Response: Start the CMIP services component using APPNMGMT or APPNMGPM.

BNT0013E CMIP services program 'programname' was started improperly.

Explanation: The CMIP services program was started without using APPNMGMT or APPNMGPM.

Message Variables:

- programname
  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: The CMIP services program stops.

Response: Install APPNTAA again.

BNT0014E CMIP services program 'programname' was started improperly.

Explanation: The CMIP services program was started without using APPNMGMT or APPNMGPM.

Message Variables:

- programname
  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: Initialization fails.

Response: Start the CMIP services component using APPNMGMT or APPNMGPM.

BNT0016E CMIP services program 'programname' was started improperly.

Explanation: The CMIP services program was started without using APPNMGMT or APPNMGPM; or Communications Manager/2 was not running.

Message Variables:

- programname
  The name of the CMIP services program. The program names are BNTINFRA, BNTRGSN, and BNTDISCR.

System Action: Related errors are logged in the
system error log and the CMIP services program continues processing.

**Response:** See the system error log to get information to help you diagnose and correct the problem. Restart the component. If you cannot restart the component, contact IBM Service.

**BNT0027W** CMIP services cannot complete initialization. SNA subsystem has not been started by Communications Manager/2. Will retry.

**Explanation:** During initialization, the CMIP services component failed to connect to the SNA subsystem of Communications Manager/2 and tries again to establish the connection. Up to six retries at 30-second intervals are made to attempt to successfully connect CMIP services to the SNA subsystem of Communications Manager/2.

One possible cause is that Communications Manager/2 is not running or is not fully initialized.

**System Action:** CMIP services begins retrying after the first 30-second interval for up to 6 tries.

**Response:** No action is necessary in response to this message. If the error is because the SNA subsystem has not completed its initialization, the CMIP services retry attempts should succeed once the initialization has completed. If the CMIP services component fails to connect to the SNA subsystem, it issues message BNT0016E. Ensure that Communications Manager/2 is running. See the system error log to diagnose the error.

**BNT0100E** The APPNMGMT command requires additional parameters.

**Explanation:** The APPNMGMT program could not complete the command because of missing parameters.

**System Action:** The command fails.

**Response:** Check and correct the syntax for the APPNMGMT command. If you are not sure of the correct syntax for the command, see [Appendix A](#) APPNMGMT Command Syntax on page 55.

**BNT0101E** Unable to find the CMIP services main program.

**Explanation:** An attempt to start the CMIP services component failed because one or more of its executable modules could not be found in the path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable.

**System Action:** The CMIP services component is not started.

**Response:** Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the BNTINFRA.EXE, BNTDISCR.EXE, and BNTRGSN.EXE programs are located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the CONFIG.SYS file to be sure it includes the directory where these programs are located.

**BNT0102E** Unable to start tracing; return code is rc.

**Explanation:** Tracing cannot be started. The return code indicates the cause of the error.

**Message Variables:**

<table>
<thead>
<tr>
<th>rc</th>
<th>The return code issued by the APPNMGMT or APPNMGPM program. The return codes are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Trace blocks could not be allocated (not enough memory)</td>
</tr>
<tr>
<td>6</td>
<td>BNTTRACE.EXE background trace program could not be found in the search path specified by the PATH system environment variable or the APPNMGMT environment variable</td>
</tr>
</tbody>
</table>

**System Action:** Tracing is not started.

**Response:** Start the trace again with fewer trace blocks. Check the location of the BNTTRACE.EXE program to be sure it is in a directory specified by the PATH system environment variable in the CONFIG.SYS file or on the APPNMGMT environment variable.

**BNT0103E** The trace buffer cannot be dumped or purged while tracing is active.

**Explanation:** An attempt was made to purge or dump the trace buffer while tracing was still active.

**System Action:** The command is ignored and no trace dump or purge operation is performed.

**Response:** Stop all tracing and try the dump or purge operation again.

**BNT0104E** The number of trace blocks is not between 1 and 32; 1 is assumed.

**Explanation:** A trace start operation was attempted with an incorrect number of trace blocks. The number of trace blocks must be a value between 1 and 32.

**System Action:** The incorrect value is ignored and the trace start operation is started with the number of trace blocks set to 1.

**Response:** If you need more than 1 trace block, stop all tracing and restart the trace start operation with a correct number of trace blocks.
BNT0105E Component 'componentname' has an inappropriate trace category 'category'.

Explanation: A trace start or stop operation was requested with a trace category inappropriate for the specified component.

Message Variables:
componentname
The name of the component.
category
The inappropriate trace category.

System Action: The trace start or stop operation for the inappropriate trace category is ignored, and other correct combinations of component and category are processed.

Response: Enter the command again with the correct trace category. If you are not sure of the correct trace categories, see "APPNMGMT TRACE" on page 40 for a list of trace categories for the component.

BNT0106E Unable to query the current drive.

Explanation: While attempting to start one of the components, the operating system could not query the current drive. The start operation attempts to change to the drive and directory where the component resides, start the component, and return to the initial drive and directory. The query current drive function is used to record the initial drive.

System Action: The start operation fails.

Response: If you start APPNMGMT or APPNMGPM when the current drive is a diskette, leave the diskette inserted in the drive while the APPNMGMT or APPNMGPM program is running. If this message continues to display, change to another valid drive and restart the APPNMGMT or APPNMGPM program.

BNT0107E Unable to query the current directory.

Explanation: While attempting to start one of the components, the operating system could not query the current directory. The start operation attempts to change to the drive and directory where the component resides, start the component, and return to the initial drive and directory. The query current directory function is used to record the initial directory.

System Action: The start operation fails.

Response: If you start APPNMGMT or APPNMGPM when the current directory is on a diskette, leave the diskette inserted in the drive while the APPNMGMT or APPNMGPM program is running. If this message continues to display, change to another valid drive and directory and restart the APPNMGMT or APPNMGPM program.

BNT0108E Unable to select the drive for 'programname'.

Explanation: The APPNMGMT or APPNMGPM program cannot select the drive where the program resides.

Message Variables:
programname
The drive, path, and name of the program.

System Action: The component associated with the program is not started.

Response: Ensure the drive where the program resides is selectable.

BNT0109E Unable to change to the directory for 'programname'.

Explanation: The APPNMGMT or APPNMGPM program cannot change to the directory where the program resides.

Message Variables:
programname
The drive, path, and name of the program.

System Action: The component associated with the program is not started.

Response: Ensure the directory exists and is accessible.

BNT0110E Unable to start CMIP services program 'programname'; return code is rc.

Explanation: The APPNMGMT or APPNMGPM program cannot start the CMIP services program.

Message Variables:
programname
The name of the CMIP services program.
rc The return code from the DosStartSession OS/2 control program function call.

System Action: The CMIP services program fails to start. Other CMIP services programs might start or already be started.

Response: Find the return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service. Start the CMIP services component. If the program continues to not start, ensure the referenced program is not corrupted. If the file is damaged, install APPNTAA again.

BNT0111E Unable to return to the current drive and directory.

Explanation: After starting a component, the APPNMGMT or APPNMGPM program could not return to the drive and directory that was current before the
start operation. For example, if you start APPNMGPM or APPNMGMT from a diskette, and then remove the diskette, you cannot enter commands without reinserting the diskette.

**System Action:** The initial command completes. When the APPNMGMT or APPNMGPM program stops, the drive and directory might be different from the drive and directory that was current before the start operation.

**Response:** If you start APPNMGMT or APPNMGPM when the current directory is on a diskette (started from a diskette drive), leave the diskette inserted in the drive while the APPNMGMT or APPNMGPM program is running.

---

**BNT0112E** Unable to open the trace dump file.

**Explanation:** The APPNMGMT or APPNMGPM trace dump procedure could not open the specified output file.

The probable cause of the error is:
- Write access to the file, directory, or drive is denied.
- No more OS/2 directory entries are allowed.

**System Action:** The trace dump procedure fails.

**Response:** Specify another trace dump file or directory. If you are dumping to diskette, ensure the write-protect tab allows writing. If you are dumping to a LAN server drive, ensure you have write privileges on the target drive and directory.

---

**BNT0113E** Trace I/O error occurred while dumping the trace buffer to a file.

**Explanation:** An I/O error occurred while the trace dump procedure was dumping the trace buffer to a file.

Probable causes of the error include:
- An incorrect OS/2 file name was specified.
- The drive is full.

**System Action:** The trace dump operation stops abnormally.

**Response:** Ensure you specify a valid OS/2 file name. Specify another trace dump file or directory. If you are dumping to diskette, ensure the write-protect tab allows writing. If you are dumping to a LAN server drive, make sure you have write privileges on the target drive and directory.

---

**BNT0114I** Starting the CMIP services program "programname".

**Explanation:** The CMIP services program is starting. When APPNMGMT or APPNMGPM starts the topology agent or accounting agent, it also starts the CMIP services component automatically if it is not already started.

**Message Variables:**

<table>
<thead>
<tr>
<th>programname</th>
<th>The drive, path, and name of the CMIP services program. The CMIP services programs are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNTINFRA.EXE</td>
<td>The CMIP services main program.</td>
</tr>
<tr>
<td>BNTRGSN.EXE</td>
<td>The CMIP services system registration program.</td>
</tr>
<tr>
<td>BNTDISCR.EXE</td>
<td>The CMIP services discriminator object program.</td>
</tr>
</tbody>
</table>

**System Action:** The CMIP services program loads and starts. Message BNT0002I is logged in the message log to verify that initialization has started.

**Response:** Use this message to verify that the correct directory and program are being used to start the CMIP services component.

---

**BNT0115I** Starting the accounting agent program "programname".

**Explanation:** APPNMGMT or APPNMGPM is starting the accounting agent program.

**Message Variables:**

| programname | The drive, path, and name of the accounting agent program. |

**System Action:** The accounting agent program loads and starts. Message BNT0201I is logged in the message log to verify that initialization has started.

**Response:** Use this message to verify that the correct directory and program are being used to start the accounting agent component.

---

**BNT0116I** Starting the topology agent program "programname".

**Explanation:** APPNMGMT or APPNMGPM is starting the topology agent program.

**Message Variables:**

| programname | The drive, path, and name of the topology agent program. |

**System Action:** The topology agent program loads and starts. Message BNT0402I is logged in the message log to verify that initialization has started.

**Response:** Use this message to verify that the correct directory and program are being used to start the topology agent component.
BNT0117E Unable to find the APPNMGPM program.

Explanation: An attempt to start the APPNMGPM program failed because its APPNMGPM.EXE executable module could not be found in the search path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable.

System Action: The APPNMGPM program is not started.

Response: Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the APPNMGPM.EXE program is located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the CONFIG.SYS file to be sure it includes the directory where this program is located.

BNT0118I Stopping the accounting agent component.

Explanation: The APPNMGMT or APPNMGPM program is stopping the accounting agent component.

System Action: The accounting agent component stops.

BNT0119I Stopping the topology agent component.

Explanation: The APPNMGMT or APPNMGPM program is stopping the topology agent component.

System Action: The topology agent component stops.

BNT0120E Unable to purge the trace buffer; return code is rc.

Explanation: The trace purge operation failed because either a DosFreeSeg operation or a DosGetSeg operation failed.

Message Variables:
rc The return code from the DosFreeSeg or DosGetSeg OS/2 control program function call.

System Action: The trace purge operation does not correctly purge the trace buffers. Storage allocated to the trace buffers might not be returned to OS/2.

Response: Find the return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

BNT0121I The accounting work directory is 'dirname'.

Explanation: During its initialization, the accounting agent indicates the accounting work directory it uses.

Message Variables:
dirname The name of the accounting work directory.

System Action: The accounting agent continues its initialization. Message BNT0202I is logged to verify that initialization has completed successfully.

BNT0122E Unable to start the accounting agent component; return code is rc.

Explanation: The APPNMGMT or APPNMGPM program cannot start the accounting agent component.

Message Variables:
rc The return code from the DosStartSession OS/2 control program function call.

System Action: The accounting agent component fails to start.

Response: Find the return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service. Start the accounting agent again. If you are unable to start the component, contact IBM Service.

BNT0123E Unable to find the accounting agent program.

Explanation: An attempt to start the accounting agent component failed because the BNTACCT.EXE program could not be found in the search path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable.

System Action: The accounting agent component is not started.

Response: Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the BNTACCT.EXE program is located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the CONFIG.SYS file to be sure it includes the directory where this program is located. Correct the path and start the accounting agent.

BNT0124E The accounting agent data files cannot be reset while the accounting agent component is active.

Explanation: An attempt was made to reset the accounting agent data files while the accounting agent...
was still active. The reset operation is only valid when the accounting agent is inactive.

**System Action:** The command is ignored.

**Response:** Stop the accounting agent component and try the reset operation again.

---

**BNT0125I** The accounting agent data files in directory 'dirname' have been reset.

**Explanation:** The APPNMGMT or APPNMGPM program has reset the accounting agent data files in the directory. All data in the existing files has been deleted.

**Message Variables:**

- **dirname**
  
  The name of the directory containing the accounting agent data files.

**System Action:** Accounting agent data files in the directory are reset.

---

**BNT0126E** Unable to stop the CMIP services component.

**Explanation:** The APPNMGMT or APPNMGPM program cannot stop the CMIP services component.

**System Action:** The CMIP services component is not ended properly.

**Response:** Stop CMIP services again. If that fails, try closing the windows associated with the CMIP services component. The CMIP services programs are: BNTINFRA.EXE, BNTDISCR.EXE, and BNTRGSN.EXE. If the problem persists, contact IBM Service.

---

**BNT0127I** Stopping the CMIP services component.

**Explanation:** The CMIP services component is being stopped by the APPNMGMT or APPNMGPM program. Either CMIP services was stopped explicitly or an agent component was stopped and CMIP services had no more agent users.

**System Action:** The command is ignored.

---

**BNT0128E** Unable to dump the trace buffer; return code is rc.

**Explanation:** An abnormal condition caused the trace dump operation to fail.

**Message Variables:**

- **rc**
  
  The return code issued by the APPNMGMT or APPNMGPM program. The return codes are:

  - 2 = Dump file could not be opened
  - 3 = Error writing data to the file
  - 5 = Purge operation after the dump failed
  - 6 = DosGetSeg operation failed

**System Action:** The trace dump operation fails. Some data might have been written to the file.

**Response:** Start the trace dump operation again. If the problem persists, contact your local support personnel.

---

**BNT0129E** Unable to dump the trace buffer; return code is rc.

**Explanation:** An abnormal condition caused the trace dump operation to fail.

**Message Variables:**

- **rc**
  
  The return code issued by the APPNMGMT or APPNMGPM program. The return codes are:

  - 2 = Dump file could not be opened
  - 3 = Error writing data to the file
  - 5 = Purge operation after the dump failed
  - 6 = DosGetSeg operation failed

**System Action:** The trace dump operation fails. Some data might have been written to the file.

**Response:** Start the trace dump operation again. If the problem persists, contact your local support personnel.

---

**BNT0130I** Stopping the CMIP services component.

**Explanation:** The CMIP services component is being stopped by the APPNMGMT or APPNMGPM program. Either CMIP services was stopped explicitly or an agent component was stopped and CMIP services had no more agent users.

**System Action:** The command is ignored.

---

**BNT0131I** The topology agent component is already active.

**Explanation:** An attempt was made to start the topology agent component when it was already active. Only one instance of the topology agent component can be active at one time.

**System Action:** The command is ignored.

---

**BNT0132E** Unable to find the topology agent program.

**Explanation:** An attempt to start the topology agent component failed because the BNTTA.EXE program could not be found in the search path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable.

**System Action:** The topology agent component is not started.

**Response:** Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the BNTTA.EXE program is located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the CONFIG.SYS file to be sure it includes the directory
where this program is located. Correct the path and start the topology agent.

BNT0133E Unable to start the topology agent component; return code is rc.

Explanation: The APPNMGMT or APPNMGPM program cannot start the topology agent component.

Message Variables:
rc The return code from the DosStartSession OS/2 control program function call.

System Action: The topology agent fails to start.
Response: Find the return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service. Start the topology agent again. If the component does not start, and you cannot determine the cause of the problem based on the return code value, contact IBM Service.

BNT0134I The topology agent component is not active.

Explanation: The topology agent component is already inactive; stopping it is unnecessary.

System Action: The command is ignored.

BNT0135E Unable to stop the topology agent component.

Explanation: The APPNMGMT or APPNMGPM program cannot stop the topology agent component, The topology agent component might already be inactive, but the APPNMGMT or APPNMGPM program did not detect it.

System Action: The stop operation fails.

BNT0136E 'string' is an unknown parameter for the APPNMGMT command.

Explanation: The APPNMGMT program detected an unknown parameter. APPNMGMT expected a keyword, but the indicated text string was not a valid keyword or keyword abbreviation.

Message Variables:
string The text string containing the unknown parameter.

System Action: The command is ignored.
Response: Issue the command again using the correct parameter. If you are not sure of the correct syntax for the command, see Appendix A. APPNMGMT Command Syntax on page 35.

BNT0137E Syntax error at 'string' on the APPNMGMT command.

Explanation: The APPNMGMT program detected a syntax error at the indicated text string.

Message Variables:
string The text string containing the syntax error.

System Action: The command is ignored.
Response: Issue the command again using the correct syntax. If you are not sure of the correct syntax for the command, see Appendix A. APPNMGMT Command Syntax on page 35.

BNT0138E The MAXBUFRECS value is not between 100 and 65535; defaulting to 1000.

Explanation: While starting the accounting agent component, the APPNMGMT or APPNMGPM program encountered a value for the MAXBUFRECS parameter that was out of the acceptable range and has substituted the default value for the parameter.

System Action: The accounting agent is started with the default value of 1000 for the MAXBUFRECS parameter.
Response: If the default value is not correct, stop the accounting agent component and start it again with the desired value.

BNT0139I The accounting agent component is already active.

Explanation: An attempt was made to start the accounting agent component when it was already active. Only one instance of the accounting agent component can be active at one time.

System Action: The command is ignored.

BNT0140E Unable to find the CMIP services system registration program.

Explanation: An attempt to start the CMIP services component failed because the system registration program (BNTRGSN.EXE) could not be found in the search path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable. The CMIP services component is unusable.

System Action: The CMIP services system registration program is not started.
Response: Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the BNTRGSN.EXE program is located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the
CONFIG.SYS file to be sure it includes the directory where this program is located.

**BNT0141E** Unable to find the CMIP services discriminator object program.

Explanation: An attempt to start the CMIP services component failed because the discriminator object program (BNTDISCR.EXE) could not be found in the search path specified by the APPNMGMT environment variable or, if the APPNMGMT environment variable is not defined, in the search path specified by the PATH system environment variable. The CMIP services component is unusable.

System Action: The CMIP services discriminator object program is not started.

Response: Check the APPNMGMT environment variable, if defined, to be sure the variable includes the directory where the BNTDISCR.EXE program is located. If the APPNMGMT environment variable is not defined, check the PATH system environment variable in the CONFIG.SYS file to be sure it includes the directory where this program is located.

**BNT0142I** The CMIP services component is not active.

Explanation: The CMIP services component is already inactive; stopping it is unnecessary.

System Action: The command is ignored.

**BNT0143I** Status of CMIP services component: status

Explanation: This message shows the status of the CMIP services component in response to an APPNMGMT DISPLAY STATUS command.

Message Variables:
- **status**: The status of the CMIP services component.
  - inactive: The component is not active. Start the component for it to become usable.
  - unusable: The component is initializing.
  - active: The component is ready for use.

Response: If the CMIP services component has a status of “inactive,” start the component to make it usable. If the CMIP services component has a status of “unusable,” wait until it has finished initializing.

**BNT0144I** Status of topology agent component: status

Explanation: This message shows the status of the topology agent component in response to an APPNMGMT DISPLAY STATUS command.

Message Variables:
- **status**: The status of the topology agent component.
  - inactive: The component is not active. Start the component for it to become usable.
  - unusable: The component is initializing.
  - active: The component is ready for use.

**BNT0145I** Status of accounting agent component: status

Explanation: This message shows the status of the accounting agent component in response to an APPNMGMT DISPLAY STATUS command.

Message Variables:
- **status**: The status of the accounting agent component.
  - inactive: The component is not active. Start the component for it to become usable.
  - unusable: The component is initializing.
  - active: The component is ready for use.

**BNT0146I** Trace used %1 of %2 blocks and wrapped %3 times.

Explanation: This informational message is placed at the beginning of the trace dump file to indicate how many of the allocated trace blocks have been used, and the number of times the trace blocks were overwritten.

Message Variables:
- **%1**: The number of allocated trace blocks that have been used.
- **%2**: The number of trace blocks that are allocated.
- **%3**: The number of times the allocated trace blocks have been overwritten.

System Action: The trace dump continues.
The APPNMGMT command requires additional parameters.

**Explanation:** The APPNMGMT program could not complete the command because of missing parameters.

**System Action:** The command fails.

**Response:** Check and correct the syntax for the APPNMGMT command. If you are not sure of the correct syntax for the command, see [Appendix A: APPNMGMT Command Syntax](#) on page 35.

---

Starting trace dump to file `filename`

**Explanation:** The trace buffer dump procedure has started.

**Message Variables:**

- `filename` The dump file name specified on the Trace Dump Buffer panel.

**System Action:** The trace dump continues.

---

Trace dump has completed successfully.

**Explanation:** The trace buffer dump procedure has completed and the dump file can be opened.

**System Action:** The trace dump stops.

---

Unable to start the APPNMGPM.EXE program.

**Explanation:** The APPNMGMT program cannot start the APPNMGPM program.

**System Action:** The APPNMGPM program fails to start.

**Response:** Ensure the APPNMGPM.EXE program exists and is in a directory specified by the PATH system environment variable.

---

Unable to change to the accounting work directory `dirname`.

**Explanation:** The APPNMGMT or APPNMGPM program cannot change to the accounting work directory.

**Message Variables:**

- `dirname` The name of the accounting work directory.

**System Action:** The reset or start accounting agent operation fails.

**Response:** Correct the configuration to ensure the accounting work directory exists, or set the APPNACCT environment variable to a valid directory.

---

The accounting agent component is initializing.

**Explanation:** The accounting agent component is beginning its initialization processing.

**System Action:** The accounting agent is initializing. Message BNT0202I is logged in the message log to verify that initialization has completed successfully.

---

The accounting agent component successfully completed initialization.

**Explanation:** The accounting agent component has completed initialization processing, and it is ready to execute incoming requests.

**System Action:** The accounting agent component resumes collecting accounting data from Communications Manager/2 for existing AMCOs and accepts incoming requests from accounting managers.

---

The accounting agent component is not active.

**Explanation:** The accounting agent component is already inactive; stopping it is unnecessary.

**System Action:** The command is ignored.

---

The accounting agent component unexpectedly terminated because of a critical error.

**Explanation:** The accounting agent component stopped abnormally because it encountered an accounting data file error or an internal processing error.

**System Action:** The accounting agent component stops and accounting information is no longer collected. Residual accounting data files in the accounting work subdirectory might be left in an incomplete state and could cause a file clean-up error to occur the next time the accounting agent component is started. Detailed error information has been logged to the system error log.

**Response:** Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.

---

The accounting agent component initialization failed.

**Explanation:** The accounting agent component cannot complete its initialization because of a processing error.

**System Action:** The accounting agent component stops. Detailed error information has been logged to the system error log.

**Response:** Extract the most recent system error log records where APPN-AA is the originator and use the
**BNT0206E** Clean up of completed end point session data failed.

**Explanation:** The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:
- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

**System Action:** The accounting agent component stops. Detailed error information has been logged to the system error log.

**Response:** Depending on the cause of the error, do one or more of the following:
- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.

---

**BNT0207E** Clean up of completed conversation data failed.

**Explanation:** The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:
- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

**System Action:** The accounting agent component stops. Detailed error information has been logged to the system error log.

**Response:** Depending on the cause of the error, do one or more of the following:
- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.

---

**BNT0208E** Clean up of completed intermediate session data failed.

**Explanation:** The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:
- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

**System Action:** The accounting agent component stops. Detailed error information has been logged to the system error log.

**Response:** Depending on the cause of the error, do one or more of the following:
- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.
BNT0209E  Clean up of active end point session data failed.

Explanation: The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:

- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

System Action: The accounting agent component stops. Detailed error information has been logged to the system error log.

Response: Depending on the cause of the error, do one or more of the following:

- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Reset the accounting agent data files and start the accounting agent component.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.

BNT0210E  Clean up of active conversation data failed.

Explanation: The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:

- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

System Action: The accounting agent component stops. Detailed error information has been logged to the system error log.

Response: Depending on the cause of the error, do one or more of the following:

- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Reset the accounting agent data files and start the accounting agent component.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.

BNT0211E  Clean up of active intermediate session data failed.

Explanation: The accounting agent initialization process encountered an error while cleaning up accounting data files in the accounting work subdirectory.

The probable causes of the error include:

- The accounting agent was terminated abnormally by the operator (for example, by a control-break), a system shutdown, a system failure, or an accounting program error.
- Multiple accounting agents are using the same accounting work directory on a LAN server. Each accounting agent requires a separate accounting work directory.
- Insufficient disk space for the accounting work directory.
- A data file in the accounting work directory was accidentally removed or modified by a user.

System Action: The accounting agent component stops. Detailed error information has been logged to the system error log.

Response: Depending on the cause of the error, do one or more of the following:

- Ensure the accounting work directories on a LAN server are not shared by agents.
- Ensure the accounting work directory has sufficient free disk space.
- Reset the accounting agent data files and start the accounting agent component.
- Extract the most recent system error log records where APPN-AA is the originator and use the information to identify and correct the problem. Start the accounting agent component again.
### BNT0402I The topology agent component is initializing.

**Explanation:** The topology agent component is beginning its initialization processing.

**System Action:** The topology agent is initializing. Message BNT0440I is logged in the message log to confirm when initialization has completed successfully.

### BNT0409I The topology agent component is shutting down.

**Explanation:** This message is issued in response to the following:
- A request to stop the topology agent component.
- The topology agent is stopping abnormally.
- A required CMIP services program has shut down.

**System Action:** Message BNT0410I is logged to verify that shutdown completed normally.

### BNT0410I The topology agent component successfully completed shutdown.

**Explanation:** The topology agent component has successfully shut down. Possible causes include:
- A request to stop the topology agent component.
- The topology agent is stopping abnormally.
- A required CMIP services program has shut down.

**Response:** If the shutdown was caused by a CMIP services program shutting down or other errors, refer to messages issued and the system error log.

### BNT0440I The topology agent component successfully completed initialization.

**Explanation:** The topology agent component has completed initialization processing, and it is ready to execute incoming requests.

**System Action:** The topology agent component can begin sending topology data in response to requests from topology managers.

### BNT0447E The topology agent component has stopped because of a processing error.

**Explanation:** The topology agent component stopped abnormally because it encountered an internal processing error or it failed to connect to the CMIP services component.

**System Action:** The topology agent component stops. Detailed error information has been logged to the system error log.

**Response:** See the system error log to diagnose and correct the problem. Start the topology agent component again.

### BNT0448E The topology agent component is shutting down because Communications Manager/2 is not active.

**Explanation:** The topology agent component is shutting down because Communications Manager/2 is not active.

**System Action:** The topology agent component stops. There might be entries in the system error log describing the problem in Communication Manager/2.

**Response:** See the system error log to diagnose and correct the problem. Restart Communications Manager/2. Start the topology agent component again.

### BNT0470W The topology agent component failed to connect to the CMIP services component and will retry.

**Explanation:** During initialization, the topology agent component failed to connect to the CMIP services component and tries again to establish the connection. The retry begins in 6 seconds and is repeated until the topology agent component successfully connects with the CMIP services component, or the topology agent receives a return code indicating that CMIP services is unusable.

The probable cause of the error is:
- The CMIP services component is not started.
- The CMIP services component has not completed its initialization.

**System Action:** The topology agent component begins retrying after the first 6-second interval.

**Response:** If this warning is because the CMIP services component has not completed its initialization, the topology agent retry attempts should succeed once the initialization has completed. No action is necessary in response to this message. If CMIP services remains unusable, the topology agent issues message BNT0447E.
Appendix C. System Error Log Entries

This appendix contains system error log entries created by Communications Manager/2, CMIP services, the APPN accounting agent, the APPN topology agent, and some utilities.

Note: Some error log entries include additional data that is not described in this book. Additional data that is not described in this book is intended for the use of IBM Service.

Major Code=22

The minor codes for this major code are described in the IBM Communications Manager/2 Problem Determination Guide.

Major Code=76

This major code is assigned to the APPNTAA CMIP services. An error log entry with this major code is identified by:

Originator: APPN-OSI

76-00000000 through 76-00000225

Explanation: Minor codes in this range are described in Appendix D. CMIP Services Error Codes on page 79.

Response: Use the description of the CMIP services error code to determine the cause and any suggested responses.

76-00000226

Explanation: CMIP services received a valid OSI session protocol data unit (PDU) from a manager, but the message is out of sequence; that is, the manager should not have sent the message at the time. The OSI session is terminated, along with any CMIP transactions using that session.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000227

Explanation: CMIP services received an incorrect OSI session PDU from a manager. Either CMIP services did not recognize the type of message or a length field in the session header (of the session PDU) was incorrect. The OSI session is terminated, along with any CMIP transactions using that session.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000228

Explanation: CMIP services received an incorrect OSI session PDU from a manager. The OSI session PDU was missing a required field. Some examples for this minor code are:

- CMIP services received an OSI REFUSE session PDU that did not contain a Reason Code parameter.
- CMIP services received an OSI ABORT session PDU that did not contain a Transport Disconnect parameter.

The OSI session is terminated, along with any CMIP transactions using that session.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000229

Explanation: CMIP services received an incorrect OSI session PDU from a manager. The OSI session PDU was missing a required field. One example for this minor code is that CMIP services received an OSI DATA-TRANSFER session PDU that did not contain any user information. The OSI session is terminated, along with any CMIP transactions using that session.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
System Error Log Entries

76-0000022A
Explanation: An internal software problem was detected within the CMIP services component while processing an OSI message for a particular OSI session. The OSI session is terminated, along with any CMIP transactions using that session.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-0000022C
Explanation: CMIP services received an OSI session PDU from a manager, specifying a parameter or value that CMIP services does not support. Certain parameters and values must be disabled when the OSI session is established. Therefore, these parameters and values should not be set in any messages received by CMIP services. Some examples are:
- CMIP services received an OSI CONNECT session PDU with a Session User Requirements parameter containing no indication of the duplex functional unit; CMIP services supports only the duplex functional unit.
- CMIP services received an OSI ACCEPT session PDU indicating the half-duplex functional unit, but not the duplex functional unit.

This error is also logged if the presentation layer of CMIP services specifies an incorrect session parameter when it requests the session layer to establish an OSI session. This is an internal software error in the CMIP services component.

The OSI session is terminated, along with any CMIP transactions that are using that session.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-0000022D
Explanation: CMIP services received an OSI session PDU containing too much data. CMIP services cannot receive or send more than 10240 bytes of data in each OSI session PDU. This limit is set when the OSI session is established.

This error is also logged if the presentation layer of CMIP services attempts to send a message with too much data. This is an internal software error in the topology or accounting agent component that supplied the data.

The OSI session is terminated, along with any CMIP transactions using that session.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-0000022E
Explanation: CMIP services received an SNA condition report related to the underlying MS transaction or LU 6.2 session of an OSI session. The SNA condition report is a type of MDS-MU indicating the occurrence of an error. The SNA condition report is logged separately, in an associated log entry, as minor code 0000023E.

If the error occurs during the establishment of the OSI session, the OSI session is not established. If the error occurs after the OSI session is established, the OSI session is terminated, along with any CMIP transactions using that session.
Response: The SNA condition report contains SNA sense data that identifies the cause of the error. This log entry (minor code 0000022E) is created when the SNA sense data is other than one of the following:

<table>
<thead>
<tr>
<th>Sense data</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08120011</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 0000022F.</td>
</tr>
<tr>
<td>08A80001</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 00000231.</td>
</tr>
<tr>
<td>08A80003</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 00000230.</td>
</tr>
<tr>
<td>08A8000A</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 00000231.</td>
</tr>
<tr>
<td>08A8000B</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 00000231.</td>
</tr>
<tr>
<td>08A8000F</td>
<td>The occurrence of this sense data is indicated by a log entry with minor code 0000022F.</td>
</tr>
</tbody>
</table>

Use the associated log entry (minor code 0000023E) to obtain the SNA sense data. Use this sense data to determine the cause of the problem and to fix the problem. The SNA condition report contains information you can use to diagnose the problem. The SNA sense data and the format of the SNA condition report are documented in SNA Formats.

76-0000022F
Explanation: CMIP services received an SNA condition report related to the underlying MS transaction or LU 6.2 session of an OSI session. The SNA condition report is a type of MDS-MU indicating the occurrence of an error. The SNA condition report is logged separately,
in an associated log entry, as minor code 0000023E.

If the error occurs during an attempt to establish an OSI session, the OSI session is not established. If the error occurs after the OSI session is established, the OSI session is terminated, along with any CMIP transactions using that session.

Response: The SNA condition report contains SNA sense data that identifies the cause of the error. This log entry (minor code 0000022F) is created when the SNA sense data is one of the following:

<table>
<thead>
<tr>
<th>Sense data</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08120011</td>
<td>The SNA component of a node along the path of the MS transaction between the agent and manager has insufficient storage at this time to process the MDS-MU.</td>
</tr>
<tr>
<td>08A8000F</td>
<td>The MDS communications element of the CMIP services component at the manager node is congested at this time and unable to receive the MDS-MU.</td>
</tr>
</tbody>
</table>

Use the associated log entry (minor code 0000023E) to obtain the SNA sense data. Use this sense data to determine the cause of the problem. The SNA condition report contains information you can use to diagnose the problem. The SNA sense data and the format of the SNA condition report are documented in SNA Formats.

The failure is usually a temporary condition. However, you can allocate more resources (or decrease the workload) for the SNA support at the congested node.

76-00000230

Explanation: CMIP services received an SNA condition report related to the underlying MS transaction of an OSI session. The SNA condition report is a type of MDS-MU indicating the occurrence of an error. The SNA condition report is logged separately, in an associated log entry, as minor code 0000023E.

This error occurs during an attempt to establish an OSI session. The OSI session is not established.

Response: The SNA condition report contains SNA sense data that identifies the cause of the error. This log entry (minor code 00000231) is created when the SNA sense data is the following:

<table>
<thead>
<tr>
<th>Sense code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08A80001</td>
<td>The manager node cannot be located.</td>
</tr>
<tr>
<td>08A8000A</td>
<td>An SNA session activation failure occurred along the route between the agent and manager nodes.</td>
</tr>
<tr>
<td>08A8000B</td>
<td>An MDS transaction program failed, in a node along the route between the agent and manager nodes.</td>
</tr>
</tbody>
</table>

Use the associated log entry (minor code 0000023E) to obtain the SNA sense data. Use this sense data to determine the cause of the problem. The SNA condition report contains information you can use to diagnose the problem. The SNA sense data and the format of the SNA condition report are documented in SNA Formats.

You should take the following corrective action, depending on the error:

- The manager node cannot be found (080A0001). The probable cause is the SNA support (VTAM or NetView) at the manager node is not currently active. Activate the SNA support at the manager node.
- The manager node cannot be contacted (08A8000A). Determine whether a node or a link connection between nodes from the agent node to the manager node is not active, and activate it. If the node or link connection cannot be activated because of an error condition, determine the location and cause of the failure and take corrective action to fix the problem.
- An MDS transaction program failed (08A8000B). This error can be caused by a software problem with the system. Either the CMIP services component (an MS application) does not exist at the manager node or it is not active.

Usually, the failure occurs because CMIP services has been stopped at the manager node. Start CMIP services at the manager node.

76-00000231

Explanation: CMIP services received an SNA condition report related to the underlying MS transaction of an OSI session. The SNA condition report is a type of MDS-MU indicating the occurrence of an error. The SNA condition report is logged separately, in an associated log entry, as minor code 0000023E.

This error occurs during an attempt to establish an OSI session. The OSI session is not established.

Response: The SNA condition report contains SNA sense data that identifies the cause of the error. This log entry (minor code 00000231) is created when the SNA sense data is the following:

<table>
<thead>
<tr>
<th>Sense code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08A80001</td>
<td>The manager node cannot be located.</td>
</tr>
<tr>
<td>08A8000A</td>
<td>An SNA session activation failure occurred along the route between the agent and manager nodes.</td>
</tr>
<tr>
<td>08A8000B</td>
<td>An MDS transaction program failed, in a node along the route between the agent and manager nodes.</td>
</tr>
</tbody>
</table>

Use the associated log entry (minor code 0000023E) to obtain the SNA sense data. Use this sense data to determine the cause of the problem. The SNA condition report contains information you can use to diagnose the problem. The SNA sense data and the format of the SNA condition report are documented in SNA Formats.

You should take the following corrective action, depending on the error:

- The manager node cannot be found (080A0001). The probable cause is the SNA support (VTAM or NetView) at the manager node is not currently active. Activate the SNA support at the manager node.
- The manager node cannot be contacted (08A8000A). Determine whether a node or a link connection between nodes from the agent node to the manager node is not active, and activate it. If the node or link connection cannot be activated because of an error condition, determine the location and cause of the failure and take corrective action to fix the problem.
- An MDS transaction program failed (08A8000B). This error can be caused by a software problem with the system. Either the CMIP services component (an MS application) does not exist at the manager node or it is not active.
System Error Log Entries

failing MDS transaction program. Determine the location and cause of the failure, and take corrective action to fix the problem.

To help you diagnose and fix the problem, check the error logs at the nodes along the route between the agent and manager nodes for errors related to this problem.

76-00000232

Explanation: CMIP services received an OSI ACCEPT session PDU from a manager, with the OSI session-layer version set to one (1). CMIP services does not support version one. The OSI session is terminated.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000233

Explanation: The manager node unexpectedly terminated the OSI session.

Response: Determine why the manager node terminated the OSI session. Use the CMIPSrv TRACE command at the manager, specifying trace categories SESSION and CMOS, to trace the OSI session data received and sent by the manager node. Use the APPNMGMT TRACE command or APPN Management Control at the agent, specifying CMIP services trace categories SESSION and CMOS, to trace the OSI session data received and sent by the agent node. Also, check the manager node for any error messages or log entries related to this problem. Use this information to diagnose and correct the problem.

76-00000234

Explanation: CMIP services received an unsupported OSI session PDU from a manager. The session PDU indicated that the associated data is segmented (split into multiple PDUs). CMIP services does not support OSI data segmentation. This capability is disabled when the OSI session is established. Therefore, no messages received by the CMIP services should indicate that the associated data is segmented.

The OSI session is terminated, along with any CMIP transactions using that session.

Note: OSI data segmentation is not related to SNA segmentation. The SNA segmentation capabilities are established by the underlying SNA support to segment SNA request units, which is independent of the OSI session protocols.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000236

Explanation: CMIP services could not allocate storage to process an OSI session PDU, or an internal software problem was detected within the CMIP services component while processing an OSI session PDU. The associated OSI session is terminated, along with any CMIP transactions using that session.

Response: To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, if you are using the APPN accounting agent, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

If the problem persists after increasing your available storage, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000237

Explanation: During the initiation of an OSI session, CMIP services could not allocate storage to process an OSI session PDU, or an internal software problem was detected within the CMIP services component while processing an OSI session PDU. The OSI session is not established.

Response: To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, if you are using the APPN accounting agent, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

If the problem persists after increasing your available storage, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.
**76-00000238**

**Explanation:** CMIP services received an incorrectly formatted MDS-MU from a manager. Either CMIP services could not parse the MDS-MU, or the MDS-MU specified a general data stream (GDS) variable, subvector, or value that CMIP services does not support. The associated OSI session is terminated, along with any CMIP transactions using that session.

**Response:** The log entry contains sense data that identifies the problem, along with the MDS-MU. The format of the MDS-MU is documented in *SNA Formats*. Record the information associated with this error code, including any related log entries, and contact IBM Service.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>4</td>
<td>The SNA sense data</td>
</tr>
<tr>
<td>0004</td>
<td>k</td>
<td>The received MDS-MU</td>
</tr>
</tbody>
</table>

**76-00000239**

**Explanation:** CMIP services was unable to allocate shared storage.

**Response:** To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. If you are using the APPN accounting agent, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

If the CMIP services component has shut down, restart it with the APPNMGMT command or APPN Management Control.

**76-0000023A**

**Explanation:** CMIP services encountered an error while trying to obtain the network-qualified CP name of the local node. Initialization of CMIP services fails.

**Response:** An associated log entry is created (major code 00000079, minor code 00000004) that identifies the error. The likely cause is that Communications Manager/2 or its SNA subsystem is not active. Start Communications Manager/2 or its SNA subsystem and restart CMIP services using APPNMGMT or APPN Management Control. Otherwise, if Communications Manager/2 and its SNA subsystem are active, Record the information associated with this error code, including any related log entries, and contact IBM Service.

**76-0000023D**

**Explanation:** CMIP services detected an error and is sending an SNA condition report (SNACR) to the manager node. The SNACR contains information that can be used to identify the problem, including the SNA sense data. The associated OSI session is terminated, along with any CMIP transactions using that session.

**Response:** This log entry is usually associated with other log entries and messages that further identify the error. Use the information in the SNACR, along with the SNA sense data, to diagnose and correct the problem. The format of the SNA condition report is documented in *SNA Formats*.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>4</td>
<td>The SNA sense data generated to identify the problem.</td>
</tr>
<tr>
<td>0004</td>
<td>k</td>
<td>MDS-MU containing the SNA condition report sent to the manager node.</td>
</tr>
</tbody>
</table>

**76-0000023E**

**Explanation:** CMIP services received an SNA condition report (SNACR). CMIP services in the manager node sends an SNACR when it detects an error. The MDS function of a node (including the manager or agent node) supporting the underlying MS transaction for an OSI session, sends an SNACR when it detects an MDS protocol error or when it encounters a network error that disrupts the MS transaction. The SNACR contains information that can be used to identify the problem, including the SNA sense data. The associated OSI session is terminated, along with any CMIP transactions using that session.

**Response:** Use the information in the SNACR, along with the SNA sense data, to diagnose and correct the problem. Other log entries and messages might also be created that identify the consequences of this error, with suggested resolutions. The format of the SNA condition report is documented in *SNA Formats*.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>4</td>
<td>The received SNA sense data.</td>
</tr>
<tr>
<td>0004</td>
<td>k</td>
<td>MDS-MU containing the received SNA condition report.</td>
</tr>
</tbody>
</table>
System Error Log Entries

00000240

Explanation: CMIP services encountered an error while trying to send an MDS-MU containing an OSI session PDU to a manager node. CMIP services issues the Communications Manager/2 SEND_MDS_MU verb to send MDS-MUs to the manager node. Another log entry is created that contains the error information that Communications Manager/2 returns on the verb (major code 00000079, minor code 00000004). The associated OSI session is terminated, along with any CMIP transactions using that session.

Response: Use the information in this log entry and all associated log entries and messages to identify and fix the problem.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000 k</td>
<td></td>
<td>The MDS-MU that was being sent when the error occurred. The format of the MDS-MU is documented in SNA Formats</td>
</tr>
</tbody>
</table>

76-00000243

Explanation: CMIP services failed to complete initialization because Communications Manager/2 or its SNA subsystem is not active.

This error log entry is also logged if an internal software problem was detected within the CMIP services component while processing an OSI message for a particular OSI session. The OSI session is terminated, along with any CMIP transactions using that session.

Response: Start Communications Manager/2 or its SNA subsystem and restart CMIP services using APPNMGMT or APPN Management Control. Otherwise, if Communications Manager/2 and its SNA subsystem are active, Record the information associated with this error code, including any related log entries, and contact IBM Service.

76-00000244

Explanation: The limit on the number of OSI sessions that CMIP services supports has been exceeded.

Response: Stop and restart CMIP services.

76-00000258 through 76-000003E7

Explanation: Minor codes in this range are described in "Appendix D. CMIP Services Error Codes" on page 73.

Response: Use the description of the CMIP services error code to determine the cause and any suggested responses.

Major Code=77

This major code is assigned to the accounting agent. An error log entry with this major code is identified by:

Originator: APPN-AA

77-00000200

Explanation: The accounting agent could not allocate enough storage to successfully complete a requested operation. The APPN accounting agent has shut down.

Response: To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

Restart the APPN accounting agent.

77-00000201

Explanation: The APPN accounting agent could not allocate enough storage to allocate an internal control block. The APPN accounting agent has shut down.

Response: To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

Restart the APPN accounting agent.

Additional Data:
77-00000202

**Explanation:** The APPN accounting agent could not allocate enough storage to allocate an internal signal. The APPN accounting agent remains active; however, the current operation does not complete.

**Response:** To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>The size, in binary (byte reversed), of the control block</td>
</tr>
</tbody>
</table>

77-00000300

**Explanation:** The APPN accounting agent detected an error in an accounting data file. The APPN accounting agent has shut down.

**Response:** Reset the APPN accounting agent data files to remove the file in error, then restart the APPN accounting agent.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>12</td>
<td>The file name of the data file in error</td>
</tr>
</tbody>
</table>

77-00000301

**Explanation:** The APPN accounting agent received an OS/2 error return code on a file open. The APPN accounting agent has shut down.

**Response:** Reset the accounting agent data files to remove files in error and then restart the APPN accounting agent.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

77-00000302

**Explanation:** The APPN accounting agent received an OS/2 error return code on a file read command. The APPN accounting agent remains active, and reports the error to the accounting manager.

**Response:** The additional data provided is the OS/2 return code value. Find this return code value in Appendix B of the *OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library*, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

77-00000303

**Explanation:** The APPN accounting agent received an OS/2 error return code on a file write command. The APPN accounting agent remains active unless the error...
occurred in a critical section. The error is reported to the accounting manager.

Response: The additional data provided is the OS/2 return code value. Find this return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

**77-00000304**

Explanation: The APPN accounting agent received an OS/2 error return code on a file seek command. The APPN accounting agent remains active unless the error occurred in a critical section. The error is reported to the accounting manager.

Response: The additional data provided is the OS/2 return code value. Find this return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

**77-00000305**

Explanation: The APPN accounting agent received an OS/2 error return code on a file close. The APPN accounting agent remains active unless the error occurred in a critical section. The error is reported to the accounting manager.

Response: If the APPN accounting agent has shut down, restart it. If initialization fails due to a clean-up failure, reset the APPN accounting agent data files to remove any files in error, and restart the APPN accounting agent.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

**77-00000306**

Explanation: The APPN accounting agent received an OS/2 error return code on a file remove command. The APPN accounting agent remains active unless the error occurred in a critical section. The error is reported to the accounting manager.

Response: The additional data provided is the OS/2 return code value. Find this return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>

**77-00000307**

Explanation: The APPN accounting agent was not able to start a previously created AMCO. The APPN accounting agent remains active; however, the AMCO is not started.


Stop the APPN accounting agent, reset the accounting agent data files to remove any files in error, and then restart the APPN accounting agent.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIS error definition (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>12</td>
<td>The AMCO file name</td>
</tr>
</tbody>
</table>

**77-00000308**

Explanation: The APPN accounting agent was not able to start an AMCO listed in the BNTACCT.INI file. The APPN accounting agent remains active; however, the specified AMCO is not started.


Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>12</td>
<td>The file name</td>
</tr>
</tbody>
</table>
The probable cause of this error is that the AMCO name is not valid, for example, CMIS error 6 (incorrect attribute value). If a CMIS error 6 was reported, correct the format of the AMCO name as shown in "Accounting Initialization File (BNTACCT.INI)" on page 12. Stop and restart the APPN accounting agent.

### Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIS error definition (byte-reversed)</td>
</tr>
<tr>
<td>0002</td>
<td>k</td>
<td>The name of the AMCO</td>
</tr>
</tbody>
</table>

#### 77-00000309

**Explanation:** The APPN accounting agent could not stop a file management services (FMS) thread normally. The APPN accounting agent continues the termination process.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

#### 77-00000400

**Explanation:** An unexpected error code was received from CMIP services. The APPN accounting agent remains active and the error is reported to the accounting manager.

**Response:** The additional data contains the CMIP services error code. Refer to the description of the error code in "Appendix D. CMIP Services Error Codes" on page 73, as it applies to the APPN accounting agent, to determine the cause and any suggested responses for the problem.

**Note:** The CMIP services error code in the additional data is in byte-reversed format. The two bytes must be swapped with each other in order to determine the value of the error code.

### Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIP services error code (byte-reversed)</td>
</tr>
</tbody>
</table>

#### 77-00000401

**Explanation:** The APPN accounting agent has detected an internal software problem related to an AMCO. The APPN accounting agent remains active, but the AMCO thread terminates.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

#### 77-00000402

**Explanation:** The APPN accounting agent has shut down abnormally due to an error condition, or the accounting foreground window was closed by the user.

**Response:** If the APPN accounting agent shuts down because of an error condition, this log entry is usually associated with other log entries.

#### 77-00000404

**Explanation:** The APPN accounting agent has received an error return code from OS/2 while it was creating an AMCO. The APPN accounting agent remains active, an error is reported to the accounting manager, and the AMCO thread terminates.

**Response:** This log entry can be associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

#### 77-00000405

**Explanation:** The APPN accounting agent has received an error return code from either OS/2 or CMIP services while it was deleting an AMCO. The APPN accounting agent remains active, an error is reported to the accounting manager, and the AMCO thread terminates.

**Response:** This log entry can be associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

#### 77-00000500

**Explanation:** The APPN accounting agent encountered an error while receiving data from Communications Manager/2. The APPN accounting agent has shut down.

**Response:** Use the description of the error log entry for major code 76 and the minor code indicated by the CMIP services error code in the additional data to determine the cause and any suggested responses for the problem. Restart the APPN accounting agent.

**Note:** The CMIP services error code in the additional data is in byte-reversed format. The two bytes must be swapped with each other in order to determine the value of the error code.

### Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIP services error code (byte-reversed)</td>
</tr>
</tbody>
</table>
System Error Log Entries

77-00000501
Explanation: The APPN accounting agent received an MDS-MU from the Communications Manager/2, and the MDS-MU contains a GDS variable, subvector, or subfield that the APPN accounting agent does not recognize. The APPN accounting agent remains active.
Response: This problem indicates that there is a compatibility problem between the APPN accounting agent and Communications Manager/2. Record the information associated with this error code, including any related log entries, and contact IBM Service.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000 k</td>
<td></td>
<td>MDS-MU received from Communication Manager/2</td>
</tr>
</tbody>
</table>

77-00000503
Explanation: The APPN accounting agent encountered a parsing error in a CMIP message directed to an AMCO object instance. The APPN accounting agent remains active.
Response: This log entry is usually associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000 k</td>
<td>2</td>
<td>CMIP message in error</td>
</tr>
</tbody>
</table>

77-00000504
Explanation: The APPN accounting agent received an error response from the CMIP services component, indicating that a previous CMIP services request the APPN accounting agent issued has failed. The APPN accounting agent remains active.
Response: This minor code indicates an internal software problem involving the APPN accounting agent and CMIP services. Record the information associated with this error code, including any related log entries, and contact IBM Service.

77-00000505
Explanation: The APPN accounting agent class handler was unexpectedly deregistered by CMIP services. This occurs if the CMIP services component is shut down while the accounting agent is still active. It can also occur for other reasons, such as if the CMIP services registration program (BNTRGSN.EXE) terminates.
Response: If the CMIP services component was shut down by user request, no action is required. The APPN accounting agent automatically registers again with CMIP services once CMIP services is restarted. If CMIP services was not shut down by user request, this log entry is associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000 k</td>
<td></td>
<td>CMIP services registration program (BNTRGSN.EXE) terminated</td>
</tr>
<tr>
<td>0000 k</td>
<td></td>
<td>CMIP services component was shut down</td>
</tr>
</tbody>
</table>

77-00000506
Explanation: The APPN accounting agent class handler thread has terminated. The APPN accounting agent remains active (collecting accounting data), but can no longer communicate with the accounting manager.
Response: Stop the APPN accounting agent when you no longer need to collect accounting data, and restart it when you have fixed the problem that caused the class handler to terminate. This log entry is associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

77-00000508
Explanation: The APPN accounting agent received an error return code from the Communications Manager/2 when it attempted to send an MDS-MU containing an accounting data request to the Communications Manager/2. The agent uses the Communications Manager/2 SEND_MDS_MU verb to send the MDS-MU. The Communications Manager/2 returned the error return code on the verb. The APPN accounting agent has shut down. Refer to IBM Communications Manager/2 System Management Programming Reference for the description of the return codes for the SEND_MDS_MU verb.
Response: Use the information in this log entry and all associated log entries and messages to identify and fix the problem.
Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>The primary return code from the SEND_MDS_MU verb.</td>
</tr>
</tbody>
</table>

**77-00000509**

**Explanation:** The APPN accounting agent received a CMIP services error code when it attempted to send a CMIP message to the accounting manager. The APPN accounting agent remains active.

**Response:** The additional data contains the CMIP services error code. Refer to the description of the error code in Appendix D, CMIP Services Error Codes on page 73 to determine the cause and any suggested responses for the problem.

**Note:** The CMIP services error code in the additional data is in byte-reversed format. The two bytes must be swapped with each other in order to determine the value of the error code.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIP services error code (byte-reversed)</td>
</tr>
</tbody>
</table>

**77-00000510**

**Explanation:** The APPN accounting agent received a CMIP services error code when it attempted to connect to, or register its class handler with, CMIP services. The APPN accounting agent remains active; however, it cannot communicate with the accounting manager.

**Response:** The additional data contains the CMIP services error code. Refer to the description of the error code in Appendix D, CMIP Services Error Codes on page 73 to determine the cause and any suggested responses for the problem. When you have fixed the problem, stop and restart the APPN accounting agent.

**Note:** The CMIP services error code in the additional data is in byte-reversed format. The two bytes must be swapped with each other to determine the value of the error code.

Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIP services error code (byte-reversed)</td>
</tr>
</tbody>
</table>

**77-00000512**

**Explanation:** The APPN accounting agent received an unrecognized parameter on a CMIP message. The APPN accounting agent discards the message and continues normal processing.

**Response:** This minor code indicates an internal software problem involving the APPN accounting agent and CMIP services. Record the information associated with this error code, including any related log entries, and contact IBM Service.

**77-00000513**

**Explanation:** The APPN accounting agent encountered an OS/2 error when it attempted to start a thread for an AMCO. The APPN accounting agent reports the error to the accounting manager and remains active.

**Response:** This log entry is associated with other log entries and messages that further identify the error. Use those log entries to identify and fix the problem.

**77-00000514**

**Explanation:** The APPN accounting agent received a CMIP error message that is out of sequence; that is, the APPN accounting agent sent no CMIP request to which the error message applies. The APPN accounting agent discards the message and continues normal processing.

**Response:** This minor code indicates an internal software problem involving the APPN accounting agent and CMIP services. Record the information associated with this error code, including any related log entries, and contact IBM Service.

**77-00000515**

**Explanation:** The APPN accounting agent received a type of CMIP message that it does not support. The APPN accounting agent discards the CMIP message and continues normal processing.

**Response:** This minor code indicates an internal software problem involving the APPN accounting agent and CMIP services. Record the information associated with this error code, including any related log entries, and contact IBM Service.

**77-00000516**

**Explanation:** The APPN accounting agent received an MDS-MU from an origin other than the local Communications Manager/2 SNA subsystem, such as a user-written MS application. An SNACR was returned to the sender to close out the MS transaction, and the APPN accounting agent continues normal processing.

**Response:** User MS applications should not be sending MDS-MUs to the APPN accounting agent.
System Error Log Entries

Attempt to identify what user MS application attempted to send the MDS-MU to the APPN accounting agent, and modify the MS application so it does not. Activate the accounting SNACP trace to capture the MDS-MU from the unknown origin the next time it is sent.

---

**77-00000517**

**Explanation:** The APPN accounting agent received an SNA condition report from Communications Manager/2. The APPN accounting agent has shut down.

**Response:** The SNA condition report contains the SNA sense data that identifies the condition that caused the error. Related errors may be logged by the Communications Manager/2 that further identify the problem. Use the SNA sense data and related error log entries to diagnose and correct the problem. Once you have fixed the problem, restart the accounting agent.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>k</td>
<td>MDS-MU containing the SNA condition report</td>
</tr>
</tbody>
</table>

---

**77-00000518**

**Explanation:** The APPN accounting agent attempted to send a CMIP request to a manager and received a CMIP services error code in response. The APPN accounting agent remains active.

**Response:** The additional data contains the CMIP services error code. Refer to the description of the error code in [Appendix D. CMIP Services Error Codes](#) on page 79 to determine the cause and any suggested responses for the problem. Once you have fixed the problem, stop and restart the APPN accounting agent.

**Note:** The CMIP services error code in the additional data is in byte-reversed format. The two bytes must be swapped with each other in order to determine the value of the error code.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>CMIP services error code (byte-reversed)</td>
</tr>
</tbody>
</table>

---

**77-01000000**

**Explanation:** The APPN accounting agent received an OS/2 error return code on an OS/2 control program function call. The APPN accounting agent remains active unless the error occurred in a critical section. The error is reported to the accounting manager.

**Response:** The additional data provided is the OS/2 return code value. Find this return code value in Appendix B of the OS/2 Control Program Programming Reference in the IBM Operating System/2 Technical Library, 10G3356, to identify and fix the problem. If you do not have access to this publication, call IBM Service.

**Additional Data:**

---
### System Error Log Entries

#### 77-01000001

**Explanation:** The APPN accounting agent encountered an internal message out of sequence. This minor code indicates that an internal software problem exists in the APPN accounting agent or CMIP services component. The APPN accounting agent has shut down.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>2</td>
<td>OS/2 return code (byte-reversed)</td>
</tr>
</tbody>
</table>

#### 77-01000002

**Explanation:** The APPN accounting agent encountered an unknown internal message. This minor code indicates that an internal software problem exists in the APPN accounting agent component. The APPN accounting agent terminates the OS/2 thread that received the unknown message, but the APPN accounting agent component continues normal processing.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>50</td>
<td>Internal message header</td>
</tr>
</tbody>
</table>

---

### Major Code=78

This major code is assigned to the APPNTAA APPN topology agent. An error log entry with this major code is identified by `Originator: APPN-TA`.

#### 78-00000000

**Explanation:** The APPN topology agent was unable to obtain storage.

**Response:** To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. If you are also using the APPN accounting agent, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

If the APPN topology agent has shut down, restart it with the APPNMGMT command or APPN Management Control.

#### 78-00000003

**Explanation:** A function the APPN topology agent uses failed. The APPN topology agent has shut down.

**Response:** Refer to any related error log entries to diagnose and correct the problem. If you cannot correct the problem, or no related error log entries exist, record the information associated with this log entry, and contact IBM Service.

#### 78-000000C8 through 78-00000225

**Explanation:** The minor codes in this range are described in [Appendix D. CMIP Services Error Codes](#) on page 79.

**Response:** Use the description of the CMIP services error code, as it applies to the APPN topology agent, to determine the cause and any suggested responses.

#### 78-00000258 through 78-000003E7

**Explanation:** The minor codes in this range are described in [Appendix D. CMIP Services Error Codes](#) on page 79.

**Response:** Use the description of the CMIP services error code as it applies to the APPN topology agent, to determine the cause and any suggested responses.
System Error Log Entries

78-00002000
Explanation: The APPN topology agent received a message from CMIP services, and the APPN topology agent does not support the type of message indicated in the message header. The additional data area of this log entry contains the message.
Response: If you suspect the APPNTAA sent an erroneous CMIP message, record the information associated with this log entry, and contact IBM Service.
Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>k</td>
<td>The unrecognized message that the APPN topology agent received from CMIP services</td>
</tr>
</tbody>
</table>

78-00002568
Explanation: The APPN topology agent received an incorrectly formatted MDS-MU from Communications Manager/2. Either the APPN topology agent could not parse the MDS-MU, or the MDS-MU specified GDS variable, subvector, or value that the APPN topology agent does not support.
Response: This problem indicates that there is a compatibility problem between the APPN topology agent and Communications Manager/2. The additional data area of this log entry contains the sense data the APPN topology agent created to identify the problem, and the MDS-MU. Record the information associated with this error code, including any related log entries, and contact IBM Service.
Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>4</td>
<td>The SNA sense data generated to identify the problem</td>
</tr>
<tr>
<td>0004</td>
<td>k</td>
<td>MDS-MU containing the SNACR sent to Communications Manager/2</td>
</tr>
</tbody>
</table>

78-00002574
Explanation: The APPN topology agent received an SNA condition report (SNACR) from Communications Manager/2. Communications Manager/2 sends an SNACR when it detects an error. The SNACR contains information that can be used to identify the problem, including SNA sense data.
Response: The additional data contains the SNA sense data and the MDS-MU containing the SNACR the APPN topology agent received. The format of the SNACR is documented in SNA Formats. Use the additional data for this log entry, together with other related log entries, to diagnose and correct the problem. If you cannot correct the problem, record the information associated with this log entry, and contact IBM Service.
Additional Data:

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>4</td>
<td>The received SNA sense data</td>
</tr>
<tr>
<td>0004</td>
<td>k</td>
<td>MDS-MU containing the received SNA condition report</td>
</tr>
</tbody>
</table>

78-00002576
Explanation: The APPN topology agent encountered an error while trying to send an MDS-MU to the Communications Manager/2. Another log entry is created that contains the error information received when the problem occurred (major code 00000079, minor code 00000004). The APPN topology agent has shut down.
Response: The additional data contains the MDS-MU the APPN topology agent attempted to send. The format of the MDS-MU is documented in SNA Formats. Use the additional data for this log entry, together with other related log entries, to diagnose and correct the problem. If you cannot correct the problem, record the information associated with this log entry, and contact IBM Service.
System Error Log Entries

**Additional Data:**

<table>
<thead>
<tr>
<th>Hex Offset</th>
<th>Decimal Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>k</td>
<td>The MDS-MU that was being sent when the error occurred.</td>
</tr>
</tbody>
</table>

**Major Code=79**

This major code is assigned to the APPNTAA utilities. An error log entry with this major code is identified by Originator: ?????, Where ????? can be APPN-OSI, APPN-TA, or APPN-AA. The originator identifies the APPNTAA component that was executing when a utility function logged an error.

**79-00000000**

**Explanation:** The program could not allocate enough storage to successfully complete a function. The program stops processing the current request, and possibly ends.

**Response:** To obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. If you are using the APPN accounting agent, change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

**79-00000001**

**Explanation:** An error occurred using the 'C' library functions.

**Response:** Record the information associated with this error code, including related log entries, and contact IBM Service.

**79-00000003**

**Explanation:** An internal software problem exists in one of the components of APPNTAA.

**Tracing Data Sent by Manager Nodes**

If you suspect the APPNTAA manager node sent the agent node an incorrect request, capture the data exchanged between the manager node and the agent node, and give this data to IBM Service for analysis.

Use the VTAM data trace on the manager to trace the LU 6.2 session between the agent node and the manager node. To trace the data received by CMIP services, start a CMIP services trace for SESSION and CMOS events using APPN Management Control. You can also use the Communications Manager/2 trace facilities to trace the LU 6.2 session.
System Error Log Entries

After capturing the data, gather related log entries in the system error log and messages in the message log. Record associated information at the local node (for example, log entries and messages) along with associated trace information, and contact IBM Service.
Appendix D. CMIP Services Error Codes

This appendix contains CMIP services error codes. These error codes can appear as the minor codes in log entries created by CMIP services and the APPN topology agent, and as additional data in log entries for the APPN accounting agent. In addition, some of these error codes can appear in trace records.

<table>
<thead>
<tr>
<th>Code</th>
<th>Explanation</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000004</td>
<td>This return code corresponds to logged message BNT0004.</td>
<td>Type HELP BNT0004 to view extended help for this code.</td>
</tr>
<tr>
<td>00000005</td>
<td>This return code corresponds to logged message BNT0005.</td>
<td>Type HELP BNT0005 to view extended help for this code.</td>
</tr>
<tr>
<td>00000006</td>
<td>This return code corresponds to logged message BNT0006.</td>
<td>Type HELP BNT0006 to view extended help for this code.</td>
</tr>
<tr>
<td>00000007</td>
<td>This return code corresponds to logged message BNT0007.</td>
<td>Type HELP BNT0007 to view extended help for this code.</td>
</tr>
<tr>
<td>00000008</td>
<td>This return code corresponds to logged message BNT0008.</td>
<td>Type HELP BNT0008 to view extended help for this code.</td>
</tr>
<tr>
<td>0000000C</td>
<td>This return code corresponds to logged message BNT0012.</td>
<td>Type HELP BNT0012 to view extended help for this code.</td>
</tr>
<tr>
<td>0000000D</td>
<td>This return code corresponds to logged message BNT0013.</td>
<td>Type HELP BNT0013 to view extended help for this code.</td>
</tr>
<tr>
<td>0000000E</td>
<td>This return code corresponds to logged message BNT0014.</td>
<td>Type HELP BNT0014 to view extended help for this code.</td>
</tr>
<tr>
<td>00000010</td>
<td>This return code corresponds to logged message BNT0016.</td>
<td>Type HELP BNT0016 to view extended help for this code.</td>
</tr>
<tr>
<td>00000013</td>
<td>This return code corresponds to logged message BNT0019.</td>
<td>Type HELP BNT0019 to view extended help for this code.</td>
</tr>
<tr>
<td>00000014</td>
<td>This return code corresponds to logged message BNT0020.</td>
<td>Type HELP BNT0020 to view extended help for this code.</td>
</tr>
<tr>
<td>0000001A</td>
<td>This return code corresponds to logged message BNT0026.</td>
<td>Type HELP BNT0026 to view extended help for this code.</td>
</tr>
<tr>
<td>0000000CA</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>000000CC</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td></td>
</tr>
</tbody>
</table>
CMIP Services Error Codes

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000CF
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D0
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D1
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D2
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D3
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D4
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D6
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D7
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

000000D8
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

0000012C
Explanation: One or more *.DAT or *.TAB files are damaged.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000012D
Explanation: One or more *.DAT or *.TAB files are damaged.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000012E
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

0000012F
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including related log entries, and contact IBM Service.
error code, including related log entries, and contact IBM Service.

00000130

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

00000131

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

00000132

Explanation: One or more *.DAT or *.TAB files are damaged.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

00000133

Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node. One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000134

Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000135

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

00000136

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

00000137

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

00000138

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.

00000139

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including related log entries, and contact IBM Service.
CMIP Services Error Codes

0000013A

Explanation: CMIP services detected one of the following errors:
- One or more of the *.DAT or *.TAB files is damaged.
- CMIP services received incorrect data from the manager node.
- An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response:
If the problem persists, the manager node might be sending incorrect data or an internal software problem might exist. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

0000013B

Explanation: One or more of the *.DAT or *.TAB files is damaged, or an internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000013C

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component. An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000013D

Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000013E

Explanation: CMIP services could not allocate enough storage to successfully complete a function.

Response: In order to obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, you might need to reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, if you are using the APPN accounting agent, you might need to change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

0000013F

Explanation: An internal software problem exists within the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000140

Explanation: An internal software problem exists within the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000141

Explanation: One or more of the *.DAT or *.TAB files are damaged, or an internal software problem exists within the CMIP services component.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000142

Explanation: An internal software problem exists within the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
### CMIP Services Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Explanation</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000143</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000144</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000145</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000146</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000147</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000148</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000149</td>
<td>CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see &quot;Tracing Data Sent by Manager Nodes&quot; on page 77. If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000014A</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000014B</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000014C</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000014D</td>
<td>CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see &quot;Tracing Data Sent by Manager Nodes&quot; on page 77. If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000014E</td>
<td>CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see &quot;Tracing Data Sent by Manager Nodes&quot; on page 77. If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
</tbody>
</table>
CMIP Services Error Codes

Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000014F

Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000150

Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000151

Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000152

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000153

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000154

Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000155

Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000156

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
error code, including any related log entries, and contact IBM Service.

00000157

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000158

Explanation: One or more of the *.DAT or *.TAB files are damaged, or an internal software problem exists within the CMIP services component.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000159

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000015A

Explanation: An internal software problem exists within the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000015B

Explanation: One or more *.DAT or *.TAB files are damaged.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000015C

Explanation: One or more *.DAT or *.TAB files are damaged.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000015D

Explanation: One or more *.DAT or *.TAB files are damaged.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

00000162

Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000164

Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000165

Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.

Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.
CMIP Services Error Codes

00000166
Explanation: CMIP services received incorrect data from the manager node.
Response: Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000167
Explanation: CMIP services received incorrect data from the manager node.
Response: Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000168
Explanation: CMIP services could not allocate enough storage to successfully complete a function, or an internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: In order to obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, you might need to reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, if you are using the APPN accounting agent, you might need to change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.
If the problem persists after increasing your available storage, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000169
Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control. If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

0000016A
Explanation: One or more of the *.DAT or *.TAB files are damaged, or CMIP services received incorrect data from the manager node.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control. If the problem persists, the manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

0000016B
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000177
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000178
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000179
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000017A
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
CMIP Services Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Explanation</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000017B</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000017C</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000017D</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000017E</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000017F</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000180</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
</tbody>
</table>

Appendix D. CMIP Services Error Codes
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Explanation</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000187</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000188</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000189</td>
<td>An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000190</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000191</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000192</td>
<td>An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000193</td>
<td>CMIP services detected one of the following errors:</td>
<td>Install the APPN TAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control. If the problem persists, the manager node might be sending incorrect data or an internal software problem might exist. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see “Tracing Data Sent by Manager Nodes” on page 77.</td>
</tr>
<tr>
<td>00000194</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000195</td>
<td>CMIP services received a request that specified an incorrect name of a managed object. The request can come from either an agent component attempting to register a managed object, or from a manager. The most likely cause is that the registration program (BNTRGSN.EXE) of the CMIP services component is not active. The status indicated for the CMIP services component should be unusable.</td>
<td>Restart the CMIP services component using APPN Management Control. Ensure that the status of CMIP services is updated to active. If this error code appears in the system error log while the status of the CMIP services component is active, contact IBM Service.</td>
</tr>
<tr>
<td>00000196</td>
<td>CMIP services received a request from a manager to create a managed object that already exists. For example, this can occur when:</td>
<td>CMIP services received a request from a manager to create a managed object that already exists. For example, this can occur when: 1. A manager creates an accounting management control object (AMCO). 2. The manager is then stopped and restarted (deleting its knowledge of the AMCO). 3. The manager then attempts to create the AMCO.</td>
</tr>
</tbody>
</table>
CMIP services sends an error response back to the manager. Upon receipt of the error response, if the manager regards this condition as an error, it issues an error message to the NetView operator or authorized receiver, and logs error information in the NetView log. In the example above, the accounting manager regards this condition as normal and does not issue an error message nor log error information.

**Response:** If the manager issues an error message and logs error information, the user of the manager is responsible for determining the corrective action to take.

00000197

**Explanation:** CMIP services received a request from a manager directed to a managed object that does not exist. For example, this can occur when:

1. A manager creates an accounting management control object (AMCO).
2. The accounting agent component is then stopped (deleting the AMCO).
3. The manager then attempts to retrieve data from the AMCO.

CMIP services sends an error response back to the manager. Upon receipt of the error response, the manager issues an error message to the NetView operator or authorized receiver, and logs error information in the NetView log.

**Response:** The user of the manager is responsible for determining whether this condition is an error and, if so, the corrective action to take.

00000198

**Explanation:** CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see **“Tracing Data Sent by Manager Nodes” on page 77**.

If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000199

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000019A

**Explanation:** One or more *.DAT or *.TAB files are damaged.

**Response:** Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000019B

**Explanation:** CMIP services received a request from a manager to delete a managed object that does not exist. For example, this can occur when:

1. A manager creates an accounting management control object (AMCO).
2. The accounting agent component is then stopped (deleting the AMCO).
3. The manager then attempts to delete the AMCO.

CMIP services sends an error response back to the manager. Upon receipt of the error response, the manager issues an error message to the NetView operator or authorized receiver, and logs error information in the NetView log.

**Response:** The user of the manager is responsible for determining whether this condition is an error and, if so, the corrective action to take.

0000019C

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000019D

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.
CMIP Services Error Codes

0000019E
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000019F
Explanation: CMIP services received a scoped request for objects that do not exist. The manager that sent the request determines whether this condition is normal or an error.
Response: The user of the manager is responsible for determining whether this condition is an error and, if so, the corrective action to take.

000001A0
Explanation: CMIP services received incorrect data from the manager node, or an internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: The manager node might be sending incorrect data. Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see [Tracing Data Sent by Manager Nodes](#) on page 77.
If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001A1
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001A2
Explanation: CMIP services received a request to create a managed object but no agent is registered to handle requests for that class of object. For example, this can occur when:
1. The accounting agent component is stopped.
2. The manager then attempts to create an accounting management control object (AMCO).
CMIP services sends an error response back to the manager. Upon receipt of the error response, the manager issues an error message to the NetView operator or authorized receiver, and logs error information in the NetView log.
Response: The user of the manager is responsible for determining whether this condition is an error and, if so, the corrective action to take.

000001A3
Explanation: CMIP services received an event notification from an agent component, such as the accounting agent, but the discriminator object program (BNTDISCR.EXE) of the CMIP services component is not active. The discriminator object program is required in order to process the event notification. The status indicated for the CMIP services component should be unusable.
Response: Restart the CMIP services component using APPN Management Control. Ensure that the status of CMIP services is updated to active. If this error code appears in the system error log while the status of the CMIP services component is active, contact IBM Service.

000001F4
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001F5
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001F6
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001F7
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this
error code, including any related log entries, and contact IBM Service.

000001F8
Explanation: The APPN accounting agent or APPN topology agent tried to send a CMIP linked reply, but the CMIP transaction identified in the linked reply no longer exists. The CMIP transaction was probably terminated because the corresponding manager abnormally ended without ending the CMIP transaction. CMIP services discards the CMIP linked reply.
Response: No action is required at the agent node. The termination of the CMIP transaction causes an error to be logged at the manager node, as well, and the corrective action is the responsibility of the user at the manager node.

000001F9
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000001FA
Explanation: CMIP services received incorrect data from the manager node.
Response: Capture the error by tracing the session data (at NetView or the agent node). For more information about tracing, see "Tracing Data Sent by Manager Nodes" on page 77.

00000258
Explanation: An internal software problem exists within the CMIP services component, or the OSI session to the manager has ended. If the OSI session has ended, the accounting manager or topology manager retries the CMIP transactions that were terminated.
Response: If the problem persists, record the information associated with this log entry, and contact IBM Service.

00000259
Explanation: BNTDISCR.EXE was started improperly.
Response: Start CMIP services using APPNMGMT or APPN Management Control.

0000025A
Explanation: One or more *.DAT or *.TAB files are damaged.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000025B
Explanation: One or more *.DAT or *.TAB files are damaged.
Response: Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control.

0000025C
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000025D
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000025E
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000025F
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
CMIP Services Error Codes

00000260
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000261
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000262
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000263
Explanation: The CMIP services program, BNTRGSN.EXE, unexpectedly ended.
Response: Restart CMIP services using APPNMGMT or APPN Management Control. Restart the APPN topology agent and APPN accounting agent if they were running.

00000264
Explanation: The CMIP services program BNTDISCR.EXE ended because BNTINFRA.EXE ended.
Response: Look in the error log to determine why BNTINFRA.EXE ended, and take the corrective action indicated by related error log entries. Restart CMIP services using APPNMGMT or APPN Management Control. Restart the APPN topology agent and APPN accounting agent if they were running.

00000265
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000266
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000267
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000268
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000269
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000270
Explanation: The CMIP services program, BNTRGSN.EXE, unexpectedly ended.
Response: Restart CMIP services using APPNMGMT or APPN Management Control. Restart the APPN topology agent and APPN accounting agent if they were running.

00000271
Explanation: The CMIP services program, BNTDISCR.EXE ended because BNTINFRA.EXE ended.
Response: Look in the error log to determine why BNTINFRA.EXE ended, and take the corrective action indicated by related error log entries. Restart CMIP services using APPNMGMT or APPN Management Control. Restart the APPN topology agent and APPN accounting agent if they were running.

00000272
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000273
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000274
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000275
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000276
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
error code, including any related log entries, and contact IBM Service.

<table>
<thead>
<tr>
<th>Error Code</th>
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<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>000002F1</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>000002F2</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>000002F3</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>000002F4</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>000002F5</td>
<td>CMIP services could not obtain the network-qualified CP name of the local agent node. Initialization of CMIP services fails.</td>
<td>Related system error log entries might have been created with more information to diagnose and fix the problem. Also, make sure Communications Manager/2 and its SNA subsystem are active before restarting CMIP services.</td>
</tr>
<tr>
<td>00000323</td>
<td>CMIP services received a CMIP message (a linked reply or a response) from the APPN accounting agent or APPN topology agent, but the OSI association identified in the CMIP message no longer exists. The OSI association was probably terminated because of a network error (such as an SNA session outage) before the CMIP message was sent. CMIP services discards the CMIP message.</td>
<td>No action is required at the agent node.</td>
</tr>
<tr>
<td>00000324</td>
<td>CMIP services received incorrect data from the manager node, or an internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000325</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000326</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000327</td>
<td>One or more of the *.DAT or *.TAB files are damaged, or an internal software problem exists within the CMIP services component.</td>
<td>Use this error code to diagnose the problem. Install the APPNTAM agent files again. See README file for instructions. Restart CMIP services using APPNMGMT or APPN Management Control. If the problem persists, an internal software problem might exist. Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000328</td>
<td>An internal software problem exists in the topology or accounting agent's use of the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
</tbody>
</table>

The termination of the OSI association causes an error to be logged at the manager node, as well, and the corrective action is the responsibility of the accounting manager, topology manager, or the user at the manager node.
CMIP Services Error Codes

error code, including any related log entries, and contact IBM Service.

00000329
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000032A
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000032C
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000032E
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000032F
Explanation: An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000331
Explanation: A recoverable error occurred trying to create a new OSI association.
Response: Related log entries are created identifying the cause of the problem. Use the information in these log entries to diagnose and fix the problem.

00000332
Explanation: An unexpected error occurred while trying to send a message. The related OSI association is ended.
Response: Related log entries are created identifying the cause of the problem. Use the information in these log entries to diagnose and fix the problem.

00000333
Explanation: CMIP services rejected an OSI association initiated by the manager node. The capabilities specified in the request are not supported.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000334
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000335
Explanation: CMIP services could not obtain the network-qualified CP name of the local agent node. Initialization of CMIP services fails.
Response: Related log entries might have been created with more information about the error. Use this information to diagnose and fix the problem. Also, make sure that Communications Manager/2 and its SNA subsystem are active before restarting CMIP services.

00000336
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000337
Explanation: An internal software problem exists within the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Explanation</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000338</td>
<td>The maximum number of OSI associations allowed by CMIP services has been</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>exceeded.</td>
<td></td>
</tr>
<tr>
<td>00000339</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>0000033A</td>
<td>The maximum number of local OSI associations allowed by CMIP services has</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>been exceeded.</td>
<td></td>
</tr>
<tr>
<td>0000035D</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the presentation mode is not valid.</td>
<td></td>
</tr>
<tr>
<td>0000035E</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the presentation protocol is not valid.</td>
<td></td>
</tr>
<tr>
<td>00000360</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the CMIP protocol version is not valid.</td>
<td></td>
</tr>
<tr>
<td>00000361</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the application context is not valid.</td>
<td></td>
</tr>
<tr>
<td>00000362</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the application context is missing.</td>
<td></td>
</tr>
<tr>
<td>00000363</td>
<td>An internal software problem exists within the CMIP services component or</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>in the topology or accounting agent’s use of the CMIP services component.</td>
<td></td>
</tr>
<tr>
<td>00000364</td>
<td>CMIP services received incorrect data from the manager node. The OSI</td>
<td>Record any associated information (such as log entries and messages) along with any associated trace information, and contact IBM Service.</td>
</tr>
<tr>
<td></td>
<td>capabilities specified by the message are not supported by CMIP services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specifically, the proposed presentation contexts are not valid.</td>
<td></td>
</tr>
<tr>
<td>00000365</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
<tr>
<td>00000366</td>
<td>An internal software problem exists within the CMIP services component.</td>
<td>Record the information associated with this error code, including any related log entries, and contact IBM Service.</td>
</tr>
</tbody>
</table>
CMIP Services Error Codes

00000386

**Explanation:** The APPN accounting agent or APPN topology agent received a non-CMIP message from CMIP services. This is a normal condition that both the APPN accounting agent and APPN topology agent should handle.

**Response:** This error code should only appear in trace records.

If it appears in log entries or error messages, an internal software problem exists within the APPN accounting agent or APPN topology agent component. Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000038F

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000393

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000394

**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000395

**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000396

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000397

**Explanation:** An internal software problem exists within the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000398

**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

00000399

**Explanation:** The APPN accounting agent or APPN topology agent requested data from CMIP services and none is available. This is a normal condition that both the APPN accounting agent and APPN topology agent should handle.

**Response:** This error code should only appear in trace records.

If it appears in log entries or error messages, an internal software problem exists within the APPN accounting agent or APPN topology agent component. Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000039B

**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000039D

**Explanation:** An internal software problem exists within the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.
error code, including any related log entries, and contact IBM Service.

0000039E
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

0000039F
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A0
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A1
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A2
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A3
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A4
Explanation: The maximum number of outstanding CMIP requests has been exceeded. The APPN accounting agent or APPN topology agent tried to start more CMIP requests than it is allowed.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A6
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A7
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003A9
Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003AB
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003AC
Explanation: An internal software problem exists in the topology or accounting agent's use of the CMIP services component.
Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.
## CMIP Services Error Codes

### 000003B0
**Explanation:** CMIP services is not active. The APPN accounting agent and APPN topology agent should handle this error code by retrying during initialization and ending if CMIP services ends while they are active.

**Response:** Start CMIP services using APPNMGMT or APPN Management Control. This error code can occur while CMIP services is initializing, in which case no user action is required.

### 000003B1
**Explanation:** An internal software problem exists within the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003B2
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003B8
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003B9
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BA
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BB
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BC
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BD
**Explanation:** An internal software problem exists in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BE
**Explanation:** An internal software problem exists within the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003BF
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

### 000003C1
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.
000003C2
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003C3
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003C4
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003C5
**Explanation:** An internal software problem exists within the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003CC
**Explanation:** No shared storage is available.

**Response:** In order to obtain additional memory, close unnecessary applications and remove unneeded files on the disk drive that contains the OS/2 swap file (SWAPPER.DAT). If the storage problem persists, you might need to reconfigure your system and use a disk drive that has more available storage space for the swap file; use the OS/2 SWAPPATH command to define the drive and path for the swap file. Also, if you are using the APPN accounting agent, you might need to change the accounting agent work directory to a different drive; use the APPNACCT environment variable to specify the drive and path for the accounting agent work directory.

Restart the program that logged the error.

000003CD
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

**Note:** This error can also occur if CMIP services, the APPN accounting agent, or the APPN topology agent ends abnormally. If this happens, restart the component that ended.

000003CE
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003CF
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D0
**Explanation:** CMIP services, the APPN accounting agent, or the APPN topology agent tried to receive a message from another APPNTAA program and no data is available. This is a normal condition that all APPNTAA programs should handle.

**Response:** This error code should only appear in trace records.

If it appears in log entries or error messages, an internal software problem exists in CMIP services, the APPN accounting agent, or the APPN topology agent. Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D1
**Explanation:** An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

**Response:** Record the information associated with this error code, including any related log entries, and contact IBM Service.
CMIP Services Error Codes

error code, including any related log entries, and contact IBM Service.

Note: This error can also occur if CMIP services, the APPN accounting agent, or the APPN topology agent ends abnormally. If this happens, restart the component that ended.

000003D2

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

Note: This error can also occur if CMIP services, the APPN accounting agent, or the APPN topology agent tries to send a message to another APPNTAA program that is not active, initializing, or was active and ended abnormally. If this happens, restart all components that should be active.

000003D3

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D4

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D5

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D6

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D7

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D8

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003D9

Explanation: An internal software problem exists within the CMIP services component or in the topology or accounting agent’s use of the CMIP services component.

Response: Record the information associated with this error code, including any related log entries, and contact IBM Service.

000003DA

Explanation: CMIP services, the APPN accounting agent, or the APPN topology agent tried to receive a message from another APPNTAA program and no data is available. This is a normal condition that all APPNTAA programs should handle.

Response: This error code should only appear in trace records.

If it appears in log entries or error messages, an internal software problem exists in CMIP services, the APPN accounting agent, or the APPN topology agent. Record the information associated with this error code, including any related log entries, and contact IBM Service.
00003E0

Explanation: The maximum number of messages in all OS/2 queues has been reached.

Response: Stop CMIP services and restart.
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