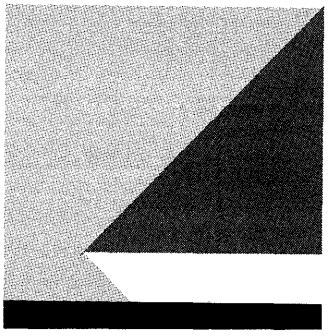
NetView™

SC30-3376-1

Operation Scenarios

Release 2



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5665-362 (MVS/XA)
5664-204 (VM)

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This edition is a major revision of ST30-3376-0 (formerly SC30-3376-0); however, it neither replaces nor obsoletes ST30-3376-0. This edition applies just to Release 2 of the NetView™ program, which runs under the following operating systems:

MVS/370 (program number 5665-361)
MVS/XA (program number 5665-362)
VM (program number 5664-204).

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Contents

About This Book

This book contains scenarios demonstrating some common problems that can occur with a large and complex network. The scenarios show how you can use the NetView™ program[1] to identify and solve network problems. This book also includes a summary of the major components of NetView, and reviews the fundamentals of problem solving described in other NetView publications.

Who Should Use This Book

This book is intended for network operators whose main responsibilities are to keep the system running smoothly and to solve user problems. The NetView program helps you identify and isolate problems in the network. In many cases, NetView recommends the actions you should take to fix a problem.

This book gives you suggestions for using NetView to identify and solve some common problems. The scenario examples are for illustration purposes only and may not exactly apply to all environments.

This book assumes that you are familiar with:

- The IBM 3270 terminal
- *NetView Operation Primer*, SC30-3363
- *Learning about NetView*, SKT2-0292, a PC-based tutorial
- The principles of networking and IBM Systems Network Architecture (SNA) terminology
- The NetView program commands introduced in the *NetView Operation Primer* and tutorial.

Some of the scenarios you will investigate in this manual are similar to scenarios you have worked with in *Learning about NetView* and *NetView Operation Primer*. There are often several ways you can investigate a problem. In *Learning about NetView*, you frequently solve problems by performing every action listed on the NetView help desk panels. As you learn more about NetView, you can take shorter routes to solve problems. Some of these shortcuts are presented in this manual.

How to Use This Book

This book consists of four chapters and three appendixes. The first chapter provides general information about the NetView program and problem solving strategies. Chapters 2 through 4 present scenarios that describe common alerts, logon failures, and terminal malfunctions that can occur in a complex network. Appendixes A, B, and C provide information about the panels presented in the scenarios.

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[1] NetView is a trademark of International Business Machines Corporation.

This book is organized as follows:

- **Chapter 1. Guidelines for Solving Problems** discusses NetView's problem solving tools, how to detect problems, and suggested problem solving strategies.
- **Chapter 2. Alerts** shows you how to investigate two typical NetView alerts: Remote Device Failure and Error-to-Traffic Ratio Exceeded. It also gives a brief description of the Link Problem Determination Aid (LPDA-1 and LPDA-2). Since the error-to-traffic alert is investigated differently depending on whether the resources involved in the alert use LPDA-1 software or LPDA-2 software, two versions of this scenario are presented: Error-to-Traffic Ratio Exceeded, Using LPDA-1 and Error-to-Traffic Ratio Exceeded, Using LPDA-2.
- **Chapter 3. Logon Failures** demonstrates how you investigate four types of logon problems: Application Not Active, Bind Failure, Cross-Network Session Is Rejected, and NCP/Token-Ring Interconnection.
- **Chapter 4. Terminals Not Responding** presents four types of problems in which a user does not get responses from a terminal: DTE Power Loss, Local Modem Not Powered On, Application Stops Responding, and Cross-Domain Session Is Lost. The DTE Power Loss scenario shows you how to use the NetView help desk to investigate a network problem.
- **Appendix A. Session Monitor Panels** gives a detailed description of the session monitor panels displayed in the scenarios.
- **Appendix B. Hardware Monitor Panels** provides a detailed description of the hardware monitor panels displayed in the scenarios.
- **Appendix C. Status Monitor Panels** provides a detailed description of the status monitor panels displayed in the scenarios.

Notes on Terms Used in This Book

Throughout this book, unless otherwise noted, the abbreviations for products refer to the latest version and release of the product.

References to VTAM include VTAM V3R1.1, VTAM V3R1.2, and VTAM V3R2.

References to VM apply to VM/SP, VM/SP HPO, and VM/XA.

References to MVS include MVS/370 and MVS/XA.

Other terms used in this book are defined in the Glossary.

What Is New In This Book

Three new operation scenarios have been added:

- Error-to-Traffic Ratio Exceeded, Using LPDA-2
- Cross-Network Session Is Rejected
- NCP/Token-Ring Interconnection Problem

In addition, this book includes three new appendixes that provide detailed information about the session monitor, hardware monitor, and status monitor panels displayed in the book's scenarios.

Where To Find More Information

Figure 1 shows the books in the NetView program library, arranged according to related tasks. Other publications you may want to use in conjunction with the NetView books are listed in the bibliography.

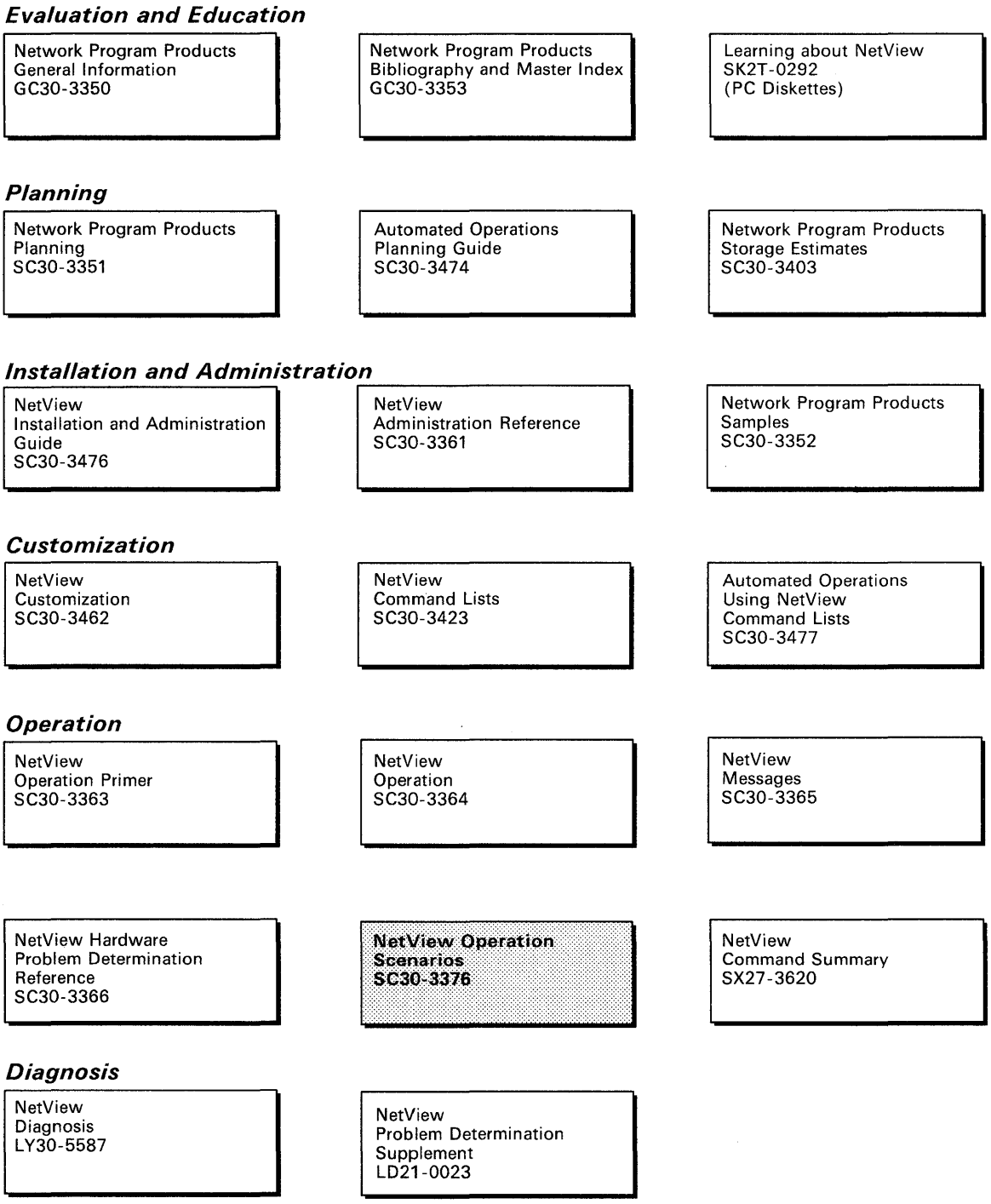

Figure 1. The NetView Library

Chapter 1. Guidelines for Solving Problems

Chapter 1. Guidelines for Solving Problems

As a network grows in size and becomes more complex, it becomes increasingly difficult to manage. The NetView™ program[2] addresses this problem by providing a comprehensive set of tools for network management. These tools help you to:

- Monitor the physical network, using the *hardware monitor*.
- Determine the status of network resources, using the *status monitor*.
- Monitor the logical network, using the *session monitor*.

Components of NetView

NetView consists of the following components:

Browse Facility

Allows you to look at the network log, which records your network activity, or to look at members of NetView data sets (MVS) or NetView files (VM).

Command Facility

Includes the operator interface and network logging facilities. It is also referred to as NCCF.

NetView Help Desk

Provides a systematic problem-solving approach to network problems.

Hardware Monitor

Provides information about the physical network resources. This includes failure information that shows probable causes and recommended actions. It is also referred to as NPDA.

4700 Support Facility

Provides information about the 3600 and 4700 Finance Communications Systems. Failure information is also included. This is also referred to as TARA. It is supported for MVS and VSE only.

Session Monitor

Provides information about the logical network resources. This includes session-related information such as session awareness, session trace, and response time measurement. It is also referred to as NLDM.

Status Monitor

Displays the status of network resources in a hierarchical manner and allows you to browse the network log. It is also referred to as STATMON.

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[2] NetView is a trademark of International Business Machines Corporation.

Online Help Facility

Displays a brief overview of each NetView component and help information for the NetView components, panels, and commands.

How These Scenarios Help You

Each scenario demonstrates how you can use some of NetView's tools to identify and isolate the problem presented. Keep in mind that the scenarios are a representative sample of the problems that can occur with a large and complex network. Once you are comfortable using NetView, you will be able to adapt the procedures to meet the needs of your environment.

Each scenario presents a problem situation and suggests, in detail, the procedures for isolating the problem. Each scenario gives you the following information:

- Scenario name
- Description of the symptom
- Brief summary of the actions you will take
- Step-by-step procedures with supporting panel illustrations.

The scenario procedures assume that you have run the PFKDEF CLIST you received with NetView and that your network uses the NetView default PF key definitions. If your network uses different PF key definitions, press the PF key that corresponds to the function you want.

How You Discover a Problem

This book shows two common ways to discover a problem:

- Alerts display on the Alerts-Dynamic panel.
- Users call you.

The hardware monitor gathers information about *events* in the network. An event is an unexpected occurrence in the network. *Alerts* are events that require immediate attention. When the hardware monitor detects an alert condition, it displays the alert on the Alerts-Dynamic panel, as shown in Figure 2 on page 5.

The alerts you investigate may depend upon your work environment. Your installation may use *filters* to assign problems to specific NetView operators. One terminal may constantly display all alerts, and another terminal may display only the alerts that *you* are required to investigate. In other installations, the lead operator or system programmer may assign alerts as they occur.

Problems that *do not* appear on the Alerts-Dynamic panel include:

- Poor response time
- Terminal not functioning
- Logon failure.

When these problems occur, users will call to let you know that they are experiencing problems with the network.

How to Display the Alerts-Dynamic Panel

Make sure you are logged on to NetView. To display the Alerts-Dynamic panel for the hardware monitor:

- Type npda ald
- Press ENTER.

The Alerts-Dynamic panel displays:

```
N E T V I E W                                  OPER3          03/20/86  11:53:14
 NPDA-30A                  * ALERTS-DYNAMIC *                    DOMAIN:  CNM01


 RESNAME TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
 A03L05  LINE 03/20/11:52 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:50 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:49 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 A03L05  LINE 03/20/11:45 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:43 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:29 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:27 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 A03L05  LINE 03/20/11:18 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:01 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:55 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:49 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:44 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03P051 TERM*03/20/10:42 POWER OFF/INVALID ADDRESS:DEVICE
 A03P051 TERM*03/20/10:42 POWER OFF/INVALID ADDRESS:DEVICE
 A03L05  LINE 03/20/10:21 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 DEPRESS ENTER KEY TO VIEW ALERTS-STATIC

  ???
CMD==>
```

As failures occur, the newest alert appears at the top of the list on the panel, and the oldest alert is scrolled off the bottom. NetView's hardware monitor provides more details about these alerts, including recommended actions you can take to investigate and solve the problems that caused the alerts. For more information about the data presented on the Alerts-Dynamic panel, see page 144 of "Appendix B. Hardware Monitor Panels."

Problem Solving Strategies

Keep in mind that you cannot solve every problem. There are some problems for which you will only be able to isolate the failing component. When you cannot solve a problem, refer it to the appropriate area for corrective action.

You can always start your problem investigation by using the NetView help desk. The help desk is an online facility that guides you through a series of panels that offer detailed techniques for identifying problems. You can also use the online help facility to display information on terms and commands that appear on NetView panels. See "Scenario: DTE Power Loss, Using the NetView Help Desk" on page 77 for an example of how you can use the NetView online help desk to investigate a problem.

What to Do Next

Your installation probably has procedures for ensuring that the system is operating smoothly and that all resources are available to the users. Always follow your installation's procedures for:

- Monitoring the system
- Reporting problems.

When you cannot solve a problem, forward it to the proper area for corrective action. Make sure you follow your installation's procedures for referring problems. For example, the telephone company, a system programmer, or the hardware installation group may be required to correct the problem. You may also be required to record problems to the Information/Management System or to the problem tracking system your installation uses.

If a user called to notify you of a problem, tell the user the results of your investigation, including whether or not you forwarded the problem to someone else.

Chapter 2. Alerts

Chapter 2. Alerts

Scenario: Remote Device Failure

Symptom

While you are monitoring the Alerts-Dynamic panel, a DTR DROP alert for device A03P001 appears. This alert means that a 3174 controller is not ready to transmit or receive data from the modem. In this example, the alert is:

```
A03P001 CTRL 03/20 16:23 DTR DROP:DEVICE
```

The Network Control Program (NCP) constantly checks active devices for data transmissions. If the NCP does not get a response within 3 seconds (or a limit set by your installation), it generates a time-out alert. The NCP sends an event record stating that the DTR connection (lead) to the control unit is inactive. NetView automatically checks the status information for the cable connections.

Action Summary

- Go from the Alerts-Dynamic panel to the Alerts-Static panel. Find the alert message on the Alerts-Static panel.
- Display and review the Recommended Action for Selected Event panel for the alert. Determine that this is not a user or installation problem.
- Call the operator responsible for this control unit and ask him to run remote tests on device A03P001.
- Follow your installation's procedures for submitting a problem to technical support.

Procedure

Follow these steps to investigate this problem:

1. As alerts occur, NetView automatically displays them on the Alerts-Dynamic panel. To view the static display, press ENTER. Incoming alerts will not appear on the static panel. The Alerts-Static panel appears:

```
N E T V I E W                                NETOP2     03/20/87 16:23:55
NPDA-30B                  * ALERTS-STATIC *                 DOMAIN: CNM01

SEL# RESNAME TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) A03P001 CTRL 03/20 16:23 DTR DROP:DEVICE
( 2) A03L04  LINE 03/20 14:50 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 3) A03L08  LINE 03/20 14:50 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 4) A03L05  LINE 03/20 14:17 OPERATION CHECK:HOST PROGRAM
( 5) A03NV4  CTRL 03/20 14:17 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 6) A03L05  LINE 03/20 14:16 OPERATION CHECK:HOST PROGRAM
( 7) A03NV4  CTRL 03/20 14:15 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 8) A03NV4  CTRL 03/20 14:14 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 9) A03NV4  CTRL 03/20 14:13 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(10) A03NV4  CTRL 03/20 14:13 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(11) A03NV4  CTRL 03/20 14:12 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(12) A03NV4  CTRL 03/20 14:11 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(13) A03NV4  CTRL 03/20 14:11 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(14) A03NV4  CTRL 03/20 14:10 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
DEPRESS ENTER KEY TO VIEW ALERTS-DYNAMIC OR ENTER A TO VIEW ALERTS-HISTORY
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)


 ???
CMD==>
```

2. Look at selection 1 (SEL# 1) on the Alerts-Static panel to see the DTR DROP problem on device A03P001. For a detailed explanation of the information presented on this panel, see page 149 of "Appendix B. Hardware Monitor Panels."

   You can display online recommendations to correct the DTR DROP problem. To review the recommended actions for selection 1:

   - Type 1
   - Press ENTER.

The Recommended Action for Selected Event panel appears:

```
N E T V I E W                                          NETOP2     03/20/87 16:24:12
NPDA-BNIFFD12       * RECOMMENDED ACTION FOR SELECTED EVENT *        PAGE 1 OF 1
  CNM01          A03NV4       A03L00     A03P001
                +---------+              +---------+
  DOMAIN        |  COMC   |----LINE----|  CTRL   |
                +---------+              +---------+
 USER     CAUSED - REMOTE DEVICE REINITIALIZED
         ACTIONS - D001 - CORRECT THEN RETRY

 INSTALL CAUSED - NONE

 FAILURE CAUSED - REMOTE DEVICE
         ACTIONS - D004 - RUN REMOTE DEVICE TESTS
                   D005 - CONTACT APPROPRIATE SERVICE REPRESENTATIVE




ENTER ST TO VIEW MOST RECENT STATISTICS, OR D TO VIEW DETAIL DISPLAY

 ???
CMD==>
```

Review the information on the panel. For an explanation of the data presented on this panel, see page 176 of "Appendix B. Hardware Monitor Panels."

For this scenario, assume you followed the recommended action for USER CAUSED and that did not fix the problem. Since there are no recommended actions for INSTALL CAUSED, try action D004, the first recommended action for FAILURE CAUSED. If you need it, you can display an explanation of recommended action D004 by typing `ACTION D004` on the command line and pressing ENTER. For more information about the ACTION CLIST, type `HELP ACTION` on the command line for online help, or see *NetView Operation*.

3. Call the operator responsible for this control unit and ask him to run tests on remote device A03P001.
4. Follow your installation's procedures for submitting a problem to technical support.
5. To return to the Alerts-Dynamic panel:
   - Type ald
   - Press ENTER.

Using Link Problem Determination Aid

Link Problem Determination Aid (LPDA) is a series of testing programs that reside in the modems attached to communication controllers and cluster controllers. LPDA is used by the Network Control Program (NCP) to determine the status of modems and attached devices and to test the transmission quality of communication links.

Two sets of LPDA programs exist. LPDA-1 software is used to test IBM 386X modems, including IBM 3863, 3864, 3865, and 3868 modems. LPDA-1 can also be used to test IBM 586X modems. LPDA-2 is used to test only IBM 586X modems, including IBM 5865, 5866, and 5868 modems.

The LPDA-1 and LPDA-2 programs run independently of the NetView program product. However, you can use NetView's hardware monitor component to request that the following LPDA-1 or LPDA-2 tests be run on the modems in your network:

LPDA-1

Remote data terminal equipment interface test (DTE)
Link status test (LS)
Remote modem self-test (RST)

LPDA-2

Line analysis test (LA)
Modem and line status test (MLS)
Transmit receive test (TRT)

When requesting LPDA data, you do not need to specify the LPDA-1 or LPDA-2 operand of the test command. The NCP knows whether the line containing these two modems supports LPDA-1, LPDA-2, or neither program, and the NCP passes this information to the hardware monitor. The hardware monitor then presents the appropriate menu (LPDA-1 Command Menu or LPDA-2 Command Menu) or gives you an error message stating that the test you requested cannot be performed for the resources you specified.

"Scenario: Error-to-Traffic Ratio Exceeded, Using LPDA-1" on page 13 and "Scenario: Error-to-Traffic Ratio Exceeded, Using LPDA-2" on page 20 show how the same error-to-traffic ratio problem can be investigated using LPDA-1 and using LPDA-2. For more information about how LPDA-1 and LPDA-2 can be used with NetView's hardware monitor, see *NetView Hardware Problem Determination Reference*.

Scenario: Error-to-Traffic Ratio Exceeded, Using LPDA-1

Symptom

An ERROR TO TRAFFIC RATIO EXCEEDED alert appears on the Alerts-Dynamic panel. In this example the alert is:

```
A03P001 CTRL 03/05 13:57 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
```

This alert means that the number of data transmissions sent more than once to controller A03P001 exceeded the maximum acceptable error rate. If this situation continues, users may experience poor response time. If the line continues to deteriorate, the affected line and the sessions on it may fail.

Action Summary

- Go from the Alerts-Dynamic panel to the Alerts-Static panel. Find the alert message on the Alerts-Static panel.
- Display the Recommended Action for Selected Event panel for the event. Review the Most Recent Traffic Stats for SDLC Sta. w/LPDA panel to verify the extent of the problem.
- Use the Link Problem Determination Aid (LPDA) Data panel to review LPDA data for the overall quality of the communication link.
- Use the TEST command to find the current condition of the line. Review the Link Status and Test Results display for any indication of a problem with the local modem. No problem is found.
- Review the test results (next page of the panel) for any indication of a problem with the remote modem. Determine that it is a problem with the line quality.
- Follow your installation's procedures for submitting a problem report.

Procedure

Follow these steps to investigate this problem.

1. As they occur, NetView automatically presents alerts on the dynamic display. To view the error-to-traffic alert on a static display, press ENTER. Incoming alerts will not appear on the static panel. The Alerts-Static panel appears:

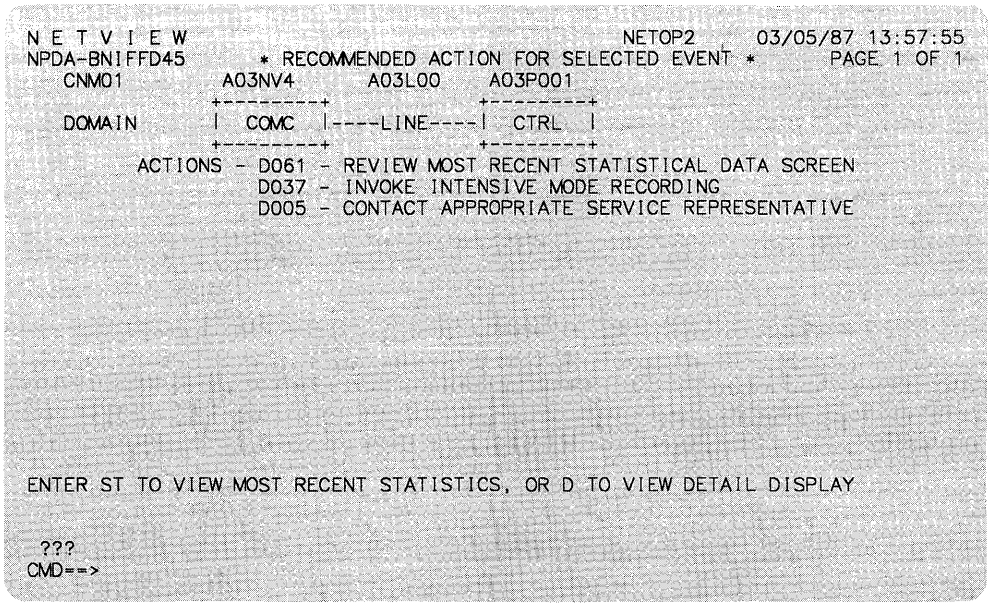
```
N E T V I E W                                    NETOP2     03/05/87 13:57:40
NPDA-30B                    * ALERTS-STATIC *                    DOMAIN: CNM01

SEL# RESNAME   TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) A03P001   CTRL 03/05 13:57 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 2) A03P001   CTRL 03/05 13:50 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 3) A03P001   CTRL 03/05 13:50 POWER LOSS DETECTED:REMOTE MODEM OFF/RMT MODEM
( 4) A03L05    LINE 03/05 13:49 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
( 5) A03P001   CTRL 03/05 13:49 POWER LOSS DETECTED:REMOTE MODEM OFF/RMT MODEM
( 6) T45A3E18  DEV  03/05 13:26 SNA DATA STREAM ERROR:HOST PROGRAM
( 7) A03L05    LINE 03/05 13:17 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 8) A03L05    LINE 03/05 12:28 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
( 9) A03P009   CTRL 03/05 12:22 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
(10) A03P009   CTRL 03/05 12:22 FORMAT EXCEPTION:DEVICE
(11) A03P010   CTRL 03/05 12:21 (SNA LEVEL PROTOCOL:APPLICATION SUBSYSTEM)
(12) A03L05    LINE 03/05 12:20 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
(13) A03P009   CTRL 03/05 12:20 FORMAT EXCEPTION:DEVICE
(14) A03P051   TERM*03/05 11:42 POWER OFF/INVALID ADDRESS:DEVICE
DEPRESS ENTER KEY TO VIEW ALERTS-DYNAMIC OR ENTER A TO VIEW ALERTS-HISTORY
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)


 ???
CMD==>
```

2. Look at selection 1 (SEL# 1) to see the ERROR-TO-TRAFFIC RATIO EXCEEDED:COMMUNICATIONS alert on the panel. For a detailed explanation of the information presented on the Alerts-Static panel, see page 149 of "Appendix B. Hardware Monitor Panels."

   You can display online recommended actions for correcting the error-to-traffic problem. To review the recommended actions for selection 1:

   - Type 1
   - Press ENTER.

   The Recommended Action for Selected Event panel appears:



3. Since hardware monitor statistics provide information about traffic and temporary errors in the network, the first recommended action suggests that you review the most recent traffic statistical data. To do this, enter ST as instructed at the bottom of the panel.

   If you want to display an explanation of this recommended action first, you can enter ACTION D061. For more information about the ACTION CLIST, type HELP ACTION on the command line for online help, or see *NetView Operation*. Also, if you want an explanation of the information presented on the Recommended Action for Selected Event panel, see page 176 of "Appendix B. Hardware Monitor Panels."

   To display the most recent traffic statistical data:

   - Type st
   - Press ENTER.

   The Most Recent Traffic Stats for SDLC Sta. w/LPDA panel appears:

```
N E T V I E W                                          NETOP2     03/05/87 13:58:51
NPDA-51A    * MOST RECENT TRAFFIC STATS FOR SDLC STA. W/LPDA *      PAGE 1 OF 2

  CNM01          A03NV4        A03L00      A03P001
                +---------+                +---------+
  DOMAIN        |  COMC   |----LINE----|   CTRL   |
                +---------+                +---------+

             STAT    TOTAL  TOTAL   E/T RATIO   TRANSMISSIONS        RECEIVES
 DATE/TIME   TYPE  TRAFFIC  TEMPS    SET CALC  TRAFFIC   TEMPS  TRAFFIC  TEMPS
03/05 13:57 TEMP-1     938     52    3.0  5.5      495      52      443      0
03/05 13:50 TEMP-1     959     41    3.0  4.3      500      41      459      0
03/05 13:43 TRAF-1     974     28    3.0  2.9      501      28      473      0
03/05 13:36 TRAF-1     968     28    3.0  2.9      498      28      470      0
03/05 13:29 TRAF-1     967     24    3.0  2.5      496      24      472      0
03/05 13:22 TRAF-1     968     24    3.0  2.4      496      24      472      0
03/05 13:15 TRAF-1     980     20    3.0  2.0      500      20      480      0
03/05 13:08 TRAF-1     983     17    3.0  1.7      500      17      483      0
03/05 13:01 TRAF-1     989     11    3.0  1.1      500      11      489      0
03/05 12:54 TRAF-1     992      8    3.0  0.8      500       8      492      0

ENTER A (LPDA DATA) OR EV (EVENT)


 ???
CMD==>
```

   This panel shows the error-to-traffic (E/T) statistics for this line. The E/T ratio threshold, which specifies the maximum acceptable error rate, is set at 3.0 (3.0%). Notice the calculated (CALC) error rates of 4.3 at 13:50 and 5.5 at 13:57. These exceeded the limit of 3.0 and caused the alerts to be generated. Look down the column and notice that the error rate has been gradually increasing since 12:54. Now you have verified the severity of the problem.

   If you want more information about the statistics presented on the Most Recent Traffic Stats for SDLC Sta. w/LPDA panel, see page 173 of "Appendix B. Hardware Monitor Panels."

4. To help isolate the problem, you can examine the Link Problem Determination Aid (LPDA) data for the line.

   To review the available LPDA data for this line, follow the instructions at the bottom of the panel:

   - Type a
   - Press ENTER.

   The Link Problem Determination Aid (LPDA-1) Data panel appears:

```
N E T V I E W                                        NETOP2     03/05/87 13:59:18
NPDA-52A   * LINK PROBLEM DETERMINATION AID (LPDA-1) DATA *          PAGE 1 OF 2

  CNM01        A03NV4          A03L00   01   A03P001
               +--------+  +-+         +-+  +--------+
  DOMAIN       |  COMC  |  |M|--LINE--|M|  |  CTRL  |
               +--------+  +-+         +-+  +--------+
            ***** LOCAL-MODEM-DATA *****   ***** REMOTE-MODEM-DATA ****
            RCV     LINE  IMPULS LOST RE     RCV     LINE  IMPULS LOST RE   DATA
 DATE/TIME  LEVEL   QUAL  HITS  RLSD INT   LEVEL   QUAL  HITS  RLSD INT   RATE
03/05 13:57  -18  GOOD/0  0     NO   NO      -17  BAD/15  0     NO   NO    FULL
03/05 13:50  -19  GOOD/0  0     NO   NO      -17  BAD/15  0     NO   NO    FULL
03/05 13:43  -18  GOOD/0  0     NO   NO      -19  GOOD/4  0     NO   NO    FULL
03/05 13:36  -16  GOOD/0  0     NO   NO      -18  GOOD/4  0     NO   NO    FULL
03/05 13:29  -18  GOOD/0  0     NO   NO      -17  GOOD/3  0     NO   NO    FULL
03/05 13:22  -18  GOOD/0  0     NO   NO      -20  GOOD/3  0     NO   NO    FULL
03/05 13:15  -19  GOOD/0  0     NO   NO      -21  GOOD/2  0     NO   NO    FULL
03/05 13:08  -20  GOOD/0  0     NO   NO      -23  GOOD/2  0     NO   NO    FULL
03/05 13:01  -17  GOOD/0  0     NO   NO      -21  GOOD/1  0     NO   NO    FULL
03/05 12:54  -18  GOOD/0  0     NO   NO      -17  GOOD/0  0     NO   NO    FULL


 ???
CMD==>
```

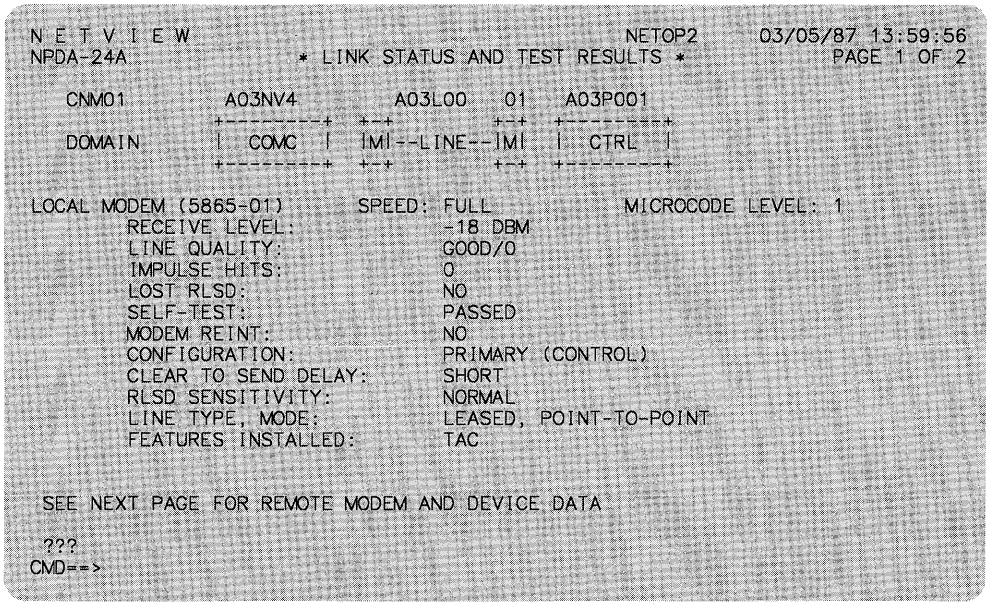
   Since this panel displays LPDA-1 data, you know that the line is equipped with 386X-family modems or with 586X-family modems, and the line has been defined in the Network Control Program (NCP) as a line that is operating in LPDA-1 mode. The display of LPDA-2 data would have indicated that the line was equipped with 586X-family modems and had been defined in the NCP as a line operating in LPDA-2 mode. For an explanation of the information presented on the Link Problem Determination Aid (LPDA-1) Data panel, see page 156 of "Appendix B. Hardware Monitor Panels."

   Notice that the Remote Modem Data LINE QUAL is BAD at 13:50 and 13:57. To find out whether the problem is with the modem or the line, you can use the hardware monitor TEST command. The TEST command lets you evaluate the links between the communication controller (A03NV4) and the controller resource identified in the alert (A03P001).

5. To run a link status (LS) test from NCP A03NV4 to the resource that generated the alert (A03P001), enter the following:

   - Type test a03nv4 a03p001 ls
   - Press ENTER.

   The Link Status and Test Results panel appears for the local modem:



Look at this panel for some of the indicators that may suggest a local modem problem:

- SELF-TEST—PASSED indicates there is no problem.
- MODEM REINT—NO means it has not been reinitialized.

After reviewing the panel, you'll notice that there is no indication of a problem. For a detailed explanation of the data presented on page 1 of the Link Status and Test Results panel, you can turn to page 159 of "Appendix B. Hardware Monitor Panels." Since no problem is evident on page 1 of this panel, you can display the next page of the panel to review information on the remote modem.

6. To display the next page of the panel, press PF8 or ENTER.

   Page 2 of the Link Status and Test Results panel presents information on the remote modem:

```
N E T V I E W                                          NETOP2     03/05/87 14:00:18
NPDA-24A              * LINK STATUS AND TEST RESULTS *                 PAGE 2 OF 2

   CNM01        A03NV4          A03L00   01   A03P001
                +--------+  +-+         +-+  +--------+
   DOMAIN       |  COMC  |  |M|--LINE--|M|  |  CTRL  |
                +--------+  +-+         +-+  +--------+

   REMOTE MODEM
            POWER LOSS DETECTED:    NO
            RECEIVE LEVEL:          -17 DBM
            LINE QUALITY:           BAD/15
            IMPULSE HITS:           0
            LOST RLSD:              NO
            MODEM REINT:            NO
            SNBU ACTIVE:            NO

   REMOTE DEVICE
            DTR DROP DETECTED:      NO
            POWER DROP DETECTED:    NO
            STREAMING:              NO


 ???
CMD==>
```

   Look at the panel for the following problem indicators:

   - POWER LOSS DETECTED—NO indicates no loss of power in the remote modem.
   - LINE QUALITY—BAD indicates a problem with the quality of the signal being received by the modem.

   Since the remote modem is finding a line quality problem, you may soon be getting phone calls from users reporting poor response.

   To find out more about the information presented on this second page of the Link Status and Test Results panel, see page 162 of "Appendix B. Hardware Monitor Panels."

7. Follow your installation's procedures for submitting a problem report. This will direct the problem to the appropriate area for correction.

8. To return to the Alerts-Dynamic panel:

   - Type ald
   - Press ENTER.

Scenario: Error-to-Traffic Ratio Exceeded, Using LPDA-2

Symptom

An ERROR TO TRAFFIC RATIO EXCEEDED alert appears on the Alerts-Dynamic panel. In this example, the alert is:

```
P4511C3 CTRL 03/16 10:29 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
```

This alert means that the number of tries needed to send data to controller P4511C3 exceeded the maximum acceptable error rate. If this condition continues, users may experience poor response time. Also, if the error rate increases, the affected line and the sessions on it may fail.

Action Summary

- Go from the Alerts-Dynamic panel to the Alerts-Static panel. Find the alert message on the Alerts-Static panel.
- Display the Recommended Action for Selected Event panel for the alert. Review the Most Recent Traffic Stats for SDLC Sta. w/LPDA panel to determine the seriousness of the problem and how long it has existed.
- Use the Modems and Associated Links test facility to run tests on the modems and lines between the communication controller and the cluster controller.
- Review the test results and observe that no problem exists with the modems. Determine that the problem is poor line quality.
- Follow your installation's procedures for submitting a problem report.

Procedure

Follow these steps to investigate this problem:

1. As alerts occur, NetView presents them on the Alerts-Dynamic panel. When a new alert is displayed at the top of the screen, the oldest alert is scrolled off the bottom. To leave the Alerts-Dynamic panel and view the error-to-traffic alert on the Alerts-Static panel, press ENTER. The Alerts-Static panel displays:

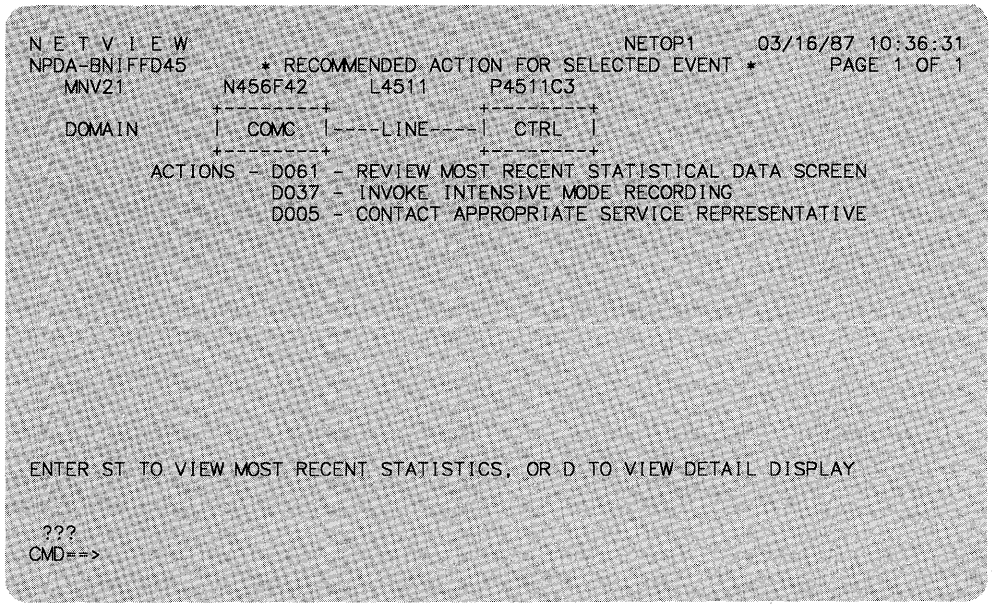
```
N E T V I E W                                    NETOP1     03/16/87 10:35:22
NPDA-30B                        * ALERTS-STATIC *                 DOMAIN: MNV21

SEL# RESNAME  TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) P4511C3  CTRL 03/16 10:29 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 2) LDEV0436 LDEV 03/16 09:59 OPERATION CHECK:HOST PROGRAM
( 3) P4511C3  CTRL 03/16 09:40 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 4) P4511C3  SSYS 03/16 09:36 RESOURCE AVAILABLE
( 5) P4511C3  SSYS 03/16 09:36 RESOURCE AVAILABLE
( 6) EWLINK1  SSYS 03/16 09:33 RESOURCE INACTIVATED
( 7) EWLINK1  LINE 03/16 09:33 DSR FAILED TO RAISE:LOCAL MODEM OFF/LOCAL MODEM
( 8) P4511C3  SSYS 03/16 09:32 RESOURCE AVAILABLE
( 9) L4511    SSYS 03/16 09:24 RESOURCE AVAILABLE
(10) NCP8F    COMC 03/16 09:23 HARDWARE ERROR:LINE ADAPTER
(11) LR686823 SSYS 03/16 09:17 RESOURCE AVAILABLE
(12) LR686823 SSYS 03/16 09:17 RESOURCE INACTIVATED
(13) LR686823 SSYS 03/16 09:15 RESOURCE AVAILABLE
(14) L4511    SSYS 03/16 09:13 RESOURCE INACTIVATED
DEPRESS ENTER KEY TO VIEW ALERTS-DYNAMIC OR ENTER A TO VIEW ALERTS-HISTORY
ENTER SEL# (ACTION),OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)

 ???
CMD==>
```

   On this static panel, incoming alerts are not displayed. For a detailed explanation of the information presented on the Alerts-Static panel, see page 149 of "Appendix B. Hardware Monitor Panels."

2. Notice that the most recent error-to-traffic alert is selection 1 (SEL# 1) on the Alerts-Static panel. To see NetView's recommendations on how to investigate and correct the problem:

   - Type 1
   - Press ENTER.

   The Recommended Action for Selected Event panel appears:



   The hardware monitor collects information about temporary errors and traffic (data transmissions) in the network. The first action (D061) suggests that you view the most recent traffic statistical data. If you want to see an explanation of this recommended action before viewing the statistical data, type `ACTION D061` on the command line and press ENTER. For more information about the ACTION CLIST, type `HELP ACTION` on the command line for online help, or see *NetView Operation*.

   For more information about the data presented on the Recommended Action for Selected Event panel, see page 176 of "Appendix B. Hardware Monitor Panels."

3. To display the most recent statistical data:

   - Type st
   - Press ENTER.

   The Most Recent Traffic Stats for SDLC Sta. w/LPDA panel appears:

```
N E T V I E W                                          NETOP1     03/16/87 10:37:57
NPDA-51A   * MOST RECENT TRAFFIC STATS FOR SDLC STA. W/LPDA *        PAGE 1 OF 1

   MNV21          N456F42      L4511      P4511C3
                  +--------+              +--------+
   DOMAIN         |  COMC  |----LINE------|  CTRL  |
                  +--------+              +--------+

              STAT    TOTAL   TOTAL   E/T RATIO   TRANSMISSIONS      RECEIVES
 DATE/TIME    TYPE  TRAFFIC  TEMPS    SET CALC  TRAFFIC   TEMPS  TRAFFIC  TEMPS
03/16 10:29 TEMP-1      14      2     3.0 14.3       13       2        1      0
03/16 10:09 TEMP-1       0      0     3.0   .0        0       0        0      0
03/16 10:00 TEMP-1       0      0     3.0   .0        0       0        0      0
03/16 09:52 TEMP-1       0      0     3.0   .0        0       0        0      0
03/16 09:40 TEMP-1     263     26     3.0  9.9      212      26       51      0
03/16 08:42 DACT         0      0     3.0   .0        0       0        0      0
03/15 18:24 DACT        18      0     3.0   .0        9       0        9      0
03/15 18:22 TEMP-1       0      0     3.0   .0        0       0        0      0
03/15 18:16 TEMP-1       0      0     3.0   .0        0       0        0      0
03/15 18:12 TEMP-1       0      0     3.0   .0        0       0        0      0
ENTER A (LPDA DATA) OR EV (EVENT)


 ???
CMD==>
```

This panel shows the amount of traffic that has traveled over the line (TOTAL TRAFFIC) and the number of temporary errors (TOTAL TEMPS) that have occurred during the data transmissions listed on this panel. The panel also shows the percentage of temporary errors which have occurred during each data transmission (E/T RATIO).

The maximum acceptable error rate for the modem is set at 3.0. Notice that the actual error rate for this line was calculated as 14.3 at 10:29 and 9.9 at 9:40.

Note: 14.3 and 9.9 are highlighted on your screen, though they are not highlighted in this book.

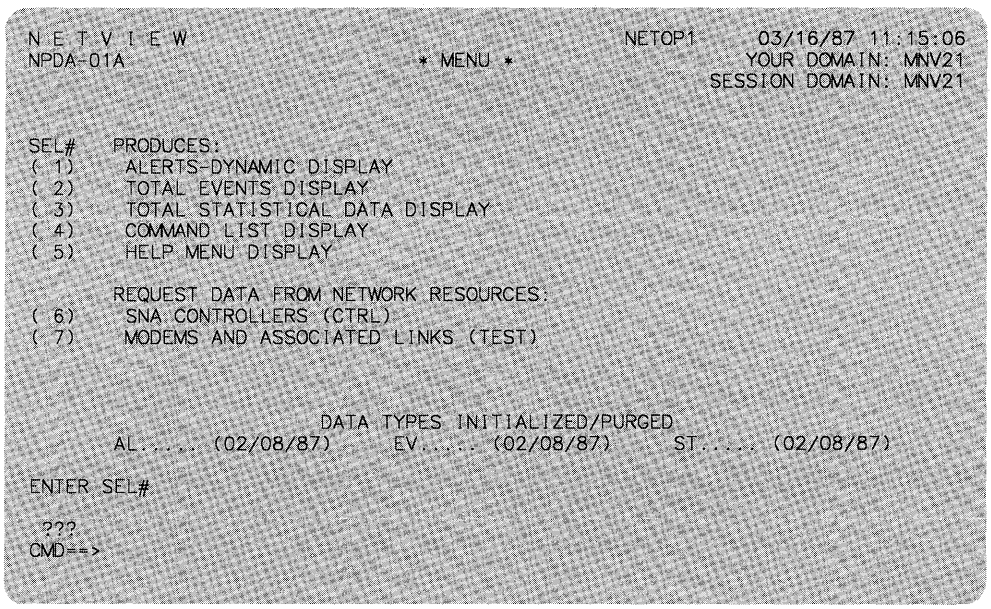
These are the only two transmissions attempted so far on 03/16. Since all the temporary errors appear in the TRANSMISSIONS column on the panel, both problems occurred while data was being sent from the communication controller to the cluster controller. This indicates that the problem is in one of four components:

- The communication controller
- The communication controller's modem
- The line between the communication controller and its modem
- The line between the communication controller's modem and the cluster controller's modem.

For more details about the information presented on the Most Recent Traffic Stats for SDLC Sta. w/LPDA panel, see page 173 of "Appendix B. Hardware Monitor Panels."

4. Make a note of the names of the communication controller (N456F42) and the cluster controller (P4511C3). You will need this information later in your investigation.
5. To further isolate the problem, you can run some of the MODEMS AND ASSOCIATED LINKS tests. To start one of these tests, you need to access the hardware monitor menu:
   - Type menu
   - Press ENTER.

   The following hardware monitor Menu panel appears:



6. By choosing the Modems and Associated Links test option on this menu, you can access the Test Information Display panel:

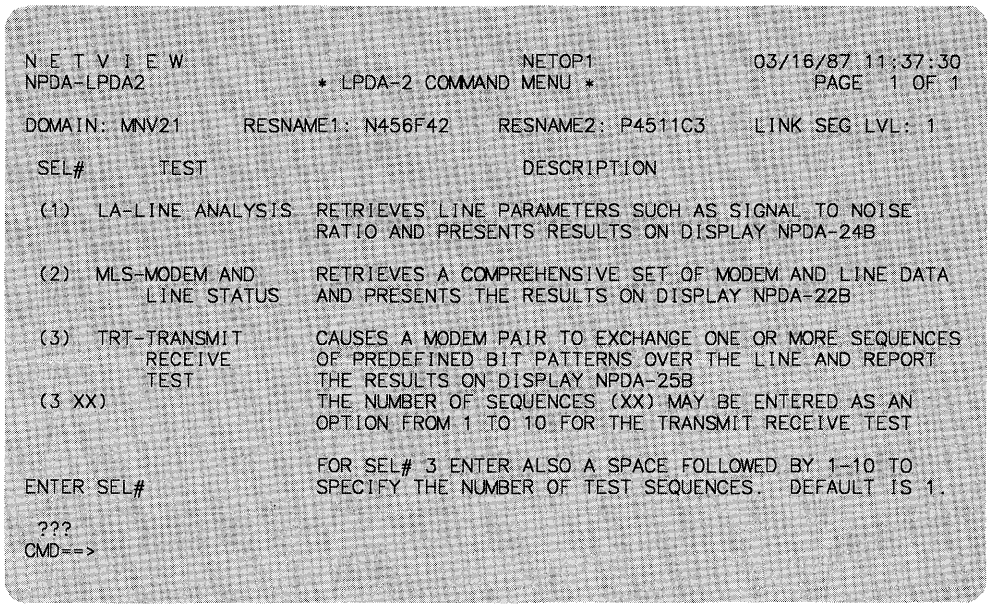
   - Type 7
   - Press ENTER.

   The Test Information Display panel appears:

```
N E T V I E W                                    NETOP1     03/16/87 11:17:39
NPDA-02D              * TEST INFORMATION DISPLAY *                PAGE 1 OF 1
DOMAIN: MNV21

  THE HARDWARE MONITOR SUPPORTS TWO SETS OF TEST COMMANDS (LPDA-1 AND LPDA-2).
  IF YOU ENTER TWO RESOURCES NAMES, THE HARDWARE MONITOR WILL DETERMINE THE
  PROPER COMMAND SET.

  THE RESOURCE NAMES ARE DEFINED BELOW AS THE VARIABLES RESNAME1 AND
  RESNAME2.  ACTUAL RESOURCE NAMES MAY BE FOUND ON THE LINE ABOVE THE NETWORK
  FIGURE ON DISPLAYS SUCH AS RECOMMENDED ACTIONS AND MOST RECENT EVENTS.

  RESNAME1 = THE NETWORK NAME OF A COMMUNICATIONS (COMC) OR NETWORK
             CONTROLLER (CTRL) AT THE CONTROL END OF THE LINK.
  RESNAME2 = THE NETWORK NAME OF THE CONTROLLER (CTRL) AT THE REMOTE END
             OF THE LINK.

NOTE:  NON-HARDWARE MONITOR COMMANDS (EXCEPT 'NCCF') ARE TAKEN AS RESOURCE
       NAMES.

ENTER RESNAME1 RESNAME2

 ???
CMD==>
```

7. To tell NetView which devices you want to test:
   - Type n456f42 p4511c3
   - Press ENTER.

   Since NetView has determined that the line between the resources you just named supports LPDA-2, the LPDA-2 Command Menu appears:



```
N E T V I E W                          NETOP1                    03/16/87 11:37:30
NPDA-LPDA2                  * LPDA-2 COMMAND MENU *                      PAGE  1 OF 1

DOMAIN: MNV21     RESNAME1: N456F42    RESNAME2: P4511C3    LINK SEG LVL: 1

 SEL#      TEST                              DESCRIPTION

 (1)  LA-LINE ANALYSIS  RETRIEVES LINE PARAMETERS SUCH AS SIGNAL TO NOISE
                        RATIO AND PRESENTS RESULTS ON DISPLAY NPDA-24B

 (2)  MLS-MODEM AND     RETRIEVES A COMPREHENSIVE SET OF MODEM AND LINE DATA
        LINE STATUS     AND PRESENTS THE RESULTS ON DISPLAY NPDA-22B

 (3)  TRT-TRANSMIT      CAUSES A MODEM PAIR TO EXCHANGE ONE OR MORE SEQUENCES
        RECEIVE         OF PREDEFINED BIT PATTERNS OVER THE LINE AND REPORT
        TEST            THE RESULTS ON DISPLAY NPDA-25B
 (3 XX)                 THE NUMBER OF SEQUENCES (XX) MAY BE ENTERED AS AN
                        OPTION FROM 1 TO 10 FOR THE TRANSMIT RECEIVE TEST

                        FOR SEL# 3 ENTER ALSO A SPACE FOLLOWED BY 1-10 TO
ENTER SEL#              SPECIFY THE NUMBER OF TEST SEQUENCES.  DEFAULT IS 1.

 ???
CMD==>
```

8. The LINE ANALYSIS test compares the quality of the data transmissions being sent across a line. To view an analysis of the data transmission quality:

   - Type 1
   - Press ENTER.

   The Line Analysis-Link Segment Level 1 panel appears:

```
N E T V I E W                                        NETOP1     03/16/87 11:38:32
NPDA-24B          * LINE ANALYSIS-LINK SEGMENT LEVEL 1 *          PAGE 1 OF 1

  MNV21        N456F42        L4511    C3   P4511C3
               +--------+  +-+        +-+  +--------+
  DOMAIN       |  COMC  |  |MI|--LINE--|MI|  |  CTRL  |
               +--------+  +-+        +-+  +--------+

ROUND TRIP DELAY: 0 MSEC
                          LOCAL                REMOTE                ACCEPTABLE
                          MODEM                MODEM                 LIMITS
TYPE-MODEL:               5866-02              5866-02
FREQUENCY SHIFT:           0 HZ                -3 HZ                 MAX  6 HZ
2ND HARMONIC DISTORTION:  40 DB                39 DB                 MIN 27 DB
3RD HARMONIC DISTORTION:  40 DB                37 DB                 MIN 32 DB
SIGNAL TO NOISE RATIO:    40 DB                18 DB                 MIN 22 DB
PHASE JITTER:              0 DEG PP             9 DEG PP             MAX 15 DEG PP
RECEIVE LEVEL, LEAST:    -14, -14 DBM         -18, -18 DBM           MIN-32 DBM
IMPULSE HITS:              0                    0                    15 IN 15 MIN
RLSD LOSSES:               0                    0
TRANSMIT LEVEL:            0 DBM                0 DBM
SPEED, RMT MODEM ADDRESS: 9.6 KBPS(FULL)       9.6 KBPS(FULL), 01


 ???
CMD==>
```

   This panel shows the type and model for the local and remote modems (both are type 5866, model 02). The panel also presents the acceptable limits for message transmission quality. When you compare the test values for the two modems to the acceptable limits, you find that the only test value which falls outside the acceptable limits is the SIGNAL TO NOISE RATIO. The minimum acceptable ratio is 22 dB, but the remote modem's signal-to-noise ratio is 18 dB.

   Note: The SIGNAL TO NOISE RATIO value is highlighted on your screen, though it is not highlighted in this book.

When the signal-to-noise ratio falls below the modem limit, it indicates that the problem is in the SDLC line between the two modems, rather than in one of the modems. Modem problems are indicated by unacceptable values in the 2nd and 3rd harmonic distortion levels.

Another indication that the problem is in the line is that the PHASE JITTER level for the remote modem is 9, while that of the local modem is 0. This means the signal is clear when it leaves the local modem, and it picks up static going over the SDLC line to the remote modem.

For a detailed explanation of the information presented on the Line Analysis-Link Segment Level 1 panel, see page 153 of "Appendix B. Hardware Monitor Panels."

9. To further investigate the problem, you can review the modem and line status information:

   - Press PF3 to return to the LPDA-2 Command Menu
   - Type 2
   - Press ENTER.

   The Modem and Line Status panel appears:

```
N E T V I E W                                          NETOP1      03/16/87 11:56:08
NPDA-22B                     * MODEM AND LINE STATUS *                  PAGE 1 OF 3
                * MODEM AND LINE PARAMETERS-LINK SEGMENT LEVEL 1 *
  MNV21         N456F42        L4511     C3    P4511C3
                +---------+   +-+         +-+  +---------+
  DOMAIN        |  COMC   |   |M|--LINE--|M|  |  CTRL   |
                +---------+   +-+         +-+  +---------+
  DESCRIPTION,PROBABLE CAUSE: NO ERROR DESCRIPTION:NO PROBABLE CAUSE IDENT

                           LOCAL MODEM         REMOTE MODEM         EXPECTED
RECEIVE LEVEL, LEAST:      -14 DBM, -14 DBM    -17 DBM, -17 DBM    -16 +/- 7 DBM
REC LVL THRESH EXCEEDED:   NO                  NO                  NO
RLSD LOSSES, AGE:          0                   0                   0
LINE QUALITY, WORST:       GOOD/0, GOOD/0      BAD/10, BAD/12      GOOD/0-4
IMPULSE HITS, AGE:         0                   0                   0-15/15 MIN
POWER OFF TONE, AGE:       NO                  NO                  NO
REINITIALIZATION, AGE:     NO                  NO                  NO
FAILURE TONE, AGE:         NO                  NO                  NO
BASE MODEM IN ERROR:       NO                  NO                  NO
FEATURE(S) IN ERROR:       NONE                NONE                NONE
SEE NEXT PAGE FOR REMOTE DTE INTERFACE SUMMARY

 ???
CMD==>
```

The only parameter on this panel that indicates a problem is LINE QUALITY, WORST. The line quality is GOOD/0, GOOD/0 for the local modem but BAD/10, BAD/12 for the remote modem.

The worst line quality that will produce test results is BAD/14. At this quality, the line contains too much static for the message to get through intact. On a scale of 0-14, BAD/12 indicates very poor line quality.

For more details about the information presented in page 1 of the Modem and Line Status panel, see page 165 of "Appendix B. Hardware Monitor Panels."

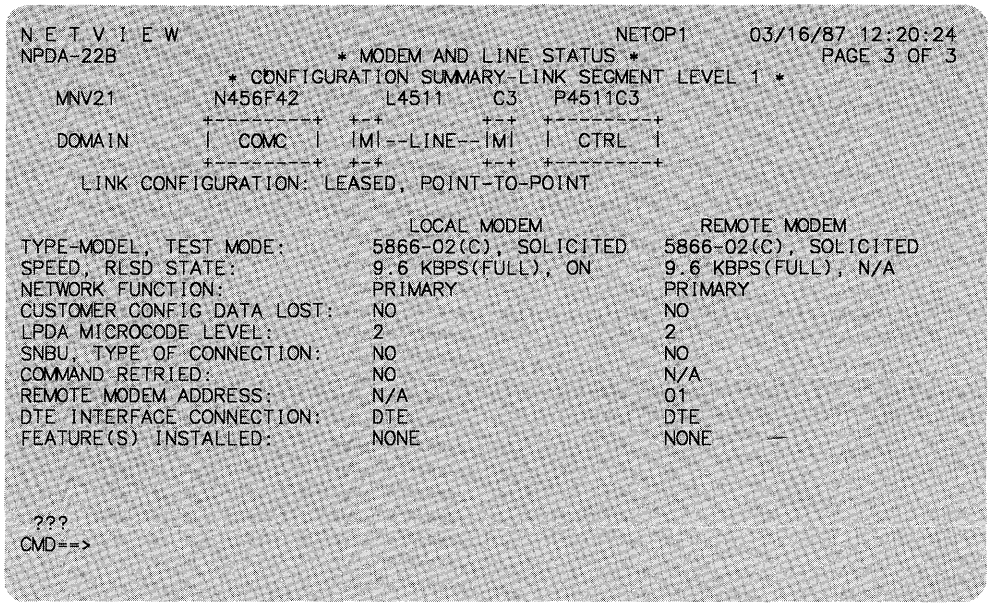
10. Use the **COPY** command to store the first page of the Modem and Line Status panel in the network log. The information on this panel may help the appropriate service representative in further investigating this problem.

11. To see the second page of this panel, press PF8 or ENTER. Page 2 of the panel appears:

```
N E T V I E W                                    NETOP1     03/16/87 12:13:25
NPDA-22B                  * MODEM AND LINE STATUS *                PAGE 2 OF 3
     * REMOTE MODEM INTERFACE-REMOTE DEVICE STATUS-LINK SEGMENT LEVEL 1 *
   MNV21        N456F42       L4511    C3   P4511C3
               +--------+  +--+       +--+  +--------+
   DOMAIN      |  COMC  |  |MI|--LINE--|MI|  |  CTRL  |
               +--------+  +--+       +--+  +--------+
                          STATUS AT COMMAND          ACTIVITY DURING TWO
                          EXECUTION TIME             MINUTES BEFORE COMMAND
REQUEST TO SEND:                OFF                          YES
CLEAR TO SEND:                  OFF                          YES
TRANSMIT DATA:                  OFF                          YES
RECEIVE DATA:                   OFF                          YES
RECEIVE LINE SIGNAL DETECT:     N/A                          NO
DATA SIGNALLING RATE SELECTOR:  ON                           NO
DATA TERMINAL READY:            ON                           NO
DTE POWER LOSS DETECTED:        OFF                          NO
TEST CONTROL:                   N/A                          NO
                          REMOTE DEVICE
                  STREAMING DETECTED: NO
SEE NEXT PAGE FOR LINK AND MODEM CONFIGURATIONS

 ???
CMD==>
```

No problems are indicated on page 2 of the panel. For a detailed explanation of the information presented on page 2 of this panel, see page 168 of "Appendix B. Hardware Monitor Panels."

12. To see page 3, press PF8 or ENTER. The third page of the panel appears:

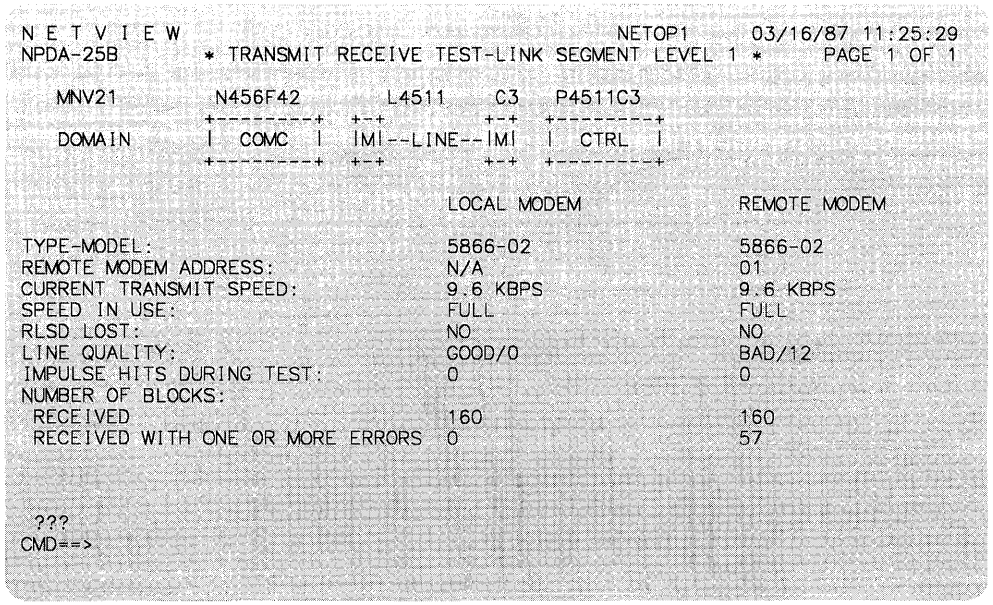


No problems are indicated on page 3 of the panel. For a detailed explanation of the information presented on page 3 of this panel, see page 170 of "Appendix B. Hardware Monitor Panels."

13. To request that NetView run a series of ten tests on the transmit and receive paths for the line between the local and remote modems:

    - Press PF3 to return to the LPDA-2 Command Menu
    - Type 3 10
    - Press ENTER.

    The Transmit Receive Test-Link Segment Level 1 panel appears:



    This panel confirms that the problem is in the SDLC line between the modems. The only unfavorable test result is the line quality for the remote modem. It is BAD/12, as on page 1 of the Modem and Line Status panel.

    For an explanation of the information presented on the Transmit Receive Test-Link Segment Level 1 panel, see page 181 of "Appendix B. Hardware Monitor Panels."

14. Follow your installation's procedures for submitting a problem report.
15. To return to the Alerts-Dynamic panel:

    - Type ald
    - Press ENTER.

Chapter 3. Logon Failures

Chapter 3. Logon Failures

Scenario: Application Not Active

Symptom

A user calls and says that he cannot log on to application TSO01.

Action Summary

- Ask the caller for his terminal ID. Tell the caller you will check into the problem and that he should try logging on again in a few minutes.
- Display and review the Node Status Detail (Description) panel. Confirm that application TSO01 is not active.
- Display the Node Status Detail (Description) panel with Detail Format menu to select other node status monitor panels.
- Display the Node Status Detail (Analysis) panel. Examine the panel and determine that application TSO01 has not been active since the last time the status monitor statistics were reset.
- Ask the operator responsible for application TSO01 or the system console to start the application.
- Wait the amount of time your installation has set for the interval between VTAM queries. Verify that the operator has started the application by displaying the Node Status Detail (Description) panel. Determine that TSO01 is now active.
- Verify that the user is in session with the application by using the Node Status Detail (Description) panel to access the Node Status Detail (Activity) panel.
- Refresh and examine the activity panel. Determine that terminal A01A442 is now using application TSO01. The problem is solved.
- Follow your installation's procedures for recording this problem.

Procedure

Follow these steps to investigate this problem:

1. Ask the user for his terminal ID. For this scenario, the terminal is A01A442. Tell the user you will check into the problem and that he should try logging on again in a few minutes.
2. Use the status monitor to check the status of the application (TSO01). To look at the status of the application, display the Node Status Detail (Description) panel:
   - Type statmon tso01
   - Press ENTER.

   The Node Status Detail (Description) panel appears:

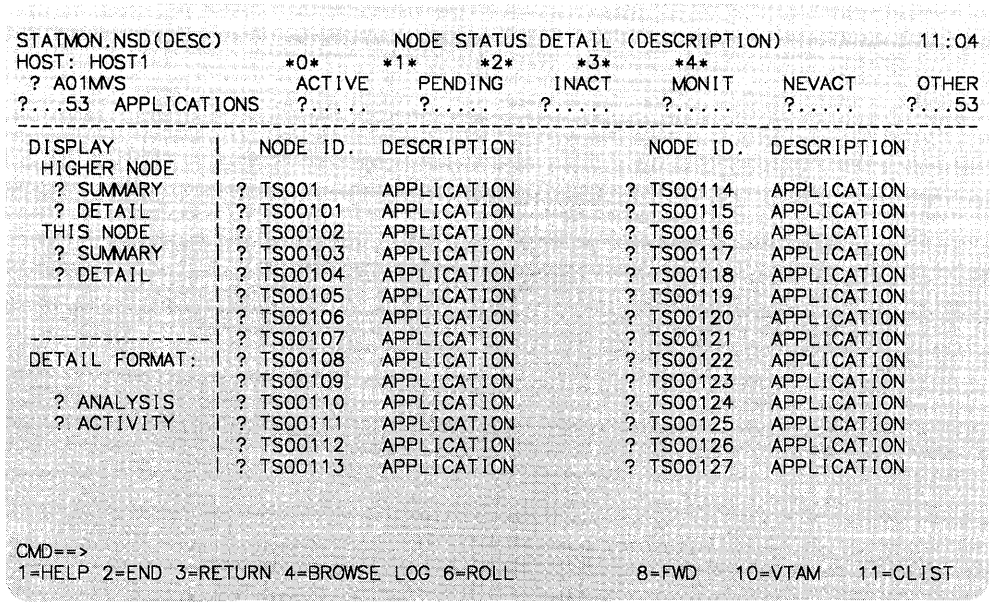
```
STATMON.NSD(DESC)              NODE STATUS DETAIL (DESCRIPTION)              11:03
HOST: HOST1              *0*      *1*      *2*      *3*      *4*
 ? A01MVS                ACTIVE   PENDING  INACT    MONIT    NEVACT    OTHER
?...53  APPLICATIONS     ?.....   ?.....   ?.....   ?.....   ?.....   ?...53
-------------------------------------------------------------------------------
 ? DISPLAY       |   NODE ID.  DESCRIPTION          NODE ID.  DESCRIPTION
  ? APPLS        |
  ? LINES        | ? TSO01   **APPLICATION        ? TSO0114  APPLICATION
  ? PUS/CLSTRS   | ? TSO0101   APPLICATION        ? TSO0115  APPLICATION
  ? LUS/TERMS    | ? TSO0102   APPLICATION        ? TSO0116  APPLICATION
  ? CDRMS        | ? TSO0103   APPLICATION        ? TSO0117  APPLICATION
  ? CDRSCS       | ? TSO0104   APPLICATION        ? TSO0118  APPLICATION
   ? ACT         | ? TSO0105   APPLICATION        ? TSO0119  APPLICATION
   ? EVERY       | ? TSO0106   APPLICATION        ? TSO0120  APPLICATION
   ? INACT       | ? TSO0107   APPLICATION        ? TSO0121  APPLICATION
  ? PENDING      | ? TSO0108   APPLICATION        ? TSO0122  APPLICATION
  ? BFRUSE       | ? TSO0109   APPLICATION        ? TSO0123  APPLICATION
 ? VARY INACT    | ? TSO0110   APPLICATION        ? TSO0124  APPLICATION
  ? I     ? F    | ? TSO0111   APPLICATION        ? TSO0125  APPLICATION
 ? VARY ACT      | ? TSO0112   APPLICATION        ? TSO0126  APPLICATION
  ? ONLY  ? ALL  | ? TSO0113   APPLICATION        ? TSO0127  APPLICATION


CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL        8=FWD    11=CLIST   12=MENU
```

   Review the panel. It shows all the nodes under the application major node A01MVS. If you have a color monitor, all the nodes in the OTHER category display in turquoise. With a monochrome monitor, the OTHER nodes display in normal intensity. The two asterisks next to TSO01 indicate that it is the node you specified on the **STATMON** command.

   For an explanation of the information presented on the Node Status Detail (Description) panel with the VTAM command menu, see page 198 of "Appendix C. Status Monitor Panels."

3. Continue your investigation by pressing PF12 (12=MENU) to access the Node Status Detail (Description) panel with a Detail Format menu. From this panel, you can select other node status monitor panels to get more detailed information on the problem.

   The Node Status Detail (Description) panel with a DETAIL FORMAT menu appears:



   For an explanation of the data presented on the Node Status Detail (Description) panel with the Detail Format menu, see page 195 of "Appendix C. Status Monitor Panels."

4. Next, access the Node Status Detail (Analysis) panel so you can see the status history for the application. Perform one of the following actions:

   - Move the cursor to the DETAIL FORMAT: ANALYSIS area in the lower left corner of the panel, replace the question mark next to ANALYSIS with any character, and press ENTER, or
   - Select ANALYSIS using a light pen and press ENTER.

   The Node Status Detail (Analysis) panel appears:

```
STATMON.NSD(ANALYSIS)          NODE STATUS DETAIL (ANALYSIS)              11:04
HOST: HOST1            *0*      *1*      *2*      *3*      *4*     ELAPSED TIME 0:26
 ? A01MVS             ACTIVE   PENDING   INACT    MONIT    NEVACT     OTHER
?...53  APPLICATIONS  ?.....   ?.....    ?.....   ?.....   ?.....     ?...53
-------------------------------------------------------------------------------
 DISPLAY        |             STATUS      ACTIVE    PENDING   INACTIVE    OTHER
  HIGHER NODE   |   NODE ID.   SINCE   |  COUNT  %  COUNT  %  COUNT  %  COUNT  %
   ? SUMMARY    | ? TS001    O 10:53   |    0    0     1  15     0   0     2  85
   ? DETAIL     | ? TS00101 O 10:38    |    0    0     0   0     0   0     1 100
  THIS NODE     | ? TS00102 O 10:38    |    0    0     0   0     0   0     1 100
   ? SUMMARY    | ? TS00103 O 10:38    |    0    0     0   0     0   0     1 100
   ? DETAIL     | ? TS00104 O 10:38    |    0    0     0   0     0   0     1 100
                | ? TS00105 O 10:38    |    0    0     0   0     0   0     1 100
                | ? TS00106 O 10:38    |    0    0     0   0     0   0     1 100
 ---------------| ? TS00107 O 10:38    |    0    0     0   0     0   0     1 100
 DETAIL FORMAT: | ? TS00108 O 10:38    |    0    0     0   0     0   0     1 100
   ? DESCRIPT   | ? TS00109 O 10:38    |    0    0     0   0     0   0     1 100
                | ? TS00110 O 10:38    |    0    0     0   0     0   0     1 100
   ? ACTIVITY   | ? TS00111 O 10:38    |    0    0     0   0     0   0     1 100
                | ? TS00112 O 10:38    |    0    0     0   0     0   0     1 100
                | ? TS00113 O 10:38    |    0    0     0   0     0   0     1 100

CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL         8=FWD   10=VTAM   11=CLIST
```

   Notice that TS001 has the letter O next to it. This means that the application has had a status in the OTHER category since the displayed time, 10:53. The ACTIVE COUNT column shows that the application has not been active since the last time the status monitor statistics were reset.

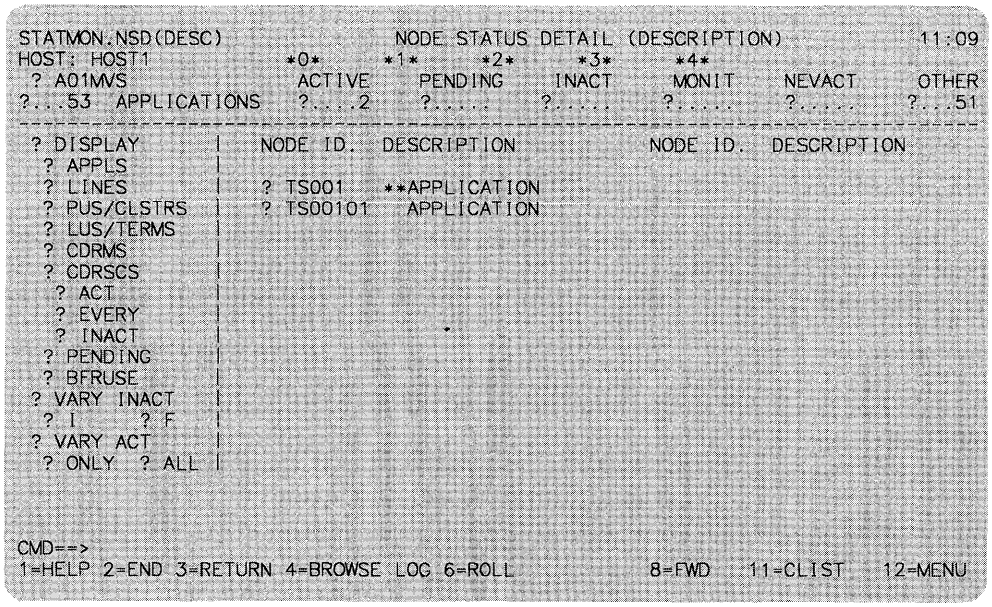
   For more details about the information presented on the Node Status Detail (Analysis) panel, see page 191 of "Appendix C. Status Monitor Panels."

5. Ask the operator responsible for this application or the system console operator to start the application (TSO01) from the system console.
6. When you request that an application be activated, VTAM does not send a message to NetView to confirm that the resource has been activated. For this reason, the status monitor queries VTAM at set intervals to see which applications are active. Your installation can set the interval. The NetView default is 13 minutes.

   Wait the amount of time your installation has set for the interval between VTAM queries. Then, to verify that the operator has started the application, check the Node Status Detail (Description) panel:

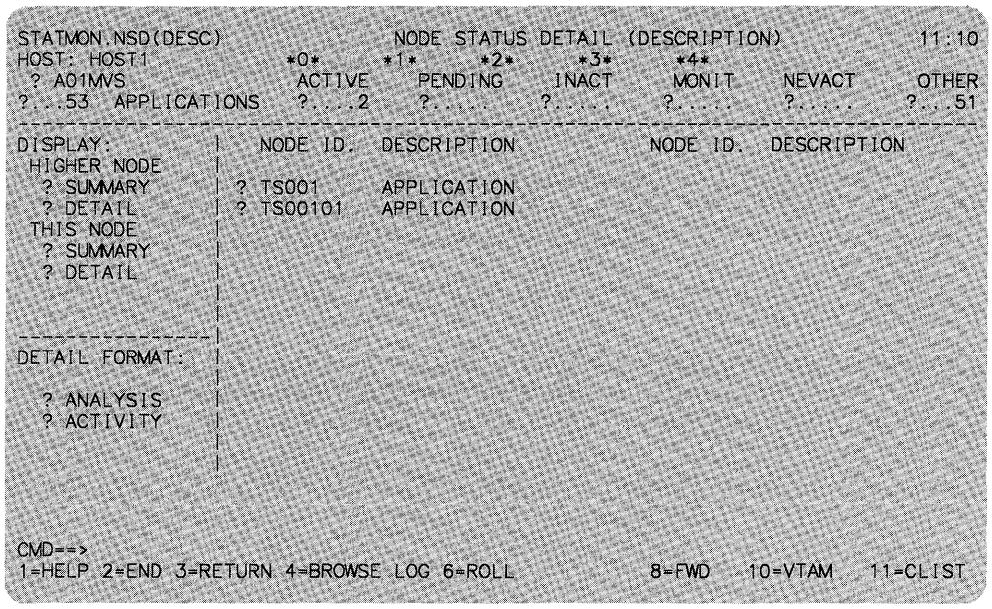
   - Type statmon tso01
   - Press ENTER.

   The Node Status Detail (Description) panel appears:



Notice that TSO01 is now active. If you have a color monitor, the application name displays in green. With a monochrome monitor, the application name displays in normal intensity.

7. To display the menu, press PF12. The Node Status Detail (Description) panel with DETAIL FORMAT menu appears:



8. To see more details on the application, perform one of the following actions:

   - Move the cursor to the DETAIL FORMAT: ACTIVITY area in the lower left corner of the panel, replace the question mark in front of ACTIVITY with any character, and press ENTER, or
   - Select ACTIVITY using a light pen and press ENTER.

   The Node Status Detail (Activity) panel appears:

```
STATMON.NSD(ACT)                NODE STATUS DETAIL (ACTIVITY)                11:11
HOST: HOST1              *0*     *1*     *2*     *3*     *4*
 ? A01MVS                ACTIVE  PENDING INACT   MONIT   NEVACT      OTHER
?...53  APPLICATIONS     ?....2  ?.....  ?.....  ?.....  ?.....     ?...51
-------------------------------------------------------------------------------
DISPLAY:          |
 HIGHER NODE      |   NODE ID.  DESCRIPTION      SENDS CHANGE |    RECVS CHANGE
   ? SUMMARY      | ? TS001     APPLICATION          0      0 |        0      0
   ? DETAIL       | ? TS00101   APPLICATION          7      0 |        2      0
 THIS NODE        |
   ? SUMMARY      |
   ? DETAIL       |
                  |
                  |
------------------|
DETAIL FORMAT:    |
   ? DESCRIPT     |
   ? ANALYSIS     |
   ? ACTIVITY     |
                  |
                  |



CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL          8=FWD   10=VTAM   11=CLIST
```

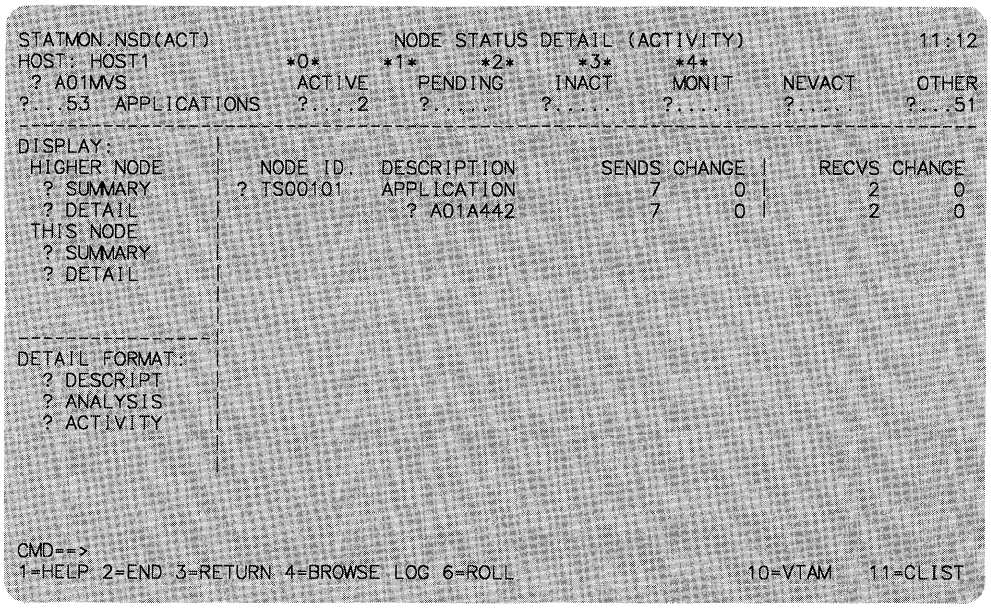
   Notice that there are send (SENDS) and receive (RECVS) counts for TSO0101, indicating that a user logged on to TSO01 and is now in session with the application TSO0101.

   For a detailed explanation of the data presented on the Node Status Detail (Activity) panel, you can turn to page 188 of "Appendix C. Status Monitor Panels."

9. To select the activity panel for TSO0101 and see which user is logged on to TSO0101, perform one of the following actions:

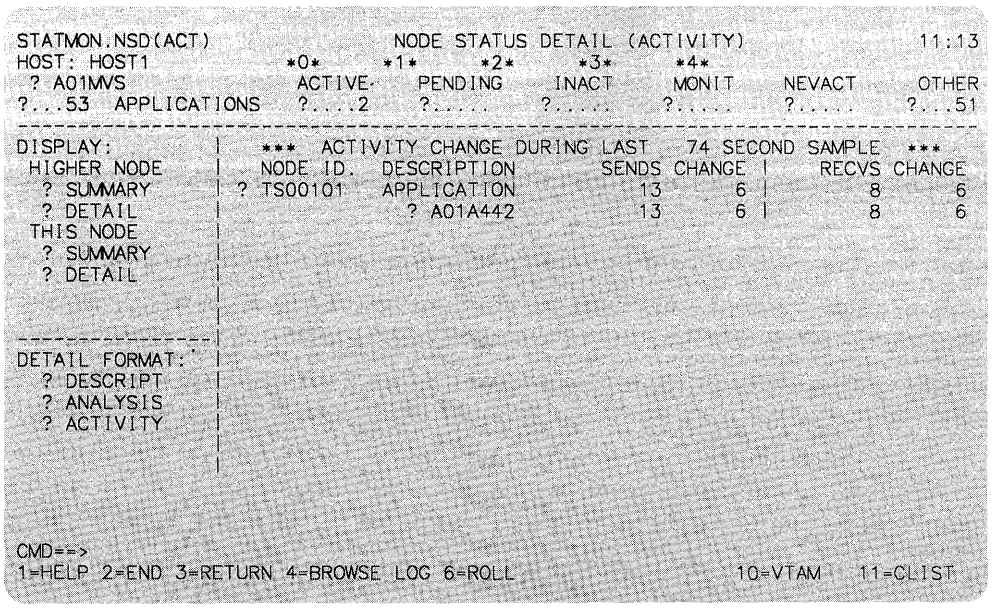
   - Move the cursor to the DETAIL FORMAT:ACTIVITY area in the lower left corner of the panel and to TSO0101, replace the question mark next to ACTIVITY and TSO0101 with any character, and press ENTER, or
   - Select them using a light pen and press ENTER.

   The Node Status Detail (Activity) panel appears:



   Look under the heading DESCRIPTION. Notice that the user's terminal (A01A442) is now using the application.

10. Press ENTER to refresh (update) the panel:



Notice that the numbers in the SENDS and RECVS columns are updated and that the CHANGE columns contain nonzero values. This indicates that the user is using the application. The problem is solved.

11. Follow your installation's procedures for recording this problem.
12. To leave the status monitor, press PF2.

Scenario: Bind Failure

Symptom

A user calls and reports that he cannot log on to an application.

Action Summary

- Ask the caller for the information he entered when trying to log on. Verify that he entered logon information correctly and that he is using a terminal supported by the application.
- Ask the caller for the terminal ID (LU name) and the name of the application.
- Use the session monitor to review the terminal's session list. The Session List panel for this terminal shows that the session cannot be established because of bind failure.
- Select the failed session with the session termination reason (STR) option. The session termination reason shows that the SLU (terminal) rejected the bind image.
- Follow your installation's procedures for submitting a problem report to a system programmer for further investigation.

Procedure

Follow these steps to investigate this problem.

1. Ask the caller what he entered when trying to log on. Verify that he entered logon information correctly. Refer to your installation's documentation to check that the logmode and application name are compatible.
2. Ask the user for the terminal ID (LU name). For this scenario, the terminal is A03T0012.
3. Use the session monitor to investigate the logon attempt:
   - Type nldm sess a03t0012
   - Press ENTER.

   The Session List panel appears:

```
NLDM.SESS                                                        PAGE    1
                              SESSION LIST
NAME: A03T0012                                                DOMAIN:  CNM01
-------------------------------------------------------------------------------
     ***** PRIMARY *****    **** SECONDARY ****
SEL#  NAME     TYPE  DOM      NAME     TYPE DOM      START TIME      END TIME
( 1) A01M      SSCP CNM01    A03T0012  LU  CNM01  03/20 11:01:00  *** ACTIVE ***
( 2) TS00101   LU   CNM01    A03T0012  LU  CNM01  03/20 11:01:56  *** BINDF  ***
                                                  REASON CODE 10 SENSE 08210000
( 3) TS00502   LU   CNM01    A03T0012  LU  CNM01  03/20 08:48:58  03/20 08:55:36
                                                  REASON CODE 0C  SENSE 00000000
( 4) TS005     LU   CNM01    A03T0012  LU  CNM01  03/20 08:48:57  03/20 08:48:57
( 5) A01M      SSCP CNM01    A03T0012  LU  CNM01  03/20 08:48:53  03/20 08:55:36
( 6) NPM05     LU   CNM01    A03T0012  LU  CNM01  03/11 15:35:05  03/11 15:40:32
( 7) A01M      SSCP CNM01    A03T0012  LU  CNM01  03/11 15:35:05  03/11 15:40:33
( 8) TS00521   LU   CNM01    A03T0012  LU  CNM01  03/11 14:45:52  03/11 15:02:01
( 9) TS005     LU   CNM01    A03T0012  LU  CNM01  03/11 14:45:45  03/11 14:45:49
(10) A01M      SSCP CNM01    A03T0012  LU  CNM01  03/11 14:45:44  03/11 15:02:02
(11) NPM05     LU   CNM01    A03T0012  LU  CNM01  03/07 07:51:25  03/07 08:02:10

  ENTER TO VIEW MORE DATA
  ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
  CMD==>
```

Notice that the session list shows a bind failure (BINDF). The logon request has been sent to the application, but a problem in the bind parameters caused the session setup to fail. For a detailed explanation of the information presented on the Session List panel, see page 121 of "Appendix A. Session Monitor Panels."

4. To learn what caused the bind failure, select the failed session with the Session Termination Reason (STR) option listed at the bottom of the panel. The Session Termination Reason panel explains the error codes that appear on the Session List panel. To display the STR panel:

   - Type 2 str
   - Press ENTER.

   The Session Termination Reason panel appears:

```
NLDM.STER                  SESSION TERMINATION REASON                    PAGE 1
----------PRIMARY-----------------+-------SECONDARY--------------------+-DOM--
NAME TS00101 SA 00000001 EL 01BC | NAME A03T0012 SA 00000003 EL 0135 | CNM01
---------------------------------+-----------------------------------+------

     TYPE:        BIND FAILURE
   REASON - (10) SETUP REJECT AT SLU

SENSE DATA:      SENSE DATA ORIGINATED AT NETA.A01M
                 RELATED NODE IS A03T0012          SENSE DATA FROM BIND
  CATEGORY - (08) INVALID SESSION PARAMETERS; SESSION PARAMETERS WERE NOT
  MODIFIER - (21) VALID OR NOT SUPPORTED BY THE HALF-SESSION WHOSE
    BYTE 2 - (00) ACTIVATION WAS REQUESTED.
    BYTE 3 - (00)









  ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
  CMD=->
```

   This panel tells you that the terminal (SLU) rejected the bind image. Sometimes there are bind failure problems if a system programmer incorrectly defined a terminal to an NCP or a major node. Also, some applications can be accessed only with specific terminal types.

   For an explanation of the information displayed on the Session Termination Reason panel, see page 133 of "Appendix A. Session Monitor Panels."

5. The system programmer will need information on the session parameters when investigating the problem. To get the information, you must return to the Session List panel, display the Session Configuration Data panel, and then display the Session Parameters panel. To return to the Session List panel:

   - Type r
   - Press ENTER.

6. From that panel, display the Session Configuration Data panel for TSO01:
   - Type 2
   - Press ENTER.

   The Session Configuration Data panel appears, including the command line:

   ```
   SELECT PT, ST (PRI, SEC TRACE), RT (RESP TIME), P, ER, VR
   ```

   You can turn to page 118 of "Appendix A. Session Monitor Panels" to review the Session Configuration Data panel and a description of the information presented on it.

   To display the Session Parameters panel:
   - Type p
   - Press ENTER.

   The Session Parameters panel appears:

```
NLDM.SPRM.BIND                SESSION PARAMETERS                            PAGE 1
---------- PRIMARY ---------------+------ SECONDARY ------------------+- DOM--
NAME TSO0101 SA 00000001 EL 01BC | NAME A03T0012  SA 00000003 EL 0135 | CNM01
---------------------------------+-----------------------------------+-------
RU BIND   TYPE REQ                NEGOTIABLE NO   TS PROFILE   3  FM PROFILE  3
FID 4
----------- FM USAGE/PLU ------------+----------- FM USAGE/SLU ----------
MULTIPLE RU CHAINS ALLOWED          | MULTIPLE RU CHAINS ALLOWED
REQUEST CONTROL MODE IS IMMEDIATE   | REQUEST CONTROL MODE IS IMMEDIATE
PRI ASKS FOR DEF OR EXCEPT RESP     | SEC ASKS FOR EXCEPTION RESPONSE
2-PHASE COMMIT N/A                  | 2-PHASE COMMIT N/A
COMPRESSION WILL NOT BE USED        | COMPRESSION WILL NOT BE USED
PRIMARY MAY SEND EB                 | SECONDARY WILL NOT SEND EB
------------------------------------+----------------------------------
FM HEADERS ARE NOT ALLOWED            CONTENTION WINNER IS THE SECONDARY
BRACKETS ARE USED - RESET STATE=BETB  HDX-FF RESET STATE: N/A
BRACKET TERMINATION RULE 1 USED       SEC-PRI PACING 1 STAGE, SEND COUNT 0
ALTERNATE CODE SET WILL NOT BE USED           RECEIVE COUNT  0 MAXRU   1024
SEQ NUMBERS N/A           BIS N/A     PRI-SEC PACING 2 STAGE, SEND COUNT 0
SEND/RECEIVE MODE IS HALF-DUPLEX FLIP         RECEIVE COUNT  0 MAXRU   1536
RECOVERY RESP IS CONTENTION LOSER     LU TYPE:   2


ENTER TO VIEW MORE DATA
CMD==>
```

   You can find an explanation of the information presented on the Session Parameters panel on page 126 of "Appendix A. Session Monitor Panels."

7. Next, use the **COPY** command to store the panel in the network log.
8. Follow your installation's procedure for submitting a problem report to a system programmer for further investigation.
9. Call the user and tell him that you have forwarded the problem and that the situation is being corrected.
10. To leave the session monitor, press PF2.

Scenario: Cross-Network Session Is Rejected

Symptom

A user calls and reports that he is unable to access an application. He used the same application a month ago with no problems.

Action Summary

- Ask the caller for his terminal ID (LU name).
- Display and review the Session List panel. Verify that the user's terminal is active but the session between the terminal and the application is inactive. Notice that the session was rejected due to a bind failure (BINDF).
- Display the Session Termination Reason panel to find the reason for the bind failure. Determine that the "session parameters were not valid or not supported" by the user's terminal.
- Display the Session Configuration Data panel to find the logon mode used for this session attempt.
- Browse the SYS1.VTAMLST data set under TSO to view the logon description specified for the user's terminal. Determine that an invalid logon mode has been used.
- Find a correct logon mode for the user's terminal. Call the user and ask him to log on again using this valid logon mode.
- Follow your installation's procedures for reporting and correcting this problem.

Procedure

Follow these steps to investigate the problem:

1. Ask the user for his terminal ID (LU name). For this scenario, the terminal is H11M432.
2. Use the session monitor to review the session data for this attempted session. The Session List panel displays session data for the network component you specify. To view the Session List panel for the user's terminal:
   - Type sess h11m432
   - Press ENTER.

   The Session List panel appears:

```
NLDM.SESS                                                          PAGE    2
                                SESSION LIST
NAME: H11M432                                                  DOMAIN:  CNM11
-------------------------------------------------------------------------------
     ***** PRIMARY *****   **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME    TYPE DOM      START TIME      END TIME
( 1) M11       SSCP  CNM11   H11M432   LU  CNM11  02/06 08:39:04  *** ACTIVE ***
( 2) MXX11     LU    CNM11   H11M432   LU  CNM11  02/06 10:11:27  02/06 10:11:29
( 3) TSO02     LU    X-NET   H11M432   LU  CNM11  02/06 10:08:21  *** BINDF  ***
        NETID: ITSSNET                            REASON CODE 10  SENSE 08210000
( 4) TSO11     LU    CNM11   H11M432   LU  CNM11  01/15 14:14:18  01/15 14:14:19
( 5) VMDISC    LU    N/A     H11M432   LU  N/A    01/12 17:19:45  *** INITF  ***
                                                                  SENSE 08010000
( 6) TSO1101   LU    CNM11   H11M432   LU  CNM11  01/12 15:38:31  01/12 17:19:39
                                                   REASON CODE 0C
( 7) TSO11     LU    CNM11   H11M432   LU  CNM11  01/12 15:38:27  01/12 15:38:31
( 8) M11       SSCP  CNM11   H11M432   LU  CNM11  01/12 12:53:35  01/12 17:19:40
( 9) MXX11023  LU    CNM11   H11M432   LU  CNM11  01/12 12:53:32  01/12 12:53:35
                                                   REASON CODE 0C



ENTER TO VIEW MORE DATA
ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
CMD==>
```

The active SSCP-LU session (SEL#1) between the user's terminal (H11M432) and the VTAM (M11) for his user domain shows that the user's terminal is active. The inactive LU-LU session (SEL#3) between application TSO02 and terminal H11M432 is the access failure the user called you about. The BINDF message in the END TIME column for SEL#3 shows that the session ended because of a bind failure.

Note: BINDF is highlighted on your screen, though it is not highlighted in the panel above.

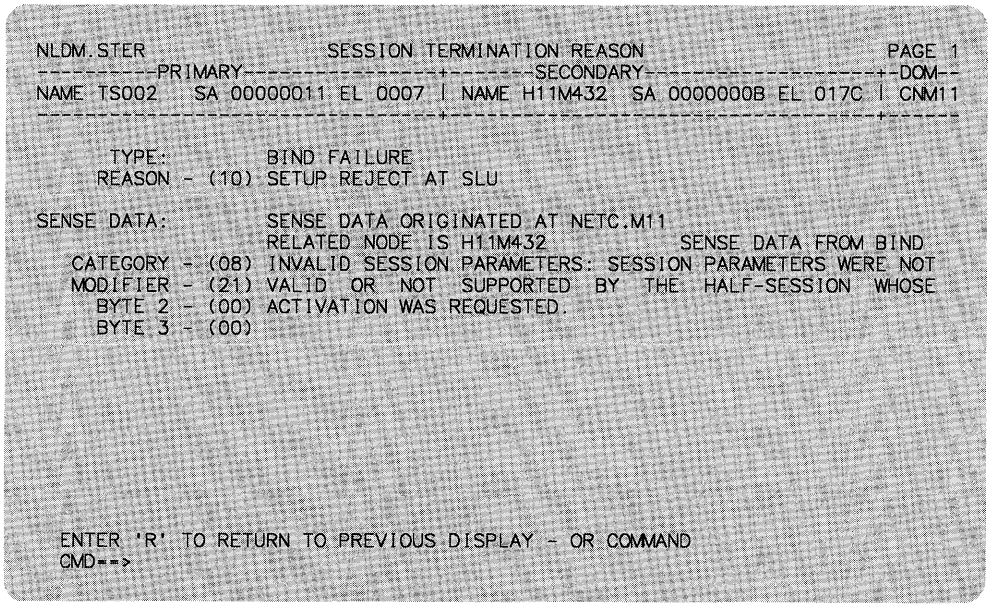
This panel also shows that TSO02 is in a different network (ITSSNET) than the user's terminal. This is a cross-network session.

For a detailed explanation of the information presented on the Session List panel, you can turn to page 121 of "Appendix A. Session Monitor Panels."

3. To get an explanation of why the session failed, access the Session Termination Reason panel:

   - Type 2 str
   - Press ENTER.

   The Session Termination Reason panel appears:



   This panel explains that the bind setup was rejected at the secondary LU (SLU). In this scenario, the SLU is terminal H11M432.

   The panel also states that the bind failure was caused by invalid session parameters. The session parameters sent by TSO02 to terminal H11M432 were not supported by the terminal, and it rejected the bind. Since the session parameters are determined by the logon mode assigned to each network resource, an invalid logon mode was probably used for this session attempt.

   For more information about the data presented on the Session Termination Reason panel, see page 133 of "Appendix A. Session Monitor Panels."

4. To view the logon mode used for this failed session, you can display the Session Configuration Data panel. First, return to the Session List panel:

   - Type r
   - Press ENTER.

   From the Session List panel, you can access the Session Configuration Data panel:

   - Type 2
   - Press ENTER.

   The Session Configuration Data panel appears:

```
NLDM.CON.SEC              SESSION CONFIGURATION DATA                        PAGE  1
----------PRIMARY------------------+-----------SECONDARY-------------------
NAME TS002   SA 00000011 EL 0007    | NAME H11M432  SA 0000000B EL 017C
-----------------------------------+---------------------------------------
DOMAIN N/A                  LOCAL NETID NETC                 DOMAIN CNM11
              +-------------+               +-------------+
              | NOT AVAIL   | --- VR NA --- | SUBAREA PU  | ISTPUS11(0000)
              +-------------+     TP NA     +------+------+
                                                   |
                                  ER NA     +------+------+
                                 RER NA     |  CUA        | 0432
                                            +------+------+
                                                   |
                         COSNAME            +------+------+
                         LOGMODE M2SDLCNQ |    LU       | H11M432 (017C)
                                            +-------------+
    ADJACENT NETID ITSSNET
    SELECT LEFT TO VIEW

SECONDARY KNOWS PRIMARY BY ALIAS: TS002
PRIMARY KNOWS SECONDARY BY ALIAS: H11M432

SELECT LEFT, PT, ST (PRI, SEC TRACE), RT (RESP TIME), P, ER, VR, PG
CMD==>
```

   This panel shows that the logon mode (LOGMODE) used for the session attempt was M2SDLCNQ. For a detailed explanation of the information displayed on this panel, you can turn to page 118 of "Appendix A. Session Monitor Panels."

5. A description of each component in the network is specified in the VTAM tables stored in the SYS1.VTAMLST data set under TSO. This description includes the resource type and the logon mode for each network resource. Because the NetView used in this scenario is in the domain of the VTAM that owns the user's terminal, the TSO in this domain will have a description for the user's terminal (H11M432). To view this description, you can use NetView's Terminal Access Facility (TAF) to log on to TSO and browse the SYS1.VTAMLST data set.

   - Press PF6 to go from the session monitor to the command facility
   - Type bgnsess flscn,applid=tso11,
     srclu=taf11o02,d=pa2,logmode=d6327802,int=y
   - Press ENTER.

   For a description of the **BGNSESS** command, see *NetView Operation*.

   When a TSO logon screen appears, log on to TSO using an operator identifier defined for your installation. Once you are logged on to TSO, the TSO READY prompt appears:

```
ICH70001I BEUGNOT LAST ACCESS AT 15:42:17 ON THURSDAY, JANUARY 8, 1987
BEUGNOT LOGON IN PROGRESS AT 17:12:51 ON FEBRUARY 6, 1987
 ***************************************************
 **  system running with new MVS release          **
 **  notice changes in ISPF and SDSF              **
 **  if there are any problems call 2313          **
 ***************************************************
READY
```

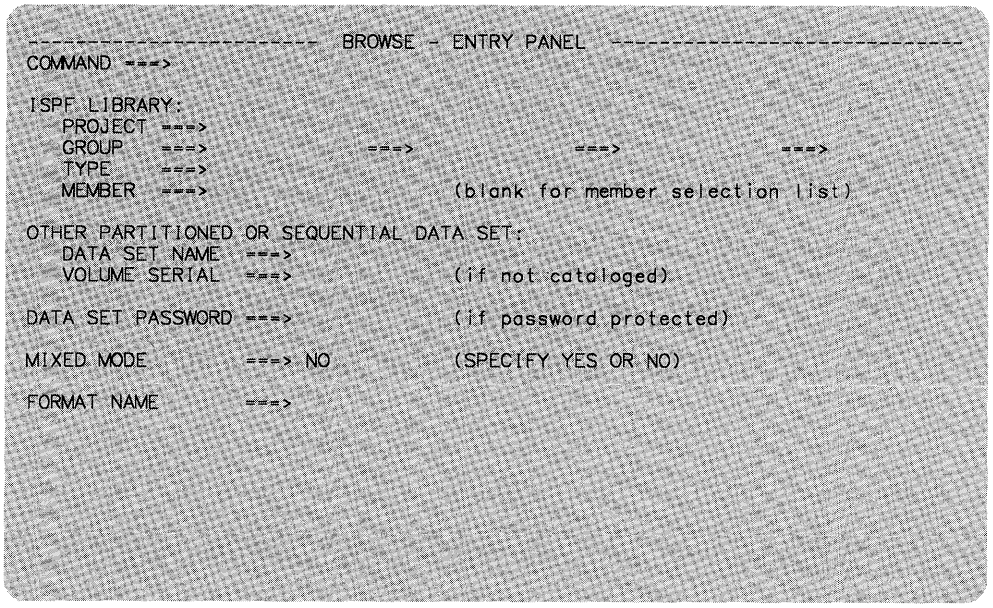
6. To access the ISPF/PDF Primary Option Menu:
   - Type ispf
   - Press ENTER.

   A panel similar to the following ISPF main menu appears:

```
>>>>>>>>>>>>>>>>>>>>>  ISPF/PDF PRIMARY OPTION MENU  <<<<<<<<<<<<<<<<<<<<<
OPTION ===>                                          DATE  87/02/06 - 87.037
                                                     SYSID      SYS3
   0 ISPF PARMS     Specify terminal and user parameters    USERID    BEUGNOT
   1 BROWSE         Display source data or output listings  TIME      17:14
   2 EDIT           Create or change source data            TERMINAL  3278
   3 UTILITIES      Perform utility functions               PF KEYS   24
   4 FOREGROUND     Invoke language processors in foreground
   5 BATCH          Submit job for language processing
   6 COMMAND        Enter TSO command or CLIST
   7 DIALOG TEST    Perform dialog testing
   8 SDSF           Spool Display Search Facility (fdp 5798 dgn)
   C CHANGES        Display summary of changes for this release
   F ICF            Information Center Facility
   I INFO/MGT       Information/Management  8p pblms 8d demp 80 csa
   L LM UTILITIES   Perform library management utility functions
   R RACF           Resource Access Control Facility
   S SMP/E          System Modification Program / Extended
   V VPW            VPW Display Services
   T TUTORIAL       Display information about ISPF/PDF
   X EXIT           Terminate ISPF using log and list defaults
Enter END command to terminate ISPF.
```

7. To access the ISPF BROWSE facility:
   - Type 1
   - Press ENTER.

   The Browse - Entry Panel displays:



8. To view the description for terminal H11M432 in the SYS1.VTAMLST data set:
   - Move the cursor to the field labeled DATA SET NAME
   - Type 'sys1.vtamlst' (including the single quote marks)
   - Press ENTER.

   The member selection list for the SYS1.VTAMLST data set appears:

```
BROWSE  - SYS1.VTAMLST ------------------------------------------------------
COMMAND ===>                                                SCROLL ===> PAGE
  NAME                VV.MM  CREATED  LAST MODIFIED  SIZE  INIT   MOD    ID
  AALIAS
  ADDGSX              01.00 84/11/01 84/11/01 16:56    95    95     0 WTCR2
  ADDSER1             01.06 81/10/15 84/06/04 10:07    25    24    15 THORD
  ADD3270             01.02 84/08/07 84/08/07 13:57    34    38     8 LIBERTY
  ADD3274             01.17 81/03/13 85/09/03 17:43    80    25    80 LIBERTY
  ADD3275             01.05 84/05/09 84/09/26 14:52    32    31     5 LIBERTY
  ADD3276             01.10 79/12/28 86/07/29 10:11    20    28    20 HAL
  ADD47005            01.27 82/06/24 85/07/16 16:20    27     5    27 RAGNAR
  ADD6670             01.00 85/02/14 85/02/14 09:28    20    20     0 LIBERTY
  ADD8100             01.00 84/06/11 84/06/11 17:12    10    10     0 JULES
  ADD8775             01.01 84/05/07 84/05/07 14:50     8     8     1 LIBERTY
  ADJSCP01
  ADJSCP02            01.00 86/04/11 86/04/11 11:23    10    10     0 SADTLER
  ADJSCP21            01.02 84/11/08 84/11/26 11:24     7     7     7 WTCR13
  ADJSCP29            01.00 85/02/25 85/02/25 11:21    10    10     0 WTCR4
  AMODETAB
  APPLA11             01.00 84/06/27 84/06/27 10:17     4     4     0 RICARDO
  AR2NLDM
  ATCAMMCP            01.02 85/02/22 85/03/01 09:40    13     3     0 KOENIG
  ATCCONX9            01.01 85/03/18 85/03/20 16:22     5     5     0 WTCR4
  ATCCON00            01.02 81/03/10 84/05/02 16:43     1     5     1 SANDOR
```

9. This list contains the name of each NCP and VTAM component in the network, since a member file for each of these components is stored in the SYS1.VTAMLST data set. In this scenario, the user's terminal is channel-attached to VTAM, so there is a member file containing data for this terminal.

   To access the member file for H11M432:

   - Type f h11m on the command line to search the member list for the first four characters of the terminal name
   - Press ENTER.

   A new screen appears when your file is found. On this new screen, move the cursor to the left of the line beginning with H11M, then:

   - Type s
   - Press ENTER.

   The selected member file SYS1.VTAMLST(H11M) appears:

```
 BROWSE -- SYS1.VTAMLST(H11M)     - 01.00 ----------  LINE 000000 COL   001 080
 COMMAND ===>                                              SCROLL ===> PAGE
****************************** TOP OF DATA ***********************************
        LBUILD                                                        00000010
H11M420 LOCAL CUADDR=420,TERM=3277,                                   X00000050
              MODETAB=MT3270,LOGAPPL=SAMON11,USSTAB=US32703,          X00000060
              ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000070
*             STATOPT=('3277 420 -SYS3')
H11M421 LOCAL CUADDR=421,TERM=3277,                                   X00000050
              MODETAB=MT3270,LOGAPPL=SAMON11,USSTAB=US32703,          X00000060
              ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000070
*             STATOPT=('3277 421 -SYS3')
H11M422 LOCAL CUADDR=422,TERM=3277,                                   X00000080
              MODETAB=MT3270,LOGAPPL=SAMON11,USSTAB=US32703,          X00000090
              ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000100
*             STATOPT=('3277 422 -SYS3')
H11M423 LOCAL CUADDR=423,TERM=3277,                                   X00000110
              MODETAB=MT3270,LOGAPPL=SAMON11,USSTAB=US32703,          X00000120
              ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000130
*             STATOPT=('3277 423 -SYS3')
H11M424 LOCAL CUADDR=424,TERM=3277,                                   X00000110
              MODETAB=MT3270,LOGAPPL=SAMON11,USSTAB=US32703,          X00000120
              ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000130
*             STATOPT=('3277 424 -SYS3')
```

10. To find the data on terminal H11M432:

    - Type f h11m432 on the command line
    - Press ENTER.

    The following panel of member file SYS1.VTAMLST(H11M) appears:

```
 BROWSE -- SYS1.VTAMLST(H11M)     - 01.00 ----------  LINE 000066 COL   001 080
 COMMAND ===>                                          SCROLL ===> PAGE
H11M42F  LOCAL CUADDR=42F,TERM=3286,FEATUR2=(MODEL2),                  X00000020
               MODETAB=MT3270,ISTATUS=INACTIVE,SPAN=(SPH11M)            00000030
*              STATOPT=('3286 42F -SYS3')
H11M430  LOCAL CUADDR=430,TERM=3277,                                   X00000050
               MODETAB=MT3270,USSTAB=US32703,LOGAPPL=SAMON11,          X00000120
               ISTATUS=ACTIVE,SPAN=(SPH11M),DLOGMOD=M3279M3             00000130
*              STATOPT=('3277 430 -SYS3')
H11M431  LOCAL CUADDR=431,TERM=3277,                                   X00000050
               MODETAB=MT3270,USSTAB=US32703,LOGAPPL=SAMON11,          X00000120
               ISTATUS=ACTIVE,SPAN=(SPH11M),DLOGMOD=M3279M3             00000130
*              STATOPT=('3277 431 -SYS3')
H11M432  LOCAL CUADDR=432,TERM=3277,                                   X00000080
               MODETAB=MT3270,USSTAB=US32703,LOGAPPL=SAMON11,          X00000120
               ISTATUS=ACTIVE,SPAN=(SPH11M),DLOGMOD=M2SDLCNQ            00000130
*              STATOPT=('3277 432 - SYS3')
H11M433  LOCAL CUADDR=433,TERM=3277,                                   X00000110
               MODETAB=MT3270,USSTAB=US32703,                          X00000120
               ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000130
*              STATOPT=('3277 433 -SYS3')
H11M434  LOCAL CUADDR=434.TERM=3277,                                   X00000110
               MODETAB=MT3270,USSTAB=US32703,                          X00000120
               ISTATUS=ACTIVE,SPAN=(SPH11M)                             00000130
```

The VTAM description for H11M432 shows that the user's terminal type (TERM) is 3277. However, the logon mode (DLOGMOD) is shown as M2SDLCNQ. For this scenario, this logon mode contains the session parameters for a printer, so you now know an error has been made in inputting the logon mode for this terminal type.

11. Until the error is corrected, you can offer the user a temporary solution. First, locate a logon mode that you know is valid for a 3279 terminal. In this network, S3270 is a valid logon mode for the user's terminal.

    Next, call the user and ask him to log on again using the following logon sequence:

    - Type logon tso,logmode=s3270
    - Press ENTER.

12. To exit TSO:

    - Press PF4 to close the SYS1.VTAMLST data set and return to the ISPF menu
    - Type x
    - Press ENTER
    - Type logoff (at the TSO "READY" prompt)
    - Press ENTER.

    You are logged off TSO and returned to the NetView command facility.

13. To go to the Alerts-Dynamic panel:

    - Type NPDA
    - Press ENTER
    - Type 1 (at the hardware monitor main menu)
    - Press ENTER.

14. Follow your installation's procedures for reporting and correcting this problem.

Using NetView to Monitor IBM Token-Ring Networks, CBXs, and PBXs

NetView can be used in conjunction with the NetView/PC™ program[3] and IBM Token-Ring Network Manager, ROLM Alert Monitor, or ROLM Call Detail Collector to allow problem data about a Token-Ring Network, a CBX[4] (computerized branch exchange), or a PBX (private branch exchange) to be viewed by a NetView operator or a Token-Ring Network specialist at another location. NetView/PC can also be used to transfer this problem data to the hardware monitor data base within NetView on the host computer.

NetView is used to manage hardware and software resources connected to a host computer. Its hardware monitor component collects error records and other information sent to the host system by hardware and software resources in the network. This information is displayed by the hardware monitor in formats you can use for problem determination.

The hardware monitor is not able to communicate directly with the resources in an IBM Token-Ring Network, a CBX, or a PBX. However, you can use the following products to collect data about these resources:

- IBM Token-Ring Network Manager to collect information about an IBM Token-Ring Network
- ROLM Alert Monitor and ROLM Call Detail Collector to gather information about a CBX or a PBX.

This information can then be passed from one of these programs to NetView through the NetView/PC program.

NetView/PC is a network management tool that allows the applications running under it (to manage a Token-Ring Network, for example, or a CBX or PBX) to send data to the host computer. NetView/PC does not solicit or store data from any source; it merely acts as a channel for data to flow between the host and other resources.

In an organization with several Token-Ring Networks, CBXs, and PBXs, problem determination responsibilities for all of these resources can be assigned to a single operator. This operator can use the remote console facility (RCF) of NetView/PC to access the NetView/PC application at any token-ring, CBX, or PBX location. Through the local NetView/PC program, the remote operator can gain access to other programs (such as IBM Token-Ring Network Manager) that store error records about the resources they monitor. He can then use these error records in resolving network problems.

When this remote operator wants to access a given NetView/PC, he must call the local administrator for that network and request a remote session. When the local administrator and the remote operator have both specified to their NetView/PC applications that they want to conduct a remote session, the local administrator's keyboard is locked and the remote operator's keystrokes are passed from his personal computer (PC) to the local administrator's PC. Also, the remote operator's PC

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[3] NetView/PC is a trademark of International Business Machines Corporation.

[4] CBX is a trademark of ROLM Corporation.

displays the panels he requests from the local administrator's PC during this remote session.

Figure 2 shows a representative network in which NetView, NetView/PC, and IBM Token-Ring Network Manager can be used together for problem determination and resolution.

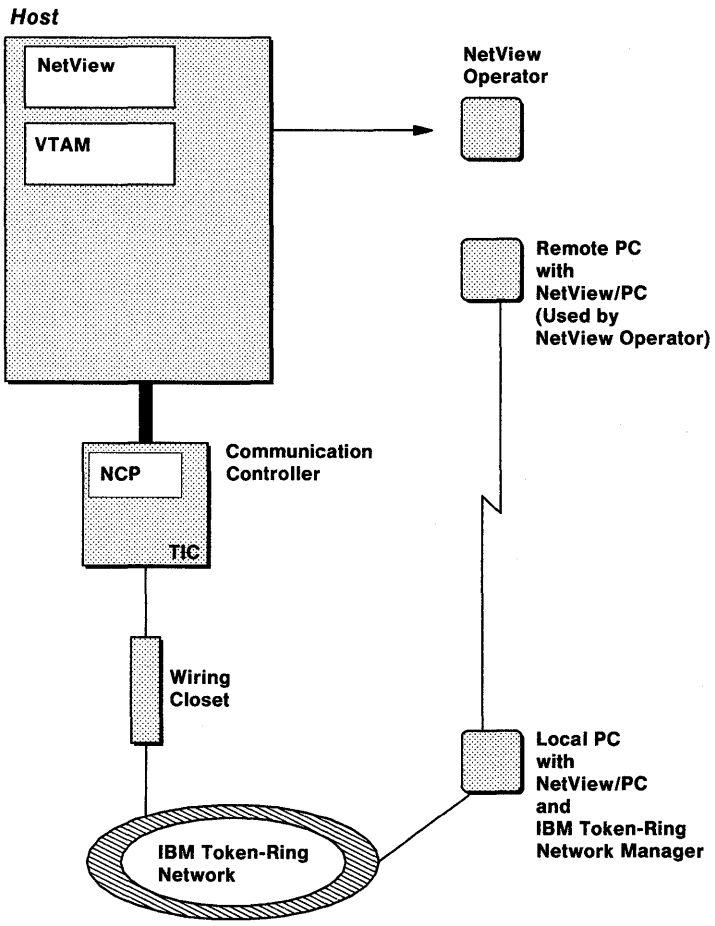


Figure 2. Network Using NetView, NetView/PC, and IBM Token-Ring Network Manager

Scenario: NCP/Token-Ring Interconnection Problem

Symptom

A user calls to report that he is unable to log on to the host computer. When he tried to log on, he received the following message:

```
4          14 communications check 501
```

Action Summary

- Ask the user for his terminal ID (LU name). Tell him you will check into the problem and he will be notified when it has been corrected.
- Review the Session List panel for the user's terminal. Find that there are no ACTIVE, BINDF, or INITF sessions for today's date.
- Review the Session Configuration Data panel for a previous SSCP-LU session between the user's terminal and the host. Determine that the user's terminal is part of an IBM Token-Ring Network. Record the names of the resources on the path between the terminal and the host.
- Use the command facility to determine whether the switched major node for this token ring has been defined as an active VTAM resource. Determine that the switched major node and the user's terminal are both defined as active.
- Use the command facility to view the current status within the network of the user's terminal. Find that the user's terminal is currently viewed by VTAM as connectable (CONCT), not active.
- Review the Alerts-History panel to see if alerts have been recorded for any of the resources on the path between the user's terminal and the host. Find that no alerts concerning these resources have been logged.
- Call the local administrator for the user's Token-Ring Network. Explain the problem and request a Remote Console Facility (RCF) session.
- Log on to the NetView/PC program on your remote console.
- Set up the RCF session on your remote console, and log on to the NetView/PC program in the user's Token-Ring Network.
- Use the Token-Ring Network Manager subprogram of NetView/PC to view the ring configuration for this Token-Ring Network. Determine that the user's terminal is not connected to the token ring.
- Call the local administrator of this Token-Ring Network and report that the user's PC is not connected to the token ring. Ask him to continue the investigation and call the user when the problem has been resolved.
- Follow your installation's procedures for reporting this problem.

Procedure

Follow these steps to investigate the problem:

1. Ask the user for his terminal ID (LU name). For this scenario, the user's terminal is E13M0102.
2. The session monitor collects data about successful, failed, and attempted sessions for each logical unit (LU) in the network. The Session List panel displays the most recent session activity for the logical unit you choose. To find out if the user's session attempt was unsuccessful due to bind failure or init failure, use the session monitor to view the Session List panel for terminal E13M0102.
   - Type nldm sess e13m0102
   - Press ENTER.

   The Session List panel appears:

```
NLDM.SESS                                                          PAGE    1
                              SESSION LIST
NAME: E13M0102                                                  DOMAIN:  CNM11
-------------------------------------------------------------------------------
     ***** PRIMARY *****    **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME     TYPE DOM      START TIME      END TIME
( 1) M11       SSCP CNM11   E13M0102  LU  CNM11  02/26 12:00:06  02/26 16:17:47
( 2) TS01111   LU   CNM11   E13M0102  LU  CNM11  02/26 11:51:12  02/26 11:54:56
                                                  REASON CODE 0C
( 3) TS011     LU   CNM11   E13M0102  LU  CNM11  02/26 11:51:10  02/26 11:51:11
( 4) M11       SSCP CNM11   E13M0102  LU  CNM11  02/26 11:50:48  02/26 11:54:56
( 5) TS01111   LU   CNM11   E13M0102  LU  CNM11  02/26 11:49:06  02/26 11:50:47
                                                  REASON CODE 0C
( 6) TS011     LU   CNM11   E13M0102  LU  CNM11  02/26 11:49:04  02/26 11:49:05
( 7) M11       SSCP CNM11   E13M0102  LU  CNM11  02/26 11:38:40  02/26 11:50:48
( 8) TS01110   LU   CNM11   E13M0102  LU  CNM11  02/26 10:42:41  02/26 10:53:48
                                                  REASON CODE 0C
( 9) M11       SSCP CNM11   E13M0102  LU  CNM11  02/25 15:14:56  02/25 15:21:55


ENTER TO VIEW MORE DATA
ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
CMD==>
```

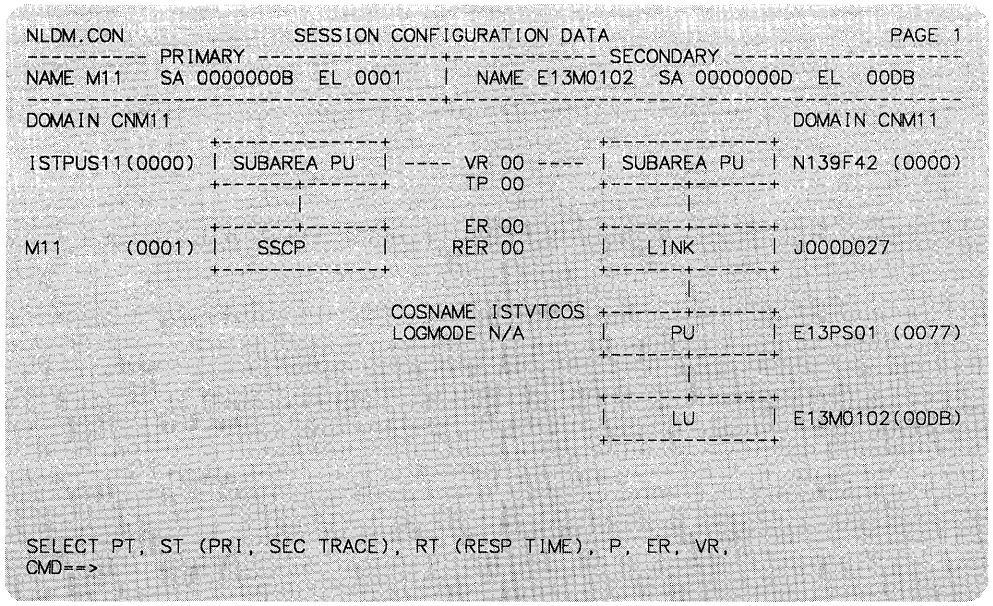
On the Session List panel, no ACTIVE, BINDF (bind failure), or INITF (init failure) sessions are shown for today's date (2/27/87). This indicates that the user's logon request was never received by the host. It is possible that the user's terminal is not defined as an "active" host resource. If you want more information about the data presented on the Session List panel, you can turn to page 121 of "Appendix A. Session Monitor Panels."

To find out if the terminal is defined to VTAM as an active resource, you need to know the path the terminal takes to communicate with the host. This will tell you the resource group in which the terminal has been placed for definition to VTAM. The Session Configuration Data panel provides path information.

3. Since there is no active session between the host (the SSCP) and the user's terminal (an LU), you cannot view the configuration for this session attempt. However, because the terminal has probably used the same path to communicate with the host in past sessions, you can obtain the information you need by viewing the configuration data for a previous SSCP session with this terminal (LU). Selection number 1 on the Session List panel is an SSCP-LU session. To view the Session Configuration Data panel for this session:

   - Type 1
   - Press ENTER.

   The Session Configuration Data panel appears:



The configuration shown on this panel is VTAM's view of a Token-Ring Network. The SUBAREA PU on the right half of the diagram is a communication controller. The LINK below it represents the physical components that connect the communication controller to a Token-Ring Network. The user's terminal (the PU and the LU shown in the diagram) is a personal computer (PC) that is connected to the host through a Token-Ring Interface Coupler (TIC), which is a part of the LINK shown in this configuration panel.

For an explanation of the information presented on the Session Configuration Data panel, see page 118 of "Appendix A. Session Monitor Panels."

4. Now that you know the user's terminal is part of a Token-Ring Network, you can use the command facility to determine if the switched major node containing the resources in this Token-Ring Network is defined as "active" to VTAM. For this scenario, the name of the switched major node is SWNTRI.

   - Press PF6 to go from the session monitor to the command facility
   - Type d net,id=swntri,e
   - Press ENTER.

   The command facility returns the following messages:

```
A CNM11     IST093I   E13PS01   ACTIVE
A CNM11     IST093I   SWNTRI    ACTIVE
```

   These messages verify that the user's terminal (physical unit E13PS01) and the switched major node for this Token-Ring Network (SWNTRI) are both defined as active resources within VTAM.

   This indicates the problem is not with the VTAM resource definitions. However, when a resource is defined as active, it does not mean the resource is currently working. It only means that VTAM is able to establish a connection if the resource requests communication with VTAM.

5. To obtain more information about the status of physical unit E13PS01, you can view the current network description for this resource. To display the description of E13PS01's status:

   - Type d net,id=e13ps01, e
   - Press ENTER.

   The following command facility panel appears:

```
NCCF          N E T V I E W          CNM11 BEUGNOT      02/27/87  14:58:01
* CNM11      D NET,ID=E13PS01,E
' CNM11
IST075I  VTAM DISPLAY - NODE TYPE = PHYSICAL UNIT
IST486I  NAME= E13PS01    STATUS= CONCT          , DESIRED STATE= CONCT
IST136I  SWITCHED SNA MAJOR NODE = SWNTRI
IST654I  I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I  LOGICAL UNITS:
IST080I  E13LO102 CONCT
IST314I  END
---------------------------------------------------------------------------
```

This panel shows that E13PS01's current status in the network is CONCT (connectable). This means that VTAM is prepared to communicate with this terminal but no session is currently in progress. This verifies that the problem is not with the VTAM resource definitions.

6. Now that you know the names of the resources along the path between the user's terminal and the host, you can check the Alerts-History panel to see if any alerts involving these resources have been logged.

   - Type npda alh
   - Press ENTER.

   The first page of the Alerts-History panel appears:

```
N E T V I E W                                    OPER1      02/27/87 15:04:31
NPDA-31A                  * ALERTS-HISTORY *                    PAGE   1 OF  3
                                                                DOMAIN:  CNM11

SEL# RESNAME  TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) LN02PTP  LINE 02/27 14:48 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 2) PU32762  CTRL 02/27 14:46 TIMEOUT:DEVICE OFF/REMOTE MODEM OFF/COMM
( 3) PU32762  CTRL 02/27 14:42 FORMAT EXCEPTION SDLC ROL:OK IF NORMAL/DEVICE
( 4) PU32762  CTRL 02/27 14:42 TIMEOUT:DEVICE OFF/REMOTE MODEM OFF/COMM
( 5) PU32762  CTRL 02/27 14:40 FORMAT EXCEPTION SDLC ROL:OK IF NORMAL/DEVICE
( 6) PU32762  CTRL 02/27 14:40 SDLC CMD REJECT:COMM CTRL PROGRAM/DEVICE
( 7) L020     LINE 02/27 13:04 (COMMUNICATIONS;UNDETERMINED)
( 8) L020     LINE 02/27 11:56 (COMMUNICATIONS;UNDETERMINED)
( 9) RALLINEX LAN  02/26 15:07 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(10) RALLINEX LAN  02/26 15:04 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(11) RALLINEX LAN  02/26 14:28 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(12) RALLINEX LAN  02/26 14:28 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(13) RALLINEX LAN  02/26 12:10 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(14) PU001    PU   02/25 18:18 UNDETERMINED ERROR:PROCESSOR
(15) PU001    PU   02/25 18:16 UNDETERMINED ERROR:PROCESSOR
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)

 ???
CMD==>
```

The Alerts-History panel can have several pages. You can press PF8 or ENTER to move forward a page at a time, and PF7 to move back a page at a time. If you want an explanation of the information presented on this panel, you can turn to page 146 of "Appendix B. Hardware Monitor Panels."

For this scenario, no alerts appear on the Alerts-History panel concerning the resources in this Token-Ring Network. You now know NetView has not recorded any information concerning the user's session attempt. This indicates that the problem occurred somewhere on the PC side of the connection.

7. To continue investigating the problem, you can use the Remote Console Facility (RCF) to dial into the local NetView/PC console for the user's Token-Ring Network.

   - Phone the local administrator for this Token-Ring Network and describe the problem
   - Request an RCF session
   - Ask the local administrator for the name of his remote console application.

   The local administrator tells you the name of the remote console application is RCF01. You will enter this name on the NetView/PC Remote Console Initiation panel once you have logged on to NetView/PC.

8. Follow your installation's procedures for logging on to NetView/PC on your remote console. A panel similar to the following NetView/PC Session Selection Menu appears:

```
                    NetView/PC Session Selection Menu
Press the number of the session that you want:

    1. SERVICES    NetView/PC Operator Services
    2. DOS Command Session




To return to DOS, select SERVICES, then SHUTDOWN.
```

9. The Remote Console Facility is activated through the SERVICES function shown on the NetView/PC Session Selection Menu.

   To access the RCF program, type 1. (You do not need to press ENTER on this panel.) The NetView/PC Operator Services Main Menu appears:

```
DCJSSPA1                NETVIEW/PC OPERATOR SERVICES
                              MAIN MENU
------------------------------------------------------------------------------
Select ONE of the following:

   1  INTERVENTION          Display operator intervention messages
   2  GROUPING              Select applications to run as a NetView/PC group
   3  OPERATOR RECORDS      Define operator identification records
   4  LOG-OFF / LOG-ON      Log-off current operator and log-on new operator
   5  REGION MANAGER        Load one of the following facilities:
                              - Remote Console Facility
                              - Local Alert Facility
   6  HOST FILE TRANSFER    Transfer a file to or from a host computer
   H  HELP MENU             How to use NetView/PC
   S  SHUTDOWN              Perform NetView/PC system shutdown

Type the number of your selection and press Enter; otherwise press F2 (Quit).




Enter   F1=Help   F2=Quit

Selection===> _
```

10. Option 5 on this menu, REGION MANAGER, allows you to load the program for RCF. To load the RCF program and request a remote-console session:

    - Type 5
    - Press ENTER.

    The NetView/PC Operator Services Region Manager Main Menu panel appears:

```
DCJRGPA1                NETVIEW/PC OPERATOR SERVICES
                          REGION MANAGER MAIN MENU
--------------------------------------------------------------------------------

Any of the functions listed below may be executed in a NetView/PC reserved
region, with the following restrictions:
   - Only one function may be executed in the region at a time.
   - Any function currently occupying the region must be shutdown
     before a new function may be installed.

Select ONE of the following:
   1  REMOTE CONSOLE    Initiate a Remote Console session
   2  DISPLAY ALERTS    Display LOCAL alerts, problems, and reminders


Type your selection and press Enter; otherwise press F2 (Quit).




Enter   F1=Help   F2=Quit

Selection===> _
```

11. Option 1 on this menu, REMOTE CONSOLE, allows you to initiate a remote console session:

    - Type 1
    - Press ENTER.

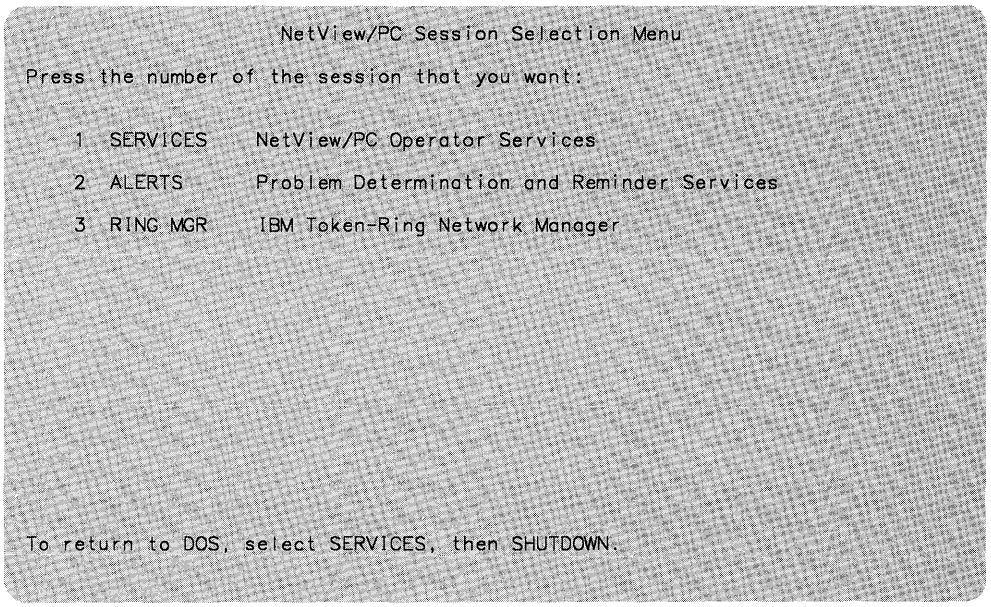
    The NetView/PC Remote Console Initiation panel appears:

```
DCJRCPA1                NETVIEW/PC REMOTE CONSOLE
                              INITIATION
--------------------------------------------------------------------------------

Select the type of Remote Console session desired:

   SESSION TYPE . . . . . __ 1=Local, 2=Remote

Type the name of the User Application Record (up to 54 characters):

   APPLICATION NAME . . .

To initiate Remote Console press Enter; otherwise press F2(Quit).




Enter   F1=Help   F2=Quit
```

    This panel asks you for the type of session you want to initiate and the name of the application you want to access. The APPLICATION NAME refers to the name that the local administrator has given to the remote console application for this local Token-Ring Network. Use the application name you requested from the local administrator when you called to set up this remote session.

    - Type 1 in the field labeled SESSION TYPE
    - Type rcf01 in the field labeled APPLICATION NAME
    - Press ENTER.

12. When the message "Local is ready for Dial-in" appears, press ENTER. The message "RCF Session Active" is displayed in the lower left corner of your screen. The term "RCF" will flash in the lower right corner of your screen throughout the remote session.
13. You can now use the Token-Ring Network Manager program to further investigate the problem. To access this program, press F2 three times to quit the operator services function and return to the main NetView/PC menu. The NetView/PC Session Selection Menu for the local administrator's NetView/PC program appears:



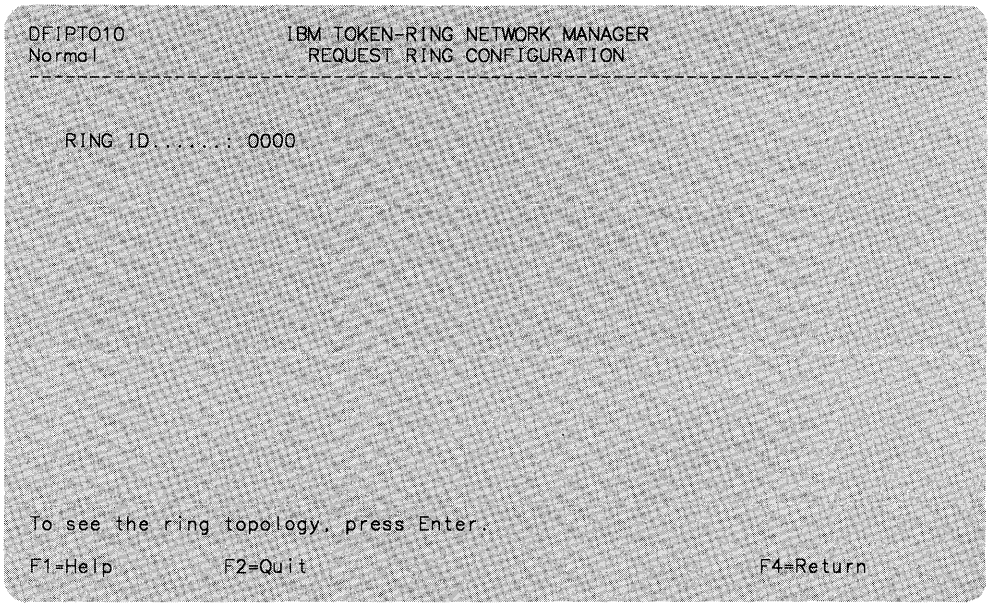
14. At this menu, type 3 to select the IBM Token-Ring Network Manager. Press ENTER when the copyright panel for this program appears. A panel similar to the following IBM Token-Ring Network Manager Ring Manager Functions panel appears:

```
DFIPCP10            IBM TOKEN-RING NETWORK MANAGER
Normal                  RING MANAGER FUNCTIONS
------------------------------------------------------------------------------
Please select one of these functions:

  ID  FUNCTION                   DESCRIPTION

   1  EVENT LOG                  Generate event log reports.
   2  SYSTEM DEFINITION          Definition of system parameters.
   3  ADAPTER FUNCTIONS          Adapter and ring commands.
   4  PATH TEST                  Check path between two adapters.
   5  RING CONFIGURATION         Display order of adapters on ring.
   6  SOFT ERROR LOGGING         Change soft error logging options.


  10  SHUTDOWN                   Shutdown the Ring Manager.
  11  EXIT                       Exit Ring Manager; return to Alerts
                                  and Services.

Type the ID of the function and press Enter===> [  ]

F1=Help
```

15. From this panel, you can select the RING CONFIGURATION function to see if the user's terminal is connected to the token-ring.

    - Type 5
    - Press ENTER.

    The Request Ring Configuration panel appears:



16. From the Request Ring Configuration panel, you can access the Ring Configuration (topology) panel. The Ring Configuration panel shows the name and function of each resource connected to the token-ring. To view this panel, press ENTER.

    The Ring Configuration panel appears:

```
DFIPTO20                IBM TOKEN-RING NETWORK MANAGER              Page 1  of 1
Normal                       RING CONFIGURATION
-------------------------------------------------------------------------------
  RING ID.....: 0000    TIME.....: 15:32:59    DATE.....: 02/27/87

  ADAPTER          SYMBOLIC        FUNCTION                          GROUP
  ADDRESS          NAME                                              ADDRESS

  10005A000799     NETVIEWPC       Ring Error Monitor                00000000
                                   Configuration Report Server

  400001130000     N139F42         Active Monitor                    80000000
  400041130002     J000D027                                          00000000
  400021130001     E13M0103        Ring Error Monitor                00000000

F1=Help    F2=Quit                        F4=Return                    PgUp
F6=Print                                                               PgDn
```

    If a resource is connected to the Token-Ring Network, its adapter address and function will be shown on this panel. If symbolic names have been assigned to the resources on this token-ring, these symbolic names will also be shown.

    Since E13M0102 is not listed on this panel, you know that the user's PC is not connected to the token-ring.

17. Call the local administrator for this Token-Ring Network and report that the PC is not connected to the token-ring. Ask him to continue the investigation at his location and notify the user when the problem has been resolved.

18. Follow your installation's procedures for reporting this problem.

Chapter 4. Terminals Not Responding

Chapter 4. Terminals Not Responding

Scenario: DTE Power Loss, Using the NetView Help Desk

This scenario demonstrates how you can use the NetView online help desk to investigate a problem. This help desk displays detailed, step-by-step instructions for solving specific problems.

The NetView help desk guides you through a series of panels that offer detailed problem determination techniques for specific problem situations. You can also use the online help facility to display information on terms and commands that appear on NetView panels.

Symptom

A user calls and says that terminal A03T0013 does not work.

Action Summary

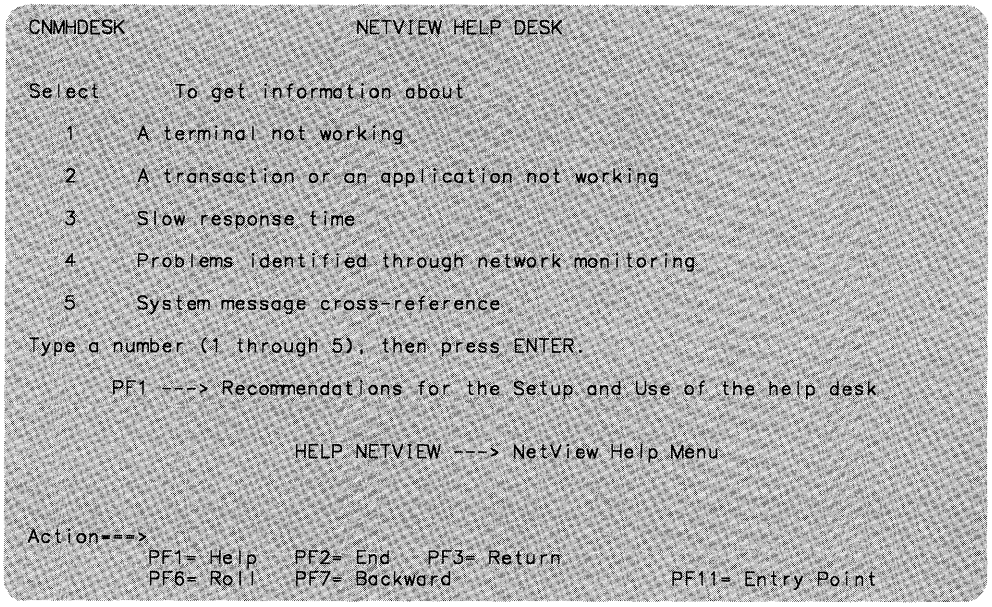
- To start the investigation, use the NetView help desk. Choose A TERMINAL NOT WORKING from the NetView Help Desk menu.
- Follow the help desk instructions. When you enter the **DISG** command to display the VTAM Display: Logical Unit panel, notice the problem with the control unit (PU).
- Continue to follow the help desk instructions to investigate the control-unit problem. Enter the **NPDA TEST** command to perform a DTE test. The test fails, but a sense code displays that tells you LPDA is not allowed on the line.
- Use the online help facility to learn how to reconfigure the line to allow LPDA, and enter the required command.
- Once LPDA is allowed on the line, try the DTE test again. From the test results, determine that the control unit is powered off (turned off).
- Ask the operator responsible for the control unit to power on (turn on) the control unit.
- Once the control unit is powered on, call and ask the user to log on again. The logon is successful.
- Follow your installation's procedure for submitting a problem report.

Procedure

Follow these steps to investigate this problem:

1. Use the NetView online help desk to display detailed, step-by-step instructions for investigating this problem. To access the help desk:
   - Type helpdesk
   - Press ENTER.

   The NetView Help Desk menu appears:



2. Since a terminal is not working, select option 1:
   - Type 1
   - Press ENTER.

   The help desk panel called The Terminal Does Not Work appears:

```
CNMHT1                THE TERMINAL DOES NOT WORK

 1st   Obtain the terminal id/logical unit name (luname).

 2nd   Ask the following questions:

       -- Is the terminal plugged in?
       -- Are the key and the power switch turned on?
       -- Is the intensity knob turned high enough?
       -- Is the terminal in test mode rather than normal mode?
       -- Has the terminal ever worked?
       -- Have any changes (such as configuration changes) been made?

 3rd   Determine how the terminal is connected and continue below.

             --- Select the number for one of the following ---

     1 3274        The terminal is connected to a 3274 controller.
     2 4700        The terminal is connected to a 4700 system.
     3 8100        The terminal is connected to an 8100 system.

Action===>
         PF1= Help   PF2= End   PF3= Return
         PF6= Roll   PF7= Backward              PF11= Entry Point
```

3. Since you already know the terminal name (A03T0013), ask the user the questions in Step 2 on the panel. Depending on your installation, you may already know the answers to some of these questions. Assume the problem is still unresolved after answering the questions in Step 2.
4. Continue to Step 3 on the panel. Determine that the terminal is connected to a 3274 controller. Follow the instructions on the panel:
   - Type 1
   - Press ENTER.

   The help desk panel called A 3270 Terminal Does Not Work appears:

```
CNMHT32              A 3270 TERMINAL DOES NOT WORK

 1st  Ask if other terminals on the same controller are having problems.

 2nd  Enter DISG luname to see the network status from the LU to the host.

       -- Link not active - There is a link problem.
       -- PU not active - There is a control unit problem.
       -- Otherwise, there is probably a terminal problem.

Note: Select 4 if LNCTL=BSC on the DISG display.  Also select 4 if the PU is
      a service point (such as NetView/PC) or if there is a 3710 between
      the NCP and the control unit (check your local documentation).

           --- Select the number for one of the following ---

        1 Link problem          The link is not active.
        2 Control unit (PU)     It is a control unit problem.
        3 Terminal (LU)         It is a terminal problem.
        4 BSC/non-SNA devices   A non-SNA device has a problem.


Action===>
                    PF2= End   PF3= Return
          PF6= Roll   PF7= Backward                  PF11= Entry Point
```

5. Follow the instructions on the panel. Proceed to Step 2 on the panel to view the status of the paths between the terminal (LU) and the host on the panel:

   - Type disg a03t0013
   - Press ENTER.

   When the command finishes processing, the VTAM Display: Logical Unit panel appears:

```
CNMOLU01              VTAM DISPLAY : LOGICAL UNIT
------------          ------------                        ------------   ------------
|   HOST   |          |   NCP    |      LINE              |    PU    |   |    LU    |
| ISTPUS11 | 322 -|   A03NV4   |---- A03L00 ------| A03P001  |---| A03T0013 |
------------          ------------                        ------------   ------------
                         ACTIV         ACTIV                  PCTD2          INACT

SIO=00000824  DESIRED=ACTIV  DESIRED=ACTIV  DESIRED=ACTIV  DESIRED=ACTIV
I/O TRC= OFF  I/O TRC= OFF   TYPE= LEASED   I/O TRC= OFF   I/O TRC= OFF
BUF TRC= OFF  BUF TRC= OFF   LNCTL= SDLC    BUF TRC= OFF   BUF TRC= OFF
SUBAREA= 011  SUBAREA= 012   TRACE= TRRES
IRN TRC= OFF  NETID= NETC    GROUP= G12S1                  PLU= INHIBITED
                                                           SLU= INHIBITED
                                                           DEVTYPE= LU
NO ACTIVE SESSIONS                                         SESSIONS:
                                                           LIM= 00000001
                                                           ACTIV=  00000
                                                           REQS=   00000

Select:   1  NCP      2  Line      3  PU

Action===>
           PF1= Help   PF2= End   PF3= Return
           PF6= Roll   PF7=Backward
```

6. Examine the network diagram. Notice that LU A03T0013 is inactive (INACT). Also notice that the PU status is PCTD2.

   You may need the resource names later in the investigation, so write down the names from the diagram:

   Host ISTPUS11

   NCP A03NV4

   Line A03L00

   PU A03P001

   LU A03T0013

7. If you do not know what PCTD2 means, enter the command **STATUS PCTD2** to display a detailed explanation. The panel tells you that PCTD2 means that the NCP tried to contact or poll the control unit, but the control unit did not respond. Because the PU is not active but the line is, assume that the problem is with the control unit (PU).

8. Press PF6 to roll to the VTAM Display: Logical Unit panel. Press PF6 again to roll to the panel called A 3270 Terminal Does Not Work. Look at the list of selections near the bottom of the panel. Since you believe the problem is with the control unit, proceed with option 2 to investigate the control unit (PU) problem:

   - Type 2
   - Press ENTER.

   The panel called The Problem Is in the 3274 Control Unit appears:

```
CNMHT3CT        THE PROBLEM IS IN THE 3274 CONTROL UNIT

 1st  Enter RECYCLE puname to deactivate and reactivate the PU.  The PU is in
        PCTD2 during a re-IML.  After a re-IML, the PU should become active.

 2nd  If the PU becomes active, ask the user to try to log on again.

 3rd  If the RECYCLE fails, or if the problem persists, continue
        according to the status of the PU.  Enter DIS puname to
        verify the status of the PU.

            --- Select the number for one of the following ---

   1 Cannot deact       The deactivation of the PU fails.
   2 Active             The activation of the PU is successful.
   3 PCTD2/LPDA         The activation of the PU is in pending contact state and
                          the line is equipped with IBM LPDA-capable modems.
   4 PCTD2              The activation of the PU is in pending contact state.
   5 Pending act        The activation of the PU is in another pending state.
   6 Rejected act       The activation of the PU is rejected.


Action===>
                    PF2= End   PF3= Return
          PF6= Roll   PF7= Backward                  PF11= Entry Point
```

9. Following the instructions on the panel, use the **RECYCLE** command to reactivate the control unit. Assume the attempt fails. Since the **RECYCLE** command took you to the command facility screen, press PF6 to roll to the panel called The Problem Is in the 3274 Control Unit.

10. Because the recycle attempt failed, look at the list of selections near the bottom of the panel. For this example, assume that you know the line is equipped with IBM LPDA modems. Therefore, select option 3 at the bottom of the panel:

    - Type 3
    - Press ENTER.

    The panel titled Act for PU on Line Equipped with LPDA Modems Ends in PCTD2 appears:

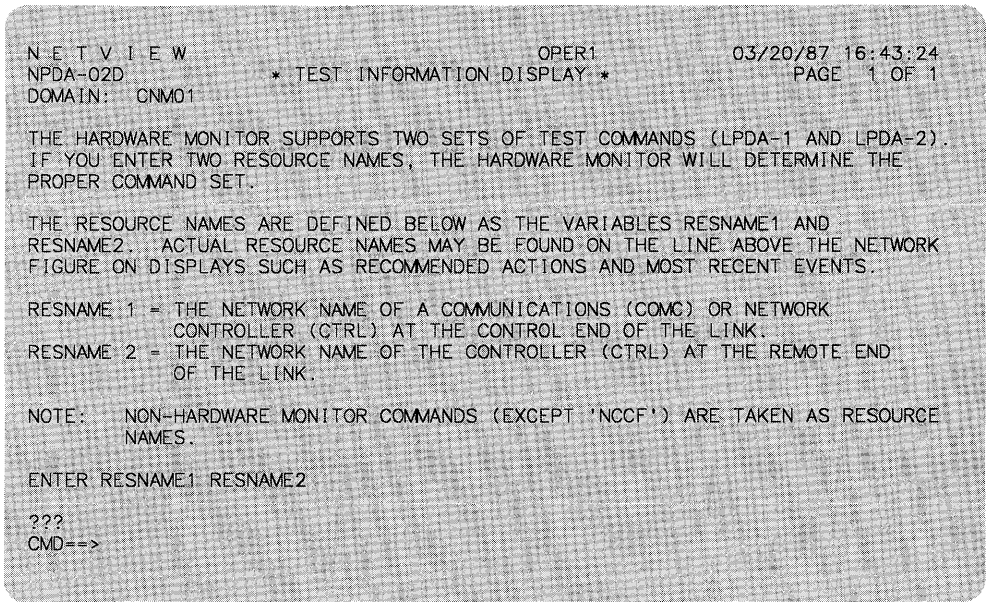
```
CNMHTCPM       ACT FOR PU ON LINE EQUIPPED WITH LPDA MODEMS ENDS IN PCTD2

NOTE:  These actions apply only to 3274 control units connected via lines
          equipped with IBM modems with LPDA capabilities.

 1st   Make sure that an IML is not in progress.

 2nd   Enter EVENTS puname to obtain the most recent reported errors.

 3rd   Select the appropriate event on the Most Recent Events panel, and
          press ENTER to view the recommended actions.

 4th   Enter NPDA TEST and follow the instructions on the panel in order
          to run the appropriate LPDA commands.

 5th   If the line test is successful, the problem may be in the control
          unit.  The problem might be solved by a re-IML of the 3274.

 6th   If the problem persists, report it.

Action===>
                    PF2= End    PF3= Return
          PF6= Roll   PF7= Backward                  PF11= Entry Point
```

11. Follow the instructions on the panel. Since you are not aware of any problems that would cause an unscheduled Initial Micro Program Load (IML) of the PU, assume that there is not an IML in progress. Assume that you perform Steps 2 and 3 from the panel, and the panels that are displayed do not provide enough information for you to pinpoint the problem.

    Since you have LPDA modems, continue with Step 4 on the panel:

    - Type npda test
    - Press ENTER.

    The Test Information Display panel appears:



12. Read the instructions on the panel. Enter the appropriate resource names to perform the test. You wrote down the resource names from the network diagram on the VTAM Display: Logical Unit panel. To perform the test:

    - Type a03nv4 a03p001
    - Press ENTER.

    The LPDA-1 Command Menu appears:

```
N E T V I E W                                  OPER1          03/20/87 16:43:52
NPDA-LPDA1              * LPDA-1 COMMAND MENU *                  PAGE  1 OF 1

DOMAIN:  CNM01      RESNAME1: A03NV4        RESNAME2: A03P001

SEL#          TEST                              DESCRIPTION

(1)      DTE -  REMOTE DTE          RETRIEVES THE CURRENT AND TRANSITION STATES
                INTERFACE TEST      OF EIA LEADS AT THE REMOTE STATION AND
                                    PRESENTS THE DATA ON DISPLAY NPDA-25A

(2)      LS  -  LINK STATUS         RETRIEVES LINE QUALITY, HIT COUNT, AND
                TEST                OTHER STATUS DATA FROM MODEMS OR LINK
                                    DIAGNOSTIC UNITS AND PRESENTS THE DATA
                                    ON DISPLAY NPDA-24A

(3)      RST -  REMOTE MODEM        RETRIEVES THE RESULTS OF THE SELF TEST OF
                SELF TEST           THE REMOTE MODEM AND PRESENTS THE DATA
                                    ON DISPLAY NPDA-22A

ENTER SEL#

???
CMD==>
```

13. Suppose that you do not know which test to perform. Therefore, start with the first test:

    - Type 1
    - Press ENTER.

    The Command List panel appears:

```
N E T V I E W                                  OPER1          03/20/87 16:47:34
NPDA-10AA                  * COMMAND LIST *                        PAGE  1 OF 2

DATA CONTROL COMMANDS
SEL#   COMMAND                    ACTION
( 1)   ALERTSD    OR  ALD         VIEW ALERTS-DYNAMIC DISPLAY
( 2)   ALERTSH    OR  ALH         VIEW ALERTS-HISTORY DISPLAY
( 3)   MRECENT    OR  MR          VIEW MOST RECENT DATA DISPLAY
( 4)   PURGE(PRG) OR  PRGATT      PURGE DATA
( 5)   TOTAL      OR  TOT         VIEW TOTAL DATA DISPLAY

REPORTING COMMANDS
SEL#   COMMAND                    ACTION
( 6)   COPY                       PRINT THE CURRENT DISPLAY IN THE NCCF LOG
( 7)   REPORTS                    SEQUENTIAL LOGGING FOR REPORT GENERATION

RETRIEVE NETWORK DATA COMMANDS
SEL#   COMMAND                    ACTION
( 8)   CTRL                       RETRIEVE NETWORK DATA FROM SNA CONTROLLER
( 9)   TEST                       RETRIEVE NETWORK DATA FROM IBM MODEMS
ENTER SEL# FOR DESCRIPTION OF COMMAND OR DEPRESS ENTER TO VIEW NEXT PAGE
BNJ2451 REQUEST REJECTED- FUNCTION NOT SUPPORTED BY RESOURCE SENSE='080C'X
 ???
CMD==>
```

14. This panel displays because the test failed. Look at the message at the bottom of the panel:

```
BNJ245I REQUEST REJECTED - FUNCTION NOT SUPPORTED BY RESOURCE
    SENSE ='080C'X
```

For an explanation of the information presented on the Command List panel, see page 151 of "Appendix B. Hardware Monitor Panels."

To get an explanation of sense code 080C:

- Type sense 080c
- Press ENTER.

The Sense Code Description panel appears:

```
NLDM.SENS                SENSE CODE DESCRIPTION                        PAGE  1
-------------------------------------------------------------------------------

SENSE DATA:
   CATEGORY - (08) PROCEDURE  NOT SUPPORTED:    A PROCEDURE (TEST,    TRACE,
   MODIFIER - (0C) IPL, REQMS TYPE) SPECIFIED IN AN RU IS NOT SUPPORTED BY
     BYTE 2 - (00) THE RECEIVER.
     BYTE 3 - (00)









ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
CMD==>
```

Since you know that the communication line uses LPDA modems, this sense code description indicates that the line was system-generated without LPDA allowed. If you want to review an explanation of the information displayed on the Sense Code Description panel, you can turn to page 116 of "Appendix A. Session Monitor Panels."

15. The online help facility may give you an idea of how to continue the investigation. To access the online help facility for LPDA:

    - Type help lpda
    - Press ENTER.

    The LPDA Command online help facility panel appears:

```
CNMKLPDA                        LPDA COMMAND                        Page 1 of 2

Use the LPDA command to query or change the LPDA status of a line or station
attached to an NCP.  The LPDA command applies to NCPs only.

Format                  Operand Description

LPDA ID=name            - Names NCP to which line or link station is attached.

       ,STATION=name    - Specifies link station for which LPDA status is to
                          be changed or queried.  When specified, LPDA status
                          is changed or queried for named station ONLY.
   or  ,LINE=name       - Specifies network name of line for which LPDA
                          status is to be changed or queried.

                  PF8 ---> More Operands, Example


Action===>
         PF1= Help    PF2= End   PF3= Return                    PF5= Bottom
         PF6= Roll    PF7= Backward  PF8= Forward    PF11= Entry Point
```

16. To see the next page of the panel, press PF8 or ENTER. Page 2 of the LPDA Command panel appears:

```
CNM1LPD2                        LPDA COMMAND                        Page 2 of 2

     Format    Operand Description

     ,QUERY - Displays LPDA status for line or station specified (default).
  or ,TYPE1 - Allows LPDA for line specified with LINE keyword having
              386X or 586X modem attributes.
  or ,TYPE2 - Allows LPDA for line specified with the LINE keyword having
              3800 modem attributes.
  or ,TYPE3 - Allows LPDA for line having 586X model 02, 03, 52, or 53 modem
              attributes.
  or ,NONE  - Specifies NOT to allow LPDA for line specified with LINE keyword.
  or ,ALLOW - Allows LPDA for station specified with STATION keyword.
  or ,BLOCK - Specifies NOT to allow LPDA for specified station.

Note:  ALLOW and BLOCK can be used with the STATION keyword only.  The TYPE1,
       TYPE2, TYPE3, and NONE operands are used with the LINE keyword only.

Example: LPDA ID=NCP2,LINE=LINE7  queries the status of LINE7 attached to NCP2.



Action===>
         PF1= Help    PF2= End   PF3= Return    PF4= Top
         PF6= Roll    PF7= Backward                PF11= Entry Point
```

17. Follow the instructions on the panel to allow LPDA on the line. Do the following:

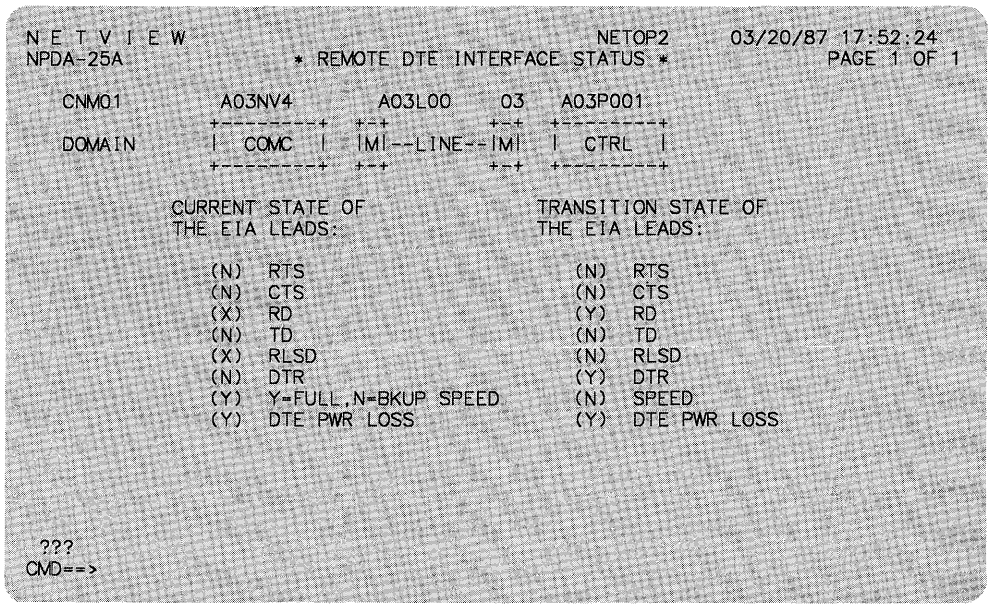
    - Type lpda id=a03nv4,line=a03l00,type1
    - Press ENTER.

    The command facility screen appears, letting you know that the command is processing. When processing is completed, a message states that the **LPDA** command has been completed. LPDA is now allowed on the line.

18. The DTE test you performed in Steps 11, 12, and 13 failed because LPDA was not allowed. Since you have now allowed LPDA, try the DTE test again:

    - Type npda test a03nv4 a03p001 dte
    - Press ENTER.

    The Remote DTE Interface Status panel appears:



19. Review the panel. Notice that the DTE PWR LOSS lead is in the Y state. To find out more about what this means, you can turn to page 178 of "Appendix B. Hardware Monitor Panels." In this appendix you can find a detailed explanation of the terms that appear on the Remote DTE Interface Status panel. The explanation for DTE PWR LOSS suggests that the control unit has been turned off or has malfunctioned and lost power.
20. Notify the control unit operator and ask him to power on the control unit. When the operator turns on the control unit, a message displays telling the operator that the control unit is active. If the activation does not work, you may want to check the control unit status with the **DIS** command to help the operator correct the problem.
21. When the control unit is active, call and ask the user to try to log on again. This time the logon should be successful.
22. Allowing LPDA by using the **LPDA** command is only a temporary solution of the problem, since it appears that the line may have been system-generated incorrectly. Notify the system programmer of the problem so that it can be corrected permanently.
23. Follow your installation's procedure for submitting a problem report.
24. To return to the Help Desk Menu:

    - Type helpdesk
    - Press ENTER.

Scenario: Local Modem Not Powered On

Symptom

A user calls early in the morning and says that none of the terminals in the location seem to be working.

Action Summary

- Ask the user for his terminal ID. Determine that this terminal is connected to control unit A04P051.
- Use the STATMON command to display and review the status of the control unit. Determine that the control unit and the line are inactive.
- Use the Node Status Detail (Description) panel to check the status of the NCP to which the line is attached. Determine that the NCP is active. The problem must be with the line.
- Continue the investigation by trying to activate the line and its attached resources. The attempt fails, but a sense code displays.
- Enter the SENSE command to get an explanation of the sense code. Find that the failure occurred in trying to make contact between the line and the local modem. The modem may be turned off or the cable may be disconnected.
- The failed activation attempt generated an alert. To find out more, refer to the Alerts-History panel. Find the alert on the panel. Review the Recommended Action for Selected Event panel for the alert.
- Follow the recommended actions on the panel. Check to see if the modem is powered on. Determine that the modem is on. Check to see if the cable is installed properly. Determine that the connection between the modem and the cable is not installed properly. Fix the connection.
- Once the connection is established, activate the line and its attached resources.
- Call the user and ask him to try logging on again. The logon is successful.
- Follow your installation's procedure for submitting a problem report.

Procedure

Follow these steps to investigate this problem:

1. Ask the user for the control unit ID. For this scenario, the control unit is A04P051. To display the status of the control unit:

   - Type statmon a04p051
   - Press ENTER.

   The Node Status Detail (Description) panel appears:

```
STATMON.NSD(DESC)              NODE STATUS DETAIL (DESCRIPTION)              09:42
 HOST: HOST1                 *0*     *1*      *2*      *3*      *4*
  ? A04L05                  ACTIVE    PENDING    INACT     MONIT    NEVACT     OTHER
 ?...4  PUS/CLUSTERS        ?.....    ?.....   ?....4    ?.....   ?.....     ?.....
--------------------------------------------------------------------------------
? DISPLAY          |   NODE ID.  DESCRIPTION       NODE ID.  DESCRIPTION
 ? APPLS           |
 ? LINES           | ? A04P051 **PU
 ? PUS/CLSTRS      | ? A04P052   PU
 ? LUS/TERMS       | ? A04P053   PU
 ? CDRMS           | ? A04P054   PU
 ? CDRSCS          |
  ? ACT            |
  ? EVERY          |
  ? INACT          |
 ? PENDING         |
 ? BFRUSE          |
? VARY INACT       |
 ? I     ? F       |
? VARY ACT         |
 ? ONLY  ? ALL     |


CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL          8=FWD   11=CLIST   12=MENU
```

   Review the information on the panel. Notice that the control unit (A04P051) is inactive. On a color monitor, it is displayed in red.

   For an explanation of the data presented on the Node Status Detail (Description) panel, see page 198 of "Appendix C. Status Monitor Panels."

2. Continue your investigation by pressing PF12 to access the Node Status Detail (Description) panel with the DETAIL FORMAT menu:

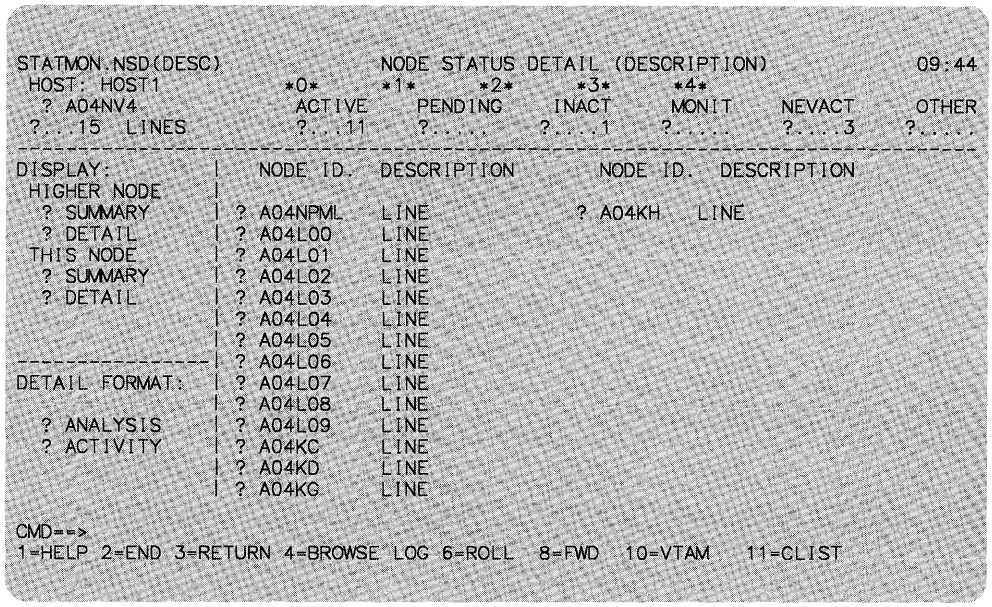
```
STATMON.NSD(DESC)              NODE STATUS DETAIL (DESCRIPTION)              09:43
 HOST: HOST1          *0*     *1*      *2*      *3*      *4*
  ? A04L05            ACTIVE    PENDING    INACT     MONIT     NEVACT     OTHER
 ?....4  PUS/CLUSTERS ?....:    ?.....   ?....4    ?.....    ?.....    ?.....
--------------------------------------------------------------------------------
DISPLAY          |   NODE ID.  DESCRIPTION      NODE ID.  DESCRIPTION
 HIGHER NODE     |
  ? SUMMARY      | ? A04P051   PU
  ? DETAIL       | ? A04P052   PU
 THIS NODE       | ? A04P053   PU
  ? SUMMARY      | ? A04P054   PU
  ? DETAIL       |
                 |
                 |
-----------------|
DETAIL FORMAT:   |
                 |
  ? ANALYSIS     |
  ? ACTIVITY     |
                 |
                 |


CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL  8=FWD  10=VTAM  11=CLIST
```

If you want an explanation of the information presented on this panel, you can turn to page 195 of "Appendix C. Status Monitor Panels."

3. Check the status of the NCP to which the line is attached. Select A04L05 from the upper-left corner of the panel and DISPLAY: HIGHER NODE DETAIL from below the dashed line. To make your selections, either:

   - Move the cursor to the appropriate areas on the panel, replace the question marks next to A04L05 and DISPLAY: HIGHER NODE DETAIL with any character, and press ENTER, or
   - Make the selections using a light pen and press ENTER.

   The Node Status Detail (Description) panel with status for line A04L05 appears:



You can determine that the NCP (A04NV4) is active, since it is displayed in green on a color terminal. Since the NCP is active, the problem must be with the line. Therefore, you want to investigate the line.

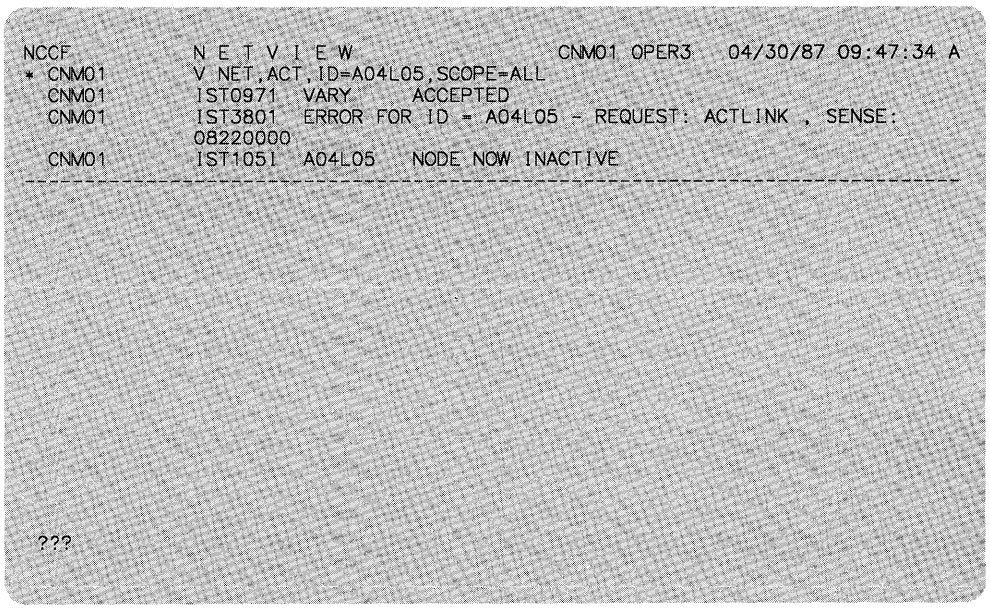
4. Press PF10. The Node Status Detail (Description) panel with a VTAM command area appears:

```
STATMON.NSD(DESC)              NODE STATUS DETAIL (DESCRIPTION)              09:46
 HOST: HOST1          *0*      *1*      *2*      *3*      *4*
  ? A04NV4             ACTIVE    PENDING    INACT     MONIT    NEVACT     OTHER
 ?...15  LINES         ?...11    ?.....    ?....1    ?.....    ?....3    ?.....
--------------------------------------------------------------------------------
? DISPLAY        |   NODE ID.  DESCRIPTION       NODE ID.  DESCRIPTION
 ? APPLS         |
 ? LINES         | ? A04NPML   LINE            ? A04KH   LINE
 ? PUS/CLSTRS    | ? A04L00    LINE
 ? LUS/TERMS     | ? A04L01    LINE
 ? CDRMS         | ? A04L02    LINE
 ? CDRSCS        | ? A04L03    LINE
  ? ACT          | ? A04L04    LINE
  ? EVERY        | ? A04L05    LINE
  ? INACT        | ? A04L06    LINE
 ? PENDING       | ? A04L07    LINE
 ? BFRUSE        | ? A04L08    LINE
? VARY INACT     | ? A04L09    LINE
 ? I     ? F     | ? A04KC     LINE
? VARY ACT       | ? A04KD     LINE
 ? ONLY  ? ALL   | ? A04KG     LINE

CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL  8=FWD          11=CLIST  12=MENU
```

5. Try to activate the line and its attached resources by doing one of the following:

   - Move the cursor to the appropriate areas on the panel to select VARY ACT, ALL, and A04L05; replace the question mark next to each choice with any character; and press ENTER, or
   - Make the selections using a light pen and press ENTER.

   The command facility panel appears:



6. The attempt to activate the line fails, but a sense code displays (SENSE: 08220000). Enter the **SENSE** command and code to find out what the sense code means:

   - Type sense 08220000
   - Press ENTER.

   An explanation of the sense code appears on the Sense Code Description panel:

```
NLDM.SENS                SENSE CODE DESCRIPTION                      PAGE  1
------------------------------------------------------------------------------

SENSE DATA:
   CATEGORY - (08) LINK  PROCEDURE  FAILURE: A  LINK-LEVEL  PROCEDURE HAS
   MODIFIER - (22) FAILED DUE TO LINK EQUIPMENT FAILURE, LOSS  OF CONTACT
     BYTE 2 - (00) WITH A LINK  STATION, OR AN INVALID RESPONSE TO A LINK
     BYTE 3 - (00) COMMAND. (THIS IS NOT A  PATH ERROR, SINCE THE REQUEST
                   BEING REJECTED WAS DELIVERED TO ITS DESTINATION.)









ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
CMD==>
```

7. The explanation tells you that the failure occurred when the communication controller tried to make contact with the local modem. The modem may be turned off, the EIA communication cable may be disconnected, or the control unit may not be installed properly. For an explanation of the information presented on the Sense Code Description panel, see page 116 of "Appendix A. Session Monitor Panels."

   The failed activation attempt is recorded as an event. Each installation has filters to determine which events become alerts. Assume this event passed the filters and became an alert. To continue the investigation, refer to the Alerts-History panel. To display the Alerts-History panel:

   - Type npda alh
   - Press ENTER.

   The Alerts-History panel appears:

```
N E T V I E W                                    NETOP2     03/20/87 09:48:56
NPDA-31A                    * ALERTS-HISTORY *                PAGE  1  of  3
                                                              DOMAIN:  CNM01

SEL# RESNAME TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) A04L05  LINE 03/20 09:31 DSR ON CHECK:LOCAL MODEM OFF/LOCAL MODEM
( 2) P51K74  CTRL 03/20 09:23 DTR DROP:DEVICE
( 3) LNE524  LINE 03/20 08:50 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 4) LNE528  LINE 03/20 08:50 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 5) A03L02  LINE 03/20 08:43 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
( 6) A03L02  LINE 03/20 08:29 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
( 7) A03L02  LINE 03/20 08:27 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 8) A03L02  LINE 03/20 08:18 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
( 9) A03L02  LINE 03/20 08:01 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
(10) A03L02  LINE 03/20 07:55 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
(11) A03L02  LINE 03/20 07:49 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
(12) A03L02  LINE 03/20 07:44 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
(13) A03P051 TERM*03/20 07:42 POWER OFF/INVALID ADDRESS:DEVICE
(14) A03P051 TERM*03/20 07:42 POWER OFF/INVALID ADDRESS:DEVICE
(15) A03L05  LINE 03/20 07:21 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)


 ???
CMD==>
```

8. Find the alert on the Alerts-History panel. SEL# 1 shows that this alert is probably caused by one of two things. Either the local modem is powered off for resource A04L05, or there is a problem with the modem itself. If you want an explanation of the information presented on the Alerts-History panel, you can turn to page 146 of "Appendix B. Hardware Monitor Panels."

   To display recommended corrective actions for this problem:

   - Type 1
   - Press ENTER.

   The Recommended Action for Selected Event panel appears:

```
N E T V I E W                                        NETOP2     03/20/87 09:49:50
NPDA-BNIFFE1B       * RECOMMENDED ACTION FOR SELECTED EVENT*          PAGE 1 OF 1

  CNM01          A03NV4         A03L05
                +---------+
  DOMAIN        |  COMC   |----LINE----
                +---------+
USER     CAUSED - LOCAL  MODEM POWER OFF
       ACTIONS - D001 - CORRECT THEN RETRY

INSTALL CAUSED - CABLE
       ACTIONS - D022 - CHECK PHYSICAL INSTALLATION

FAILURE CAUSED - LOCAL MODEM
                 LOCAL MODEM INTERFACE CABLE
       ACTIONS - D002 - RUN MODEM TESTS
                 D005 - CONTACT APPROPRIATE SERVICE REPRESENTATIVE




 ENTER ST TO VIEW MOST RECENT STATISTICS, OR D TO VIEW DETAIL DISPLAY

 ???
CMD==>
```

9. Continue your investigation by following the recommended actions in sequence. If you want an explanation of the information presented on this panel, see page 176 of "Appendix B. Hardware Monitor Panels."

   Notice that USER CAUSED tells you that the problem could be that the local modem is not powered on. Check to see if the modem is powered off or on. The modem is powered on.

10. Next, refer to INSTALL CAUSED on the panel. It tells you that the cable may not be installed properly. Check to see that the cable is installed correctly. After examination, you find that the connection between the modem and cable has come loose. Fix the connection.

11. After the cable is reconnected, you need to activate the line and its attached resources. On the command line:
    - Type v net,act,id=a04l05,scope=all
    - Press ENTER.

    The command facility screen displays with messages that the resources are being activated. Clear the screen to return to the hardware monitor.
12. Call the user and ask him to try logging on again. Wait on the phone while the user tries to log on. The user tells you that logon is successful.
13. Follow your installation's procedure for submitting a problem report.
14. To leave the hardware monitor, press PF6.

Scenario: Application Stops Responding

Symptom

A user calls and says that the terminal has stopped working. The terminal was working normally until, suddenly, there was no response from the system.

Action Summary

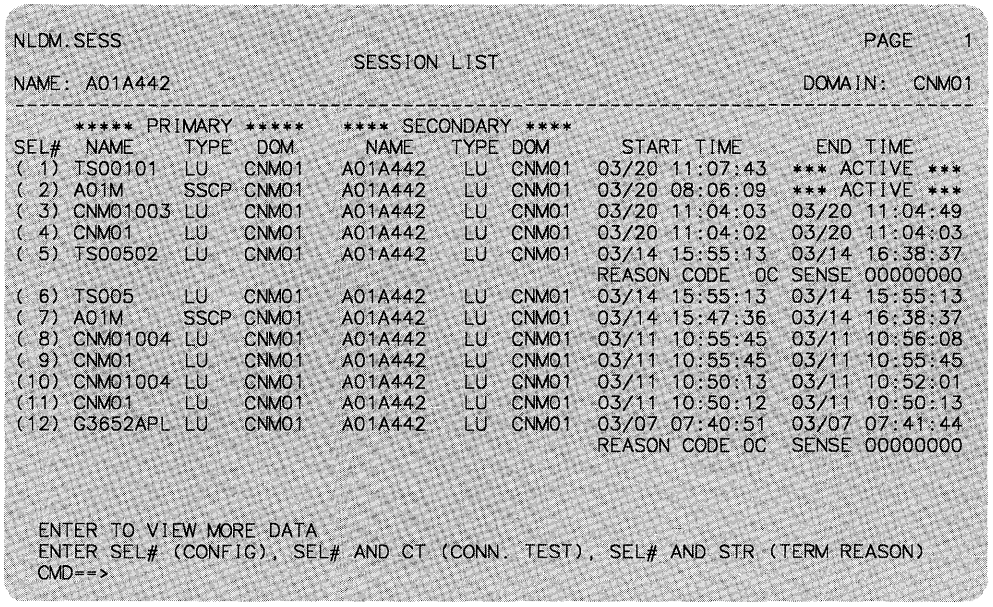
- Ask the caller for the terminal ID (LU name) and application name.
- Use the session monitor to display the Session List panel. Determine that the session list shows an active LU-LU session for this application.
- Select the session to display configuration data.
- Select primary trace from the Session Configuration Data panel. Determine that data has been passing normally between the application and the terminal. The last transaction came from the terminal to the application. The application did not respond to the last input.
- Tell the caller that the problem has been identified and will be further investigated.
- Follow your installation's procedures for submitting a problem report.

Procedure

Follow these steps to investigate this problem:

1. Ask the user for the terminal ID (LU name). For this scenario, the terminal is A01A442.
2. Use the session monitor to see the most recent data that has passed between the terminal and the application. Assume that the session traces were started earlier for the terminal (A01A442) and the application (TSO0101). To display the Session List panel for the terminal:
   - Type sess a01a442
   - Press ENTER.

   The Session List panel appears:



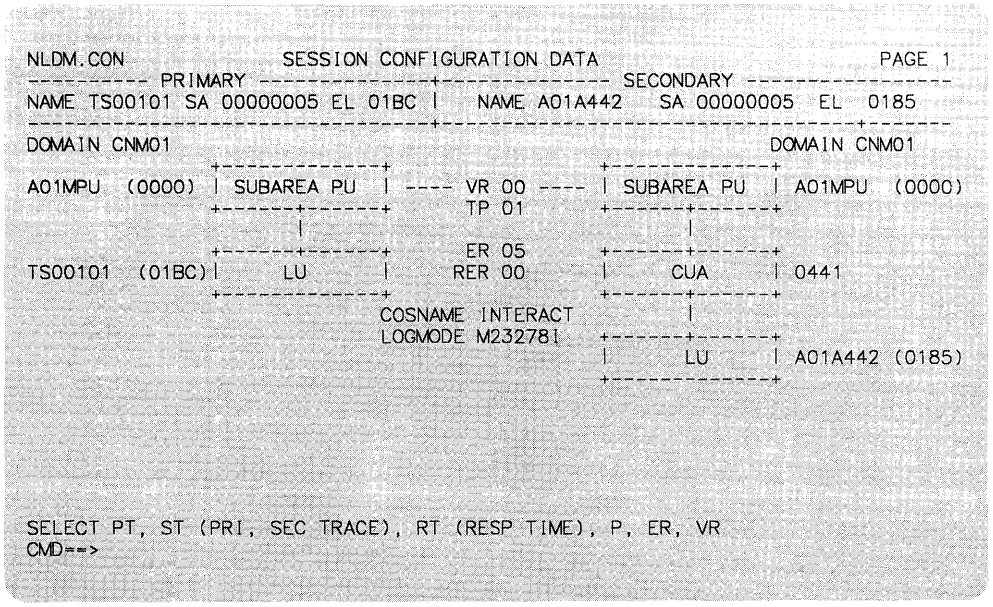
```
NLDM.SESS                                                        PAGE    1
                              SESSION LIST
NAME: A01A442                                                DOMAIN:  CNM01
-------------------------------------------------------------------------------
     ***** PRIMARY *****    **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME     TYPE DOM     START TIME      END TIME
( 1) TS00101  LU    CNM01   A01A442   LU  CNM01  03/20 11:07:43  *** ACTIVE ***
( 2) A01M     SSCP  CNM01   A01A442   LU  CNM01  03/20 08:06:09  *** ACTIVE ***
( 3) CNM01003 LU    CNM01   A01A442   LU  CNM01  03/20 11:04:03  03/20 11:04:49
( 4) CNM01    LU    CNM01   A01A442   LU  CNM01  03/20 11:04:02  03/20 11:04:03
( 5) TS00502  LU    CNM01   A01A442   LU  CNM01  03/14 15:55:13  03/14 16:38:37
                                                 REASON CODE  0C SENSE 00000000
( 6) TS005    LU    CNM01   A01A442   LU  CNM01  03/14 15:55:13  03/14 15:55:13
( 7) A01M     SSCP  CNM01   A01A442   LU  CNM01  03/14 15:47:36  03/14 16:38:37
( 8) CNM01004 LU    CNM01   A01A442   LU  CNM01  03/11 10:55:45  03/11 10:56:08
( 9) CNM01    LU    CNM01   A01A442   LU  CNM01  03/11 10:55:45  03/11 10:55:45
(10) CNM01004 LU    CNM01   A01A442   LU  CNM01  03/11 10:50:13  03/11 10:52:01
(11) CNM01    LU    CNM01   A01A442   LU  CNM01  03/11 10:50:12  03/11 10:50:13
(12) G3652APL LU    CNM01   A01A442   LU  CNM01  03/07 07:40:51  03/07 07:41:44
                                                 REASON CODE  0C SENSE 00000000


  ENTER TO VIEW MORE DATA
  ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
  CMD==>
```

Notice that the session list (SEL# 1) shows an active LU-LU session between the PRIMARY LU (TSO0101) and the SECONDARY LU (A01A442). If you want an explanation of the information presented on the Session List panel, you can turn to page 121 of "Appendix A. Session Monitor Panels."

3. To continue the investigation, select the session in order to display the detailed session configuration data from the application to the terminal:

   - Type 1
   - Press ENTER.

   The Session Configuration Data panel appears:



4. For an explanation of the information displayed on the Session Configuration Data panel, you can turn to page 118 of "Appendix A. Session Monitor Panels." To continue your investigation of the problem, you can display the primary trace (PT), which shows the recent transmissions between the application and the terminal. To display the Session Trace Data panel for the VTAM path information unit (PIU) data that flowed between the primary LU (application) and the secondary LU (terminal):

   - Type pt
   - Press ENTER.

   The Session Trace Data panel appears:

```
NLDM.PIUT                    SESSION TRACE DATA                           PAGE 1
----------- PRIMARY ----------------+--------------- SECONDARY ----------+- DOM -
NAME TS00101 SA 00000001 EL 01BC | NAME A01A442 SA 00000001 EL 0185 | CNM01
-----------------------------------+-----------------------------------+-------
SEL#  TIME    SEQ# DIR  TYPE     ****** REQ/RESP HEADER ******  RULEN SENS N
( 1)#11:07:51 0008 S-P (+)RSP    ....OC.DR.....................     0
( 2)#11:07:51 0008 S-P DATA      ....OC.NR.......BB............     8
( 3)#11:07:51 0009 P-S DATA      ....OC.DR.........EB..........   102         T
( 4)#11:07:52 0009 S-P (+)RSP    ....OC.DR.....................     0
( 5)#11:07:52 0009 S-P DATA      ....OC.NR.......BB............     8
( 6)#11:07:52 000A P-S DATA      ....OC.DR.........EB..........   102         T
( 7)#1:07:52 000A S-P (+)RSP    ....OC.DR.....................     0
( 8)#11:07:53 000A S-P DATA      ....OC.NR.......BB............     8




END OF DATA
ENTER SEL
CMD==>
```

   Review the Session Trace Data panel. For a detailed explanation of the information presented on this panel, you can turn to page 136 of "Appendix A. Session Monitor Panels." By looking at the Session Trace Data panel for this scenario, you can determine that data has been passing normally between the application (PRIMARY) and the terminal (SECONDARY) by looking at the direction (DIR) column. The direction indicators show the direction in which data was passed. In the last transaction (SEL# 8), S-P indicates that data was sent from the terminal (SECONDARY) to the application (PRIMARY). The application did not respond to the last transmission from the terminal.

5. The information on this panel may help the system programmer when further investigating this problem. Therefore, use the **COPY** command to store the Session Trace Data panel in the network log.
6. You should also use the **FORCE** command to have NetView record the data from this session for later use in investigating the problem:
   - Type force a01a442
   - Press ENTER.
7. Tell the caller that you have identified the problem with the application and an effort will be made to correct the situation.
8. Follow any other procedures your installation uses to further investigate and solve a non-hardware terminal failure.
9. Follow your installation's procedures for submitting a problem report to either the system programmers or the application programmers to further investigate the cause.
10. To leave the session monitor, press PF2.

Scenario: Cross-Domain Session Is Lost

Symptom

A user calls and reports that he was using an application when the system logged him off.

Action Summary

- Ask the caller for his terminal ID (LU name).
- Display and review the Session List panel. Verify that the user's terminal is active, but the session is inactive between the terminal and the application.
- Display the Session Configuration Data panel for the inactive session. Determine that the explicit route has become inoperative.
- Display and review the Specific ER Configuration panel to isolate the inoperative element. Determine that a node or transmission group is inoperative.
- Use the **COPY** command to store the information on the Specific ER Configuration panel for the system programmer.
- Ask the caller to try to log on again to the application.
- Display and review the Session List panel again to verify that the user has successfully logged on. Determine that the session is active.
- Display the Session Configuration Data panel to determine the new route of the session. Determine that the explicit route is different.
- Display the Specific ER Configuration panel again to see the configuration of the new route.
- Use the **COPY** command to store the information on the panel to help the system programmer when further investigating this problem.
- Follow your installation's procedures for recording this problem.

Procedure

Follow these steps to investigate this problem.

1. Ask the user for the terminal ID (LU name). For this scenario, the terminal is A04T0011.
2. Use the session monitor to view the path of the user's session between the terminal and the host. To display the Session List panel for the user's terminal:
   - Type sess a04t0011
   - Press ENTER.

   The Session List panel appears:

```
NLDM.SESS                                                          PAGE    1
                              SESSION LIST
NAME: A04T0011                                                DOMAIN:  CNM02
-------------------------------------------------------------------------------
     ***** PRIMARY *****    **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME     TYPE DOM      START TIME      END TIME
( 1) A02M      SSCP  CNM02   A04T0011  LU   CNM02  06/06 18:11:17  *** ACTIVE ***
( 2) TS00101   LU    CNM01   A04T0011  LU   CNM02  06/06 20:34:58  06/06 20:45:48
 END OF DATA
 ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
 CMD==>
```

The active SSCP-LU session (SEL# 1) indicates that the user's terminal is still active. The inactive LU-LU session (SEL# 2) between application TSO0101 and terminal A04T0011 is the one the user called you about.

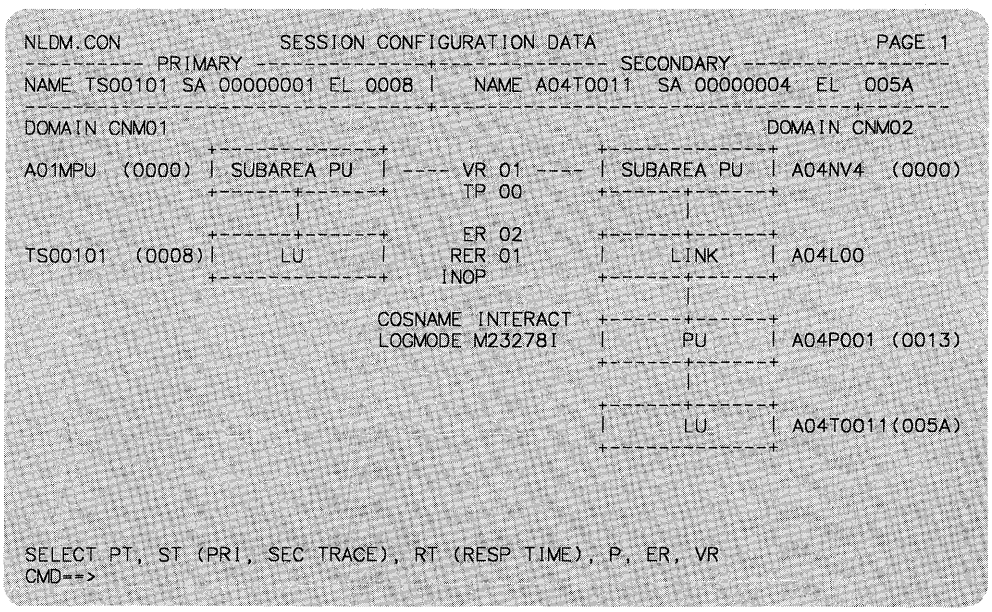
The panel also shows that application TSO01 is in domain CNM01 and that terminal A04T0011 is in domain CNM02. This is a cross-domain session.

If you want to review a detailed explanation of the information presented on the Session List panel, you can turn to page 121 of "Appendix A. Session Monitor Panels."

3. Next, display the Session Configuration Data panel for the inactive session (SEL# 2). This panel lets you see the relationship of each LU to its corresponding subarea PU. It also shows the explicit route (ER) between the subarea PUs. To display the Session Configuration Data panel, select the inactive session:

   - Type 2
   - Press ENTER.

   The Session Configuration Data panel appears:



   Review the information on the panel. This panel shows the path of the session from the primary LU (TSO0101) to its subarea PU (A01MPU) and from the secondary LU (A04T0011) to its subarea PU (A04NV4). It also shows the explicit route between these subarea PUs for this session. The explicit route is identified by an explicit route number. For this session, the explicit route between the subarea PUs is ER 02.

   Notice the term INOP that appears in the center of the panel. On a color terminal, it is displayed in red. INOP indicates that the explicit route (ER) the session was using became inoperative. This occurred because a node or transmission group (TG) in the route became inoperative.

   For more details about the information presented on the Session Configuration Data panel, see page 118 of "Appendix A. Session Monitor Panels."

4. To identify the inoperative node or transmission group (TG) in the explicit route, review the Specific ER Configuration panel. This panel isolates the node or transmission group in which there was a failure. To display the Specific ER Configuration panel:

   - Type er
   - Press ENTER.

   The Specific ER Configuration panel for the session appears:

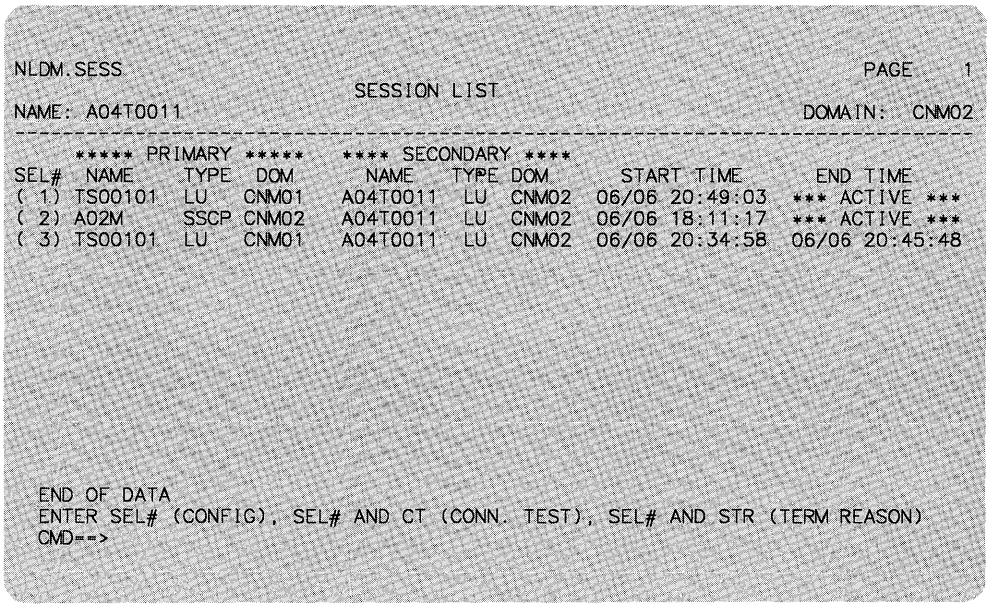
```
NLDM.ER                    SPECIFIC ER CONFIGURATION                    PAGE 1
-------------------------------------------------------------------------------
SUBAREA1 00000001  SUBAREA2 00000004  ER  02 | NODES (TOTAL/MIGRATION): 04/00
-------------------------------------------------------------------------------
                                (A)
                                 V
 +------+ NAME:  A01MPU         +------+ NAME:  A02MPU
 | INN  |   SA:  00000001       | INN  |   SA:  00000002
 +--+---+ SSCP:  A01M          +--+---+ SSCP:  A02M
    |                               |
1) TG01  INOP:  UNPLANNED    3) TG02
    |                               |
 +------+ NAME:  A03NV4         +------+ NAME:  A04NV4
 | INN  |   SA:  00000003       | INN  |   SA:  00000004
 +--+---+ SSCP:  A01M          +--+---+ SSCP:  A02M
    |
2) TG01
    |
    V
   (A)



END OF DATA
ENTER SEL# (FOR TG DETAIL)
CMD==>
```

   Notice the placement of the notation INOP: UNPLANNED next to item 1, TG01. This indicates that the explicit route is inoperative (INOP) because either the node (A01MPU) or the transmission group between A01MPU and A03NV4 (TG01) became inoperative.

   If you want more details about the information presented on the Specific ER Configuration panel, you can turn to page 139 of "Appendix A. Session Monitor Panels."

5. The information on the Specific ER Configuration panel for this scenario may help the system programmer when further investigating this problem. Therefore, use the **COPY** command to store the Specific ER Configuration panel in the network log.
6. Ask the caller to try to log on again to application TSO01.
7. Your installation's procedures may require you to display a new session list for the terminal. The new Session List panel lets you verify that the user is able to log on successfully. To display the session list for the terminal:
   - Type sess a04t0011
   - Press ENTER.

   The Session List panel appears:



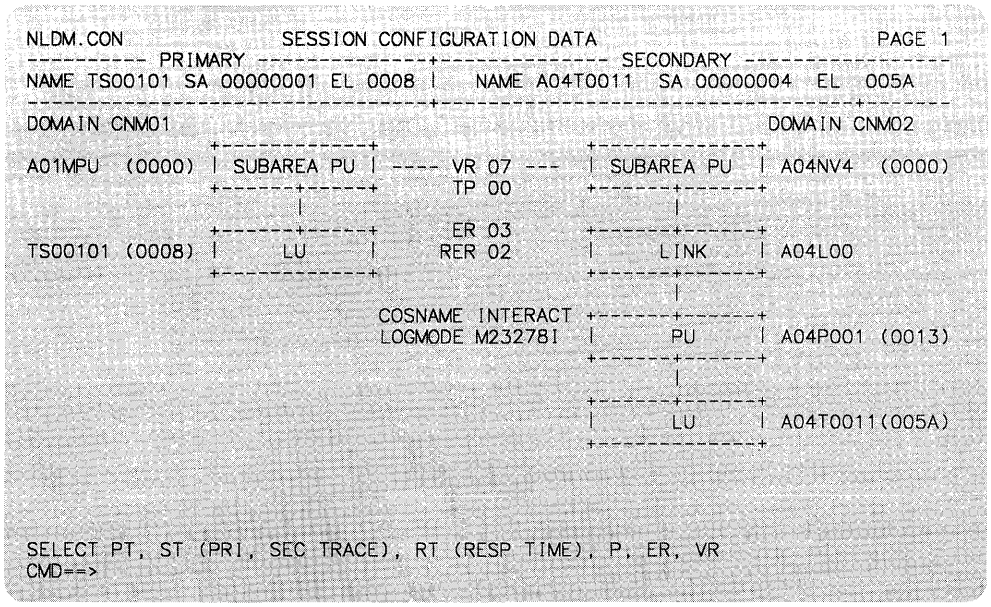
```
NLDM.SESS                                                        PAGE    1
                          SESSION LIST
NAME: A04T0011                                                DOMAIN:  CNM02
-------------------------------------------------------------------------------
     ***** PRIMARY *****   **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME     TYPE DOM      START TIME      END TIME
( 1) TS00101   LU    CNM01   A04T0011  LU  CNM02  06/06 20:49:03  *** ACTIVE ***
( 2) A02M      SSCP  CNM02   A04T0011  LU  CNM02  06/06 18:11:17  *** ACTIVE ***
( 3) TS00101   LU    CNM01   A04T0011  LU  CNM02  06/06 20:34:58  06/06 20:45:48




  END OF DATA
  ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
  CMD==>
```

Review the panel and notice that there is an active LU-LU session between application TSO0101 and terminal A04T0011 (SEL# 1).

8. To determine the explicit route the session is now using, display the Session Configuration Data panel again:

   - Type 1
   - Press ENTER.

   The Session Configuration Data panel appears:

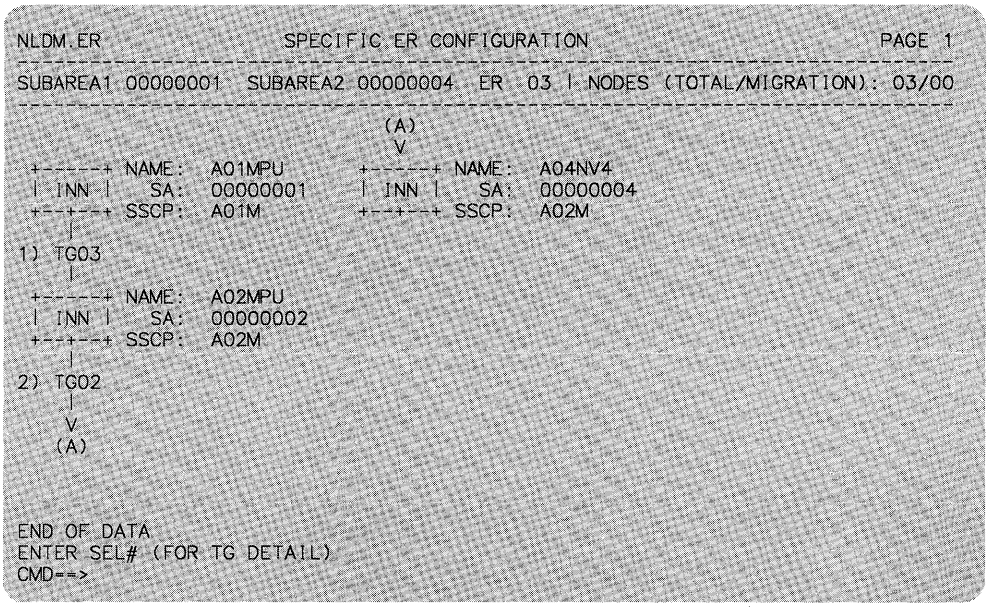


   Notice that the ER is now 03. The ER number for the inactive session was 02.

9. To see the configuration of the new explicit route, display the Specific ER Configuration panel for it:

   - Type er
   - Press ENTER.

   The Specific ER Configuration panel appears:



   Notice that the route is now going directly from the host PU (A01MPU) in subarea 1 (SA: 00000001) to the host PU (A02MPU) in subarea 2 (SA: 00000002). It no longer passes through subarea PU A03NV4.

10. Since this panel shows the new session route, the information on the panel may help the system programmer when further investigating this problem. Therefore, use the **COPY** command to store the Specific ER Configuration panel to the network log.
11. Follow your installation's procedures for recording this problem.
12. To leave the session monitor, press PF6.

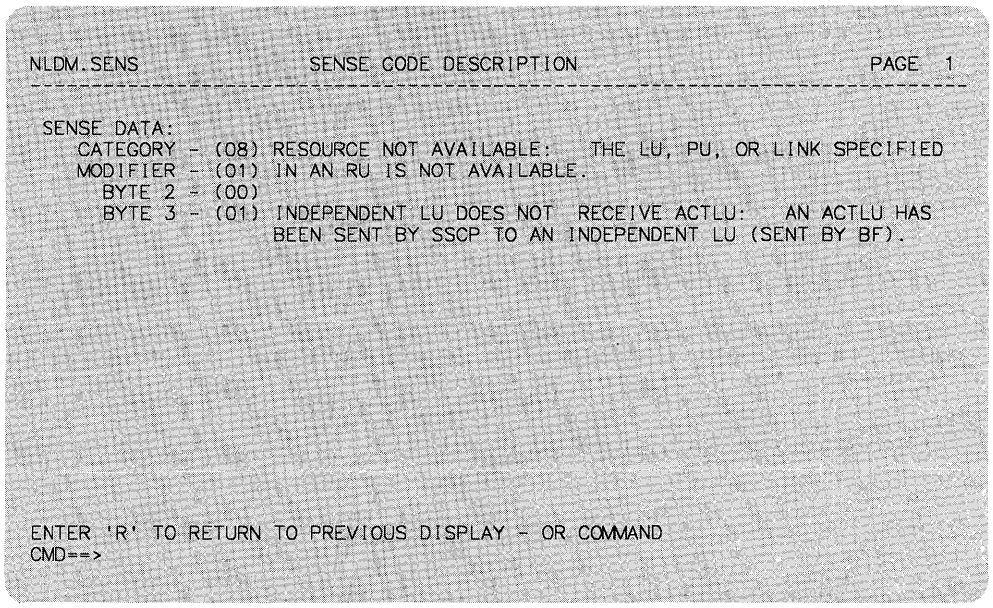
Appendix A. Session Monitor Panels

Appendix A. Session Monitor Panels

This appendix provides field descriptions and panel selection and exit methods for many of the session monitor panels displayed in this book's scenarios. While the panels displayed in the scenarios contain data pertinent to those scenarios, the panels in this appendix are used only to illustrate the panel formats. When you use these panels in your installation, you will receive different data than is displayed in the fields on these appendix panels.

For general information about session monitor panels, including a description of the information presented in the headings of these panels, see *NetView Operation*.

Sense Code Description Panel



The Sense Code Description panel presents an explanation of the hexadecimal sense codes displayed when errors occur. It is displayed on pages 87 and 97.

Field Descriptions

Only the SENSE DATA fields (CATEGORY, MODIFIER, BYTE 2, and BYTE 3) are described here. A description of the sense code appears to the right of these sense data fields. This description field is different for different sense codes. For more information about sense data, see *Systems Network Architecture Formats*.

CATEGORY

The hexadecimal value of the CATEGORY byte of the sense code. The CATEGORY and MODIFIER bytes of the sense code together determine what is presented in the first paragraph of the sense code description displayed to the right of these two fields. In this first paragraph, a general error category is described.

The following error categories are defined; all others are reserved:

00 User Sense Data Only

08 Request Reject

10 Request Error

20 State Error

40 Request Header (RH) Usage Error

80 Path Error

MODIFIER

The hexadecimal value of the MODIFIER byte of the sense code. The CATEGORY and MODIFIER bytes of the sense code together determine what is presented in the first paragraph of the sense code description displayed

to the right of these two fields. In this first paragraph, a general error category is described.

BYTE 2

The hexadecimal value of BYTE 2 of the sense code. BYTE 2 and BYTE 3 together determine what is presented in the second paragraph of the sense code description displayed to the right of these two fields. This second paragraph identifies a specific problem that falls within the general error category described in the first paragraph of the sense code description.

BYTE 3

The hexadecimal value of BYTE 3 of the sense code. See the definition for BYTE 2.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

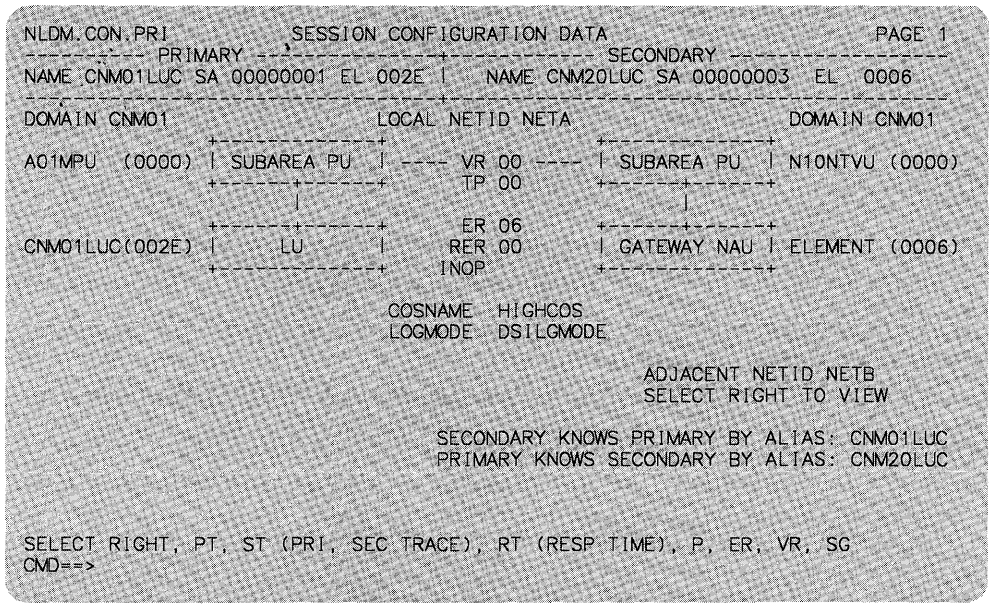
You can display this panel with the **SENSE** command.

Panel Exit

You can return to the previous session monitor panel by issuing the **RETURN** command.

You can issue any panel invocation command.

Session Configuration Data Panel



The Session Configuration Data panel displays configuration data for a selected session. The session you select is identified in the display heading. From this panel, you can choose to view primary or secondary trace data, response time data, session parameter data, explicit route configuration data, virtual route status, or secondary gateway trace data.

NetView builds a configuration diagram showing how the primary and secondary session partners are connected to each other. The subarea physical unit (PU) that each session partner is connected to is always shown in this diagram. Up to three other network nodes can be shown to depict the path between a session partner and its subarea PU.

If both session partners are in the same network, all of the data is presented in one panel page. If one session monitor in the selected session is unable to provide information, the notation NOT AVAIL is displayed in that portion of the panel. The configuration is displayed for the session monitor that was able to supply the requested information. There are several possible causes for the NOT AVAIL message:

- The required sessions have not been defined. For information about cross-domain resource management, see the cross-domain (CDRMDEF) resource definition statement in *NetView Administration Reference* and *NetView Installation and Administration Guide*.
- The session has not been allocated.
- The session monitor in the domain for which the message was received was not collecting session awareness data.
- An error was encountered in the session monitor for which the message was received.
- For inactive sessions, the session awareness data has been deleted from the data base in the domain for which the message was received.

If the session partners are in different networks, the first page of the panel will show the configuration of the session partner in the current viewing domain (as shown on the Session List panel for this session). To see the other session partner's configuration, you can enter RIGHT on the command line (on the primary session partner's configuration screen) or LEFT (on the secondary session partner's configuration screen) and press ENTER. If other networks are in the path between the primary and secondary session partners, a configuration screen for the adjacent network is displayed when you enter the RIGHT or LEFT command. You can continue to enter RIGHT or LEFT on each intermediary screen until you reach the configuration screen for the other session partner.

The Session Configuration Data panel is displayed on pages 103, 108, and 111.

Field Descriptions

PRIMARY NAME
The resource name for the primary session partner.

PRIMARY SA
The subarea address for the primary session partner.

PRIMARY EL
The element address for the primary session partner.

SECONDARY NAME
The resource name for the secondary session partner.

SECONDARY SA
The subarea address for the secondary session partner.

SECONDARY EL
The element address for the secondary session partner.

DOMAIN
The domain of the NetView that provided the configuration data.

VR
The virtual route number assigned to the selected session.

TP
The transmission priority for the virtual route.

ER
The explicit route number assigned to the selected session.

RER
The reverse explicit route number assigned to the selected session.

INOP
INOP displays in this field if the explicit route is detected as inoperative for this session. Otherwise, the field is left blank.

COSNAME
The class-of-service name for the selected session in the local network. When a class of service has not been assigned, this field is left blank.

Note: The notation N/A may appear instead of the class-of-service name if any Release 2 NLDMs are in the configuration.

LOGMODE
The name of the VTAM logon mode table entry used to set up the session. The table includes device characteristics and session protocol parameters.

SUBAREA PU

For the primary and secondary resource subareas, this box represents physical unit services—either an NCP or a HOST. The primary subarea is depicted on the left half of the diagram, and the secondary subarea is depicted on the right half. The subarea resource name and element address are shown next to the configuration box.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by selecting it from any Session List panel.

Panel Exit

If the session partners are in different networks, you can enter the **RIGHT** command from the primary session partner's configuration screen to view the next page of the configuration. From the secondary session partner's configuration screen, you can enter the **LEFT** command to view the next page of the configuration.

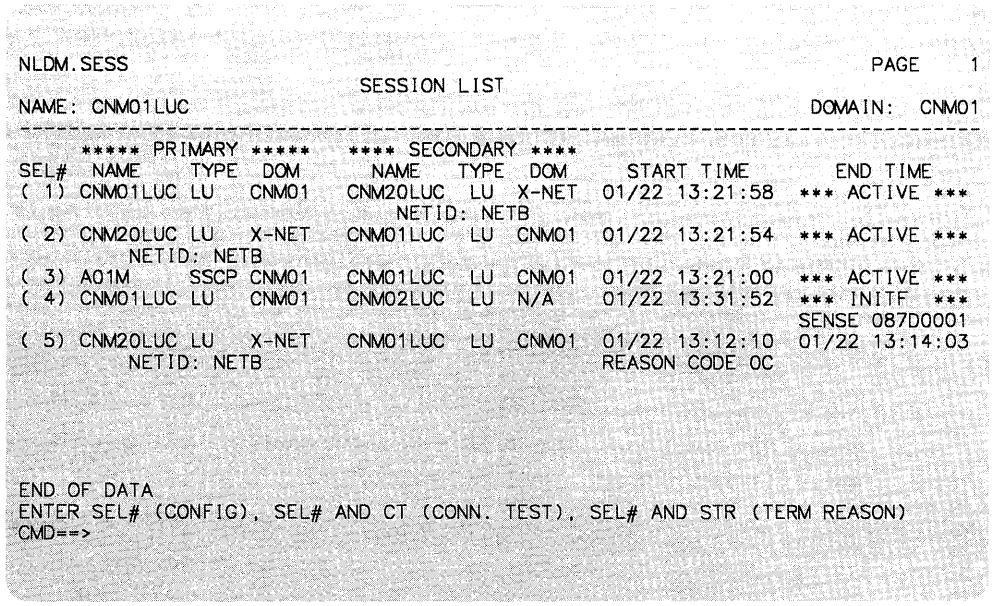
By entering the command appearing in the left column of the following table, you can select any of these panels which are applicable for your session:

PT, ST	Primary and secondary Session Trace Data
RT	Session Response Time by Collection Period
P	The applicable Session Parameters panel
ER	Specific ER Configuration
VR	Virtual Route Status
PG, SG	Primary Gateway Trace Data (from the secondary session partner's configuration screen) or Secondary Gateway Trace Data (from the primary session partner's configuration screen).

You can issue the **RETURN** command to display the previous Session List panel.

You can issue any panel invocation command.

Session List Panel



```
NLDM.SESS                                                          PAGE    1
                              SESSION LIST
NAME: CNM01LUC                                                DOMAIN:  CNM01
-------------------------------------------------------------------------------
     ***** PRIMARY *****    **** SECONDARY ****
SEL#  NAME     TYPE  DOM     NAME     TYPE  DOM     START TIME       END TIME
( 1) CNM01LUC LU    CNM01   CNM20LUC  LU  X-NET  01/22 13:21:58  *** ACTIVE ***
                              NETID: NETB
( 2) CNM20LUC LU    X-NET   CNM01LUC  LU  CNM01  01/22 13:21:54  *** ACTIVE ***
        NETID: NETB
( 3) A01M      SSCP CNM01   CNM01LUC  LU  CNM01  01/22 13:21:00  *** ACTIVE ***
( 4) CNM01LUC LU    CNM01   CNM02LUC  LU  N/A    01/22 13:31:52  *** INITF  ***
                                                                  SENSE 087D0001
( 5) CNM20LUC LU    X-NET   CNM01LUC  LU  CNM01  01/22 13:12:10  01/22 13:14:03
         NETID: NETB                             REASON CODE 0C



END OF DATA
ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
CMD==>
```

The Session List panel displays a list of network resources that are or have been in session with the resource(s) you named when you requested this panel. Real resource names (not aliases) are displayed for cross-network (X-NET) sessions. Also, for a cross-network session, the network identifier (NETID) is given for either the primary or secondary partner. Active sessions appear at the top of the list and are sorted in descending order by start time. These are followed by inactive sessions and forced sessions, which are also sorted in descending order by start time. Information about the primary and secondary partners in each session is shown.

You can request session configuration data for any session listed on this panel. When you ask to view configuration data for a cross-domain session, the session monitor gathers the configuration data from both end points of the session. This configuration data may show that a session listed as cross domain on the Session List panel is really a cross-network session. This new information, along with the real resource names, is shown in the Session Configuration Data panel.

The Session List panel is displayed on pages 45, 49, 102, 107, and 110.

Field Descriptions

PANEL DEFINITION LINE

Depending on which path you took to arrive at the Session List panel, you will receive different text in the PANEL DEFINITION LINE field. Sample panel definition lines are displayed and explained as follows:

Selection Via RESOURCE NAME LIST Display

```
NAME: CNM01LUC                                DOMAIN: CNM01
```

NAME is the resource(s) indicated by the Resource Name List selection.

DOMAIN is the domain of the NetView that supplied the session data.

Selection Via ACTIVE ER LIST Display

```
ORIGIN: A01MPU  DESTINATION: A20MPU  ER: 01  DOMAIN: CNM01
```

ORIGIN is the name of the origin subarea physical unit (PU) indicated by the Active ER List selection.

DESTINATION is the name of the destination subarea PU indicated by the Active ER List selection.

ER is the explicit route number indicated by the Active ER List selection.

DOMAIN is the domain of the NetView that supplied the session data.

Note: When the Session List display is selected from the Active ER List panel, only active sessions using the specified ER are displayed.

Selection Via ACTIVE VR LIST Display

```
ORIGIN: A01MPU  DESTINATION: A20MPU  VR: 00  TP: 00  DOMAIN: CNM01
```

ORIGIN is the name of the origin subarea PU indicated by the Active VR List selection.

DESTINATION is the name of the destination subarea PU indicated by the Active VR List selection.

VR is the virtual route number indicated by the Active VR List selection.

TP is the transmission priority indicated by the Active VR List selection.

DOMAIN is the domain of the NetView that supplied the session data.

Note: When the Session List display is selected from the Active VR List panel, only active sessions using the specified VR and TP are displayed.

Selection Via SESS Explicit Command

```
NAME: CNM01LUC CNM20LUC WITH PCID                DOMAIN: CNM01
```

NAME lists the resource(s) specified on the SESS explicit command used to generate the Session List display. You can enter one or two resource names.

WITH PCID indicates that you requested a path correlation identifier when you entered the SESS explicit command. Requesting a PCID is optional.

DOMAIN is the domain of the NetView that supplied the session data.

SEL#

You can enter the selection number to view the Session Configuration Data panel for a particular session. You can enter the selection number and **CT** to invoke the connectivity test for an active session involving a resource that is not locally attached. A message indicating the results of the test will be displayed above the command line.

By entering the selection number and **STR**, you can display the Session Termination Reason panel. This panel shows the reason code and sense code for a session that failed to set up or ended abnormally.

PRIMARY NAME

The name of the primary session partner. The primary session partner's name is specified as *DISCARD when the Session List display is invoked via the SESS *DISCARD command.

PRIMARY TYPE

The primary session partner may be type LU, PU, or SSCP. The primary session partner's type is displayed as SSCP when the Session List display is invoked via the SESS *DISCARD command.

PRIMARY DOM

The name of the primary session partner's domain. X-NET is displayed in this field if the primary session partner resides in a different network than the reporting session monitor. The field is left blank when the Session List display is invoked via the SESS *DISCARD command.

SECONDARY NAME

The name of the secondary session partner. The secondary session partner's name is specified as *DISCARD when the Session List display is invoked via the SESS *DISCARD command.

SECONDARY TYPE

The secondary session partner may be type LU, PU, or SSCP. The secondary session partner's type is displayed as SSCP when the Session List display is invoked via SESS *DISCARD.

SECONDARY DOM

The name of the secondary session partner's domain. X-NET is displayed in this field if the secondary session partner resides in a different network than the reporting session monitor. The field is left blank when the Session List display is invoked via the SESS *DISCARD command.

START TIME

The start time of the session in *month/day hour:minute:second* format.

END TIME

The end time of the session in *month/day hour:minute:second* format for inactive sessions that set up successfully. The end time is given as *** ACTIVE *** for active sessions, *** BINDF *** for sessions that failed to set up due to bind failures, *** INITF *** for sessions that failed to set up prior to bind flow, and *** FORCED *** for session data that was forced to the session monitor data base. The END TIME for the pseudo-session for discarded PIUs is shown as *** ACTIVE ***.

NETID:

The identifier of the network in which the primary or secondary session partner resides. The network identifier, along with its associated heading, is displayed under the appropriate session partner's data. It appears **only** if a session partner resides in a different network than the reporting session monitor.

PCID:

The fully qualified procedure correlation identifier (PCID) of the session. For domains with VTAM V3R2, the format of the fully qualified PCID is (1) the network identifier of the network in which the control point (CP) that generated the PCID resides, (2) a period, (3) the name of the CP that generated the PCID, (4) a period, and (5) the PCID. For earlier releases of VTAM, only the PCID itself is shown.

REASON CODE

The reason code associated with session termination. The reason code is displayed under the session start time.

For sessions that terminated due to bind failure, if the reason code is x'00', neither the reason code nor its associated heading is displayed. For sessions that terminated because of UNBIND, if the reason code is x'00', x'01', or x'02', neither the reason code nor its associated heading is displayed. For sessions which terminated because of failure before bind flow (init failure), if the reason code is x'00', neither the reason code nor its associated heading is displayed.

Note: Reason codes x'00', x'01', and x'02' all represent normal session endings.

SENSE

The sense code associated with session termination. The sense code is displayed under the session end time. If the sense code is '00000000'x (the code for a normal session ending), neither the sense code nor its associated heading is displayed.

XRF:

The extended recovery facility (XRF) session type. The possible extended recovery facility session types are PRIMARY and BACKUP. If the session is a non-extended recovery facility session, neither the XRF field nor its associated heading is displayed.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by selecting it from the Resource Name List panel or by entering the **SESS** command.

Panel Exit

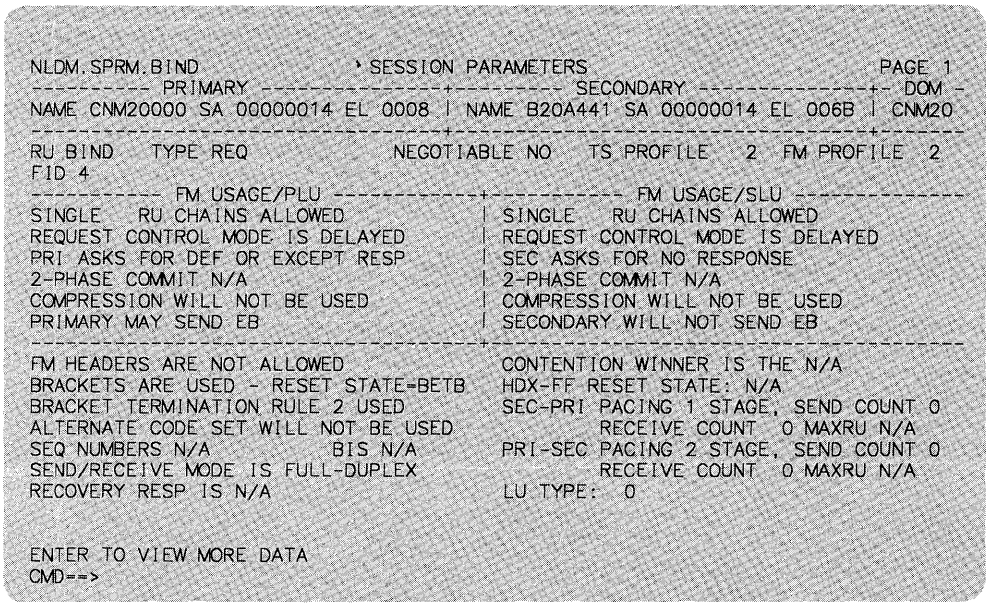
You can select any Session Configuration Data panel or the Session Termination Reason panel. However, if the Session List panel is for *DISCARD, the selection of a Session Configuration Data panel causes display of the Session Trace Data (for PIU) panel.

If you came to the Session List panel by choosing a selection number (SEL#) on another session monitor panel, you can return to that panel by issuing the **RETURN** command. If you came to the Session List panel

by issuing a **SESS** command, the **RETURN** command will display the session monitor menu panel.

You can issue any panel invocation command.

Session Parameters Panel



The Session Parameters panel (BIND version) interprets the BIND request unit for the LU-LU session you select. The selected session is identified in the panel heading. The BIND response and the BIND are recorded in the session monitor data base.

Page 1 of the panel, the BIND, is displayed above. You can display page 2 of this panel, the BIND response (RSP(BIND)), by pressing PF8 or ENTER. Page 2 is displayed on page 130 of this appendix.

The Session Parameters panel is displayed on page 47.

Field Descriptions

N/A can appear in any of the fields described here if information for that field is not available or not applicable to a specific bind. If space permits, NOT AVAILABLE, NOT APPLICABLE, or NOT PRESENT will appear instead of N/A. For more information about the fields displayed on this panel, see *Systems Network Architecture Formats*.

PRIMARY NAME
The name of the primary session partner.

PRIMARY SA
The subarea address of the primary session partner.

PRIMARY EL
The element address of the primary session partner.

SECONDARY NAME
The name of the secondary session partner.

SECONDARY SA
The subarea address of the secondary session partner.

SECONDARY EL
The element address of the secondary session partner.

DOM

The domain of the NetView that supplied the BIND and RSP(BIND) data.

RU

The type of SNA request/response unit. The RU type can be BIND, ACTPU, ACTCDRM, or ACTLU.

TYPE

The BIND type. REQ is displayed for a request, +RSP is displayed for a positive response, and -RSP is displayed for a negative response.

NEGOTIABLE

The capability that allows two LU-LU half-sessions to negotiate the parameters of a session when the session is being activated. YES is displayed for a negotiable BIND and NO for a non-negotiable BIND.

TS PROFILE

The transmission subsystem (TS) profile specified in the BIND or RSP(BIND). This value may be 1-5, 7, or 17.

FM PROFILE

The function management (FM) profile specified in the BIND or RSP(BIND). This value may be 0, 2-7, 17-19, or N/A (not applicable).

FID

The type of format identifier (FID) for the BIND or RSP(BIND), displayed in hexadecimal.

FM USAGE/PLU

Function management (FM) usage for the primary logical unit (PLU). Primary logical unit is another name for primary session partner.

FM USAGE/SLU

Function management (FM) usage for the secondary logical unit (SLU). Secondary logical unit is another name for secondary session partner.

RU CHAINS ALLOWED (PLU)

SINGLE or MULTIPLE request unit (RU) chains are allowed from the primary session partner.

REQUEST CONTROL MODE IS (PLU)

The request control mode is IMMEDIATE or DELAYED for the primary session partner.

PRI ASKS FOR

The primary session partner can ask for NO RESPONSE, EXCEPTION RESPONSE, DEFINITE RESPONSE, or DEF OR EXCEPT RESP (definite or exception response).

2-PHASE COMMIT (PLU)

2-phase commit is either SUPPORTED or NOT SUPPORTED for the synchronization point (synch point) by the primary session partner.

COMPRESSION (PLU)

Data compression MAY BE USED or WILL NOT BE USED by the primary session partner.

PRIMARY

The primary session partner MAY SEND EB (end bracket) or WILL NOT SEND EB.

RU CHAINS ALLOWED (SLU)

SINGLE or MULTIPLE request unit (RU) chains are allowed from the secondary session partner.

REQUEST CONTROL MODE IS (SLU)

The request control mode is IMMEDIATE or DELAYED for the secondary session partner.

SEC ASKS FOR

The secondary session partner can ask for NO RESPONSE, EXCEPTION RESPONSE, DEFINITE RESPONSE, or DEF OR EXCEPT RESP (definite or exception response).

2-PHASE COMMIT (SLU)

2-phase commit is either SUPPORTED or NOT SUPPORTED for the synchronization point (sync point) by the secondary session partner.

COMPRESSION (SLU)

Data compression MAY BE USED or WILL NOT BE USED by the secondary session partner.

SECONDARY

The secondary session partner MAY SEND EB (end bracket) or WILL NOT SEND EB.

FM HEADERS ARE

FM headers are ALLOWED or NOT ALLOWED.

BRACKETS

One or more chains or request units (RUS) and their responses that are exchanged between two LU-LU half-sessions and that represent a transaction between them. Possible values for the BRACKETS field are:

- ARE USED—RESET STATE = BETB
- ARE USED—RESET STATE = INB
- NOT USED IF PRI/SEC—SEND EB.

BRACKET TERMINATION RULE USED

The bracket termination rule (either 0, 1, or 2) which is used.

ALTERNATE CODE SET

The alternate code set WILL NOT BE USED or MAY BE USED.

SEQ NUMBERS

Sequence numbers either ARE AVAILABLE or are NOT AVAILABLE.

BIS

A bracket initiation stopped (BIS) message is either NOT SENT or SENT.

SEND/RECEIVE MODE IS

The send/receive mode is either FULL-DUPLEX, HALF-DUPLEX CONT, or HALF-DUPLEX FLIP-FLOP.

RECOVERY RESP IS

Recovery responsibility is either CONTENTION LOSER or SYMMETRIC.

CONTENTION WINNER IS THE

The contention winner is the session partner who gives permission to the loser to allocate a conversation on the session. The winner can either grant or reject this request. The contention winner is the SECONDARY or PRIMARY session partner.

HDX-FF RESET STATE:

The half-duplex flip-flop (HDX-FF) reset state is either REC(PRI) SND(SEC) or SND(PRI) REC(SEC).

SEC-PRI PACING STAGE

Secondary to primary pacing is in either 1 or 2 stages.

SEC-PRI SEND COUNT

The secondary to primary send count.

SEC-PRI RECEIVE COUNT

The secondary to primary receive count.

SEC-PRI MAXRU

The secondary to primary maximum RU length.

PRI-SEC PACING STAGE

Primary to secondary pacing is in either 1 or 2 stages.

PRI-SEC SEND COUNT

The primary to secondary send count.

PRI-SEC RECEIVE COUNT

The primary to secondary receive count.

PRI-SEC MAXRU

The primary to secondary maximum RU length.

LU TYPE:

The logical unit (LU) type of the session. For LU 6, the LU type includes the subtype.

```
NLDM.SPRM.BIND              SESSION PARAMETERS                    PAGE 2
---------- PRIMARY ----------+-------- SECONDARY ----------+- DOM -
NAME CNM20000 SA 00000014 EL 0008  | NAME B20A441 SA 00000014 EL 006B | CNM20
-----------------------------------+-----------------------------------+-------
RU BIND   TYPE REQ          NEGOTIABLE NO   TS PROFILE   2  FM PROFILE  2
FID 4
-------------------------------------------------------------------------------
PRIMARY ALLOWS RECEIPT OF SEGMENTS    PRIORITY SESSION ALLOC N/A
BIND CANNOT BE QUEUED                 PRIVATE CRYPTOGRAPHY NOT SUPPORTED
ALTERNATE CODE PROCESSING: N/A        SESS-LVL CRYPTOGRAPHY NOT SUPPORTED
CONTROL VECTORS INCLUDED: NO          CRYPTO KEY ENCIPHERING: NOT PRESENT
ADAPT SES-LVL PACING NOT SUPPORTED    CRYPTO CIPHER METHOD: NOT PRESENT
CONVERS-LVL SEC SUPPORT N/A           CRYPTOGRAPHY KEY: NOT PRESENT
VALID RU INTEG CHK IND N/A            PRIMARY NAME: CNM20000
ALREADY VERIFIED IND N/A              SECONDARY NAME: NOT PRESENT
PERSISTENT VERIFICATION N/A           USER REQ COR: NOT PRESENT
SYNC LVL: N/A                         USER DATA: NOT PRESENT
RECONNECT N/A
SESSION REINITIATION: N/A
PARALLEL SESSIONS N/A
CHANGE NUMBER SESSIONS N/A


ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
CMD==>
```

Many of the fields on page 2 of the Session Parameters panel are also displayed on page 1 of the panel. See page 126 of this appendix for a description of the following fields:

- PRIMARY NAME
- PRIMARY SA
- PRIMARY EL
- SECONDARY NAME
- SECONDARY SA
- SECONDARY EL
- DOM
- RU
- TYPE
- NEGOTIABLE
- TS PROFILE
- FM PROFILE
- FID

PRIMARY

The primary session partner either ALLOWS RECEIPT OF SEGMENTS or DOES NOT ALLOW REC OF SEG.

BIND

The BIND MAY BE QUEUED or CANNOT BE QUEUED.

ALTERNATE CODE PROCESSING:

Alternate code function management data (FMD) RUs are processed as either ASCII-7 or ASCII-8.

CONTROL VECTORS INCLUDED:
Control vectors are (YES) or are not (NO) included in the BIND or RSP(BIND) after the secondary session partner name.

ADAPT SES-LVL PACING
Adaptive session-level pacing is either SUPPORTED or NOT SUPPORTED.

CONVERS-LVL SEC SUPPORT
The access security information field will be either ACCEPTED or NOT ACCEPTED.

VALID RU INTEG CHK IND
The validatable request unit (RU) integrity indicator is either SUPPORTED or NOT SUPPORTED.

ALREADY VERIFIED IND
The already verified indicator will either be ACCEPTED or NOT ACCEPTED for incoming FMH 5 path information units (PIUS).

PERSISTENT VERIFICATION
Persistent verification is either SUPPORTED or NOT SUPPORTED.

SYNC LVL
The synchronization level supported is either CONFIRM only or CONFIRM, SYNC PNT, BACKOUT (indicates all three levels are supported).

RECONNECT
Reconnect is either SUPPORTED or NOT SUPPORTED.

SESSION REINITIATION
Responsibility for session reinitiation is either the OPERATOR, the PRIMARY session partner, the SECONDARY session partner, or the PRI OR SEC session partners.

PARALLEL SESSIONS
Parallel sessions are either SUPPORTED or NOT SUPPORTED.

CHANGE NUMBER SESSIONS
The ability to change the number of sessions is either SUPPORTED or NOT SUPPORTED.

PRIORITY SESSION ALLOC
Priority session allocation is either REQUESTED or NOT REQUESTED.

PRIVATE CRYPTOGRAPHY
Private cryptography is either SUPPORTED or NOT SUPPORTED.

SESS-LVL CRYPTOGRAPHY
Session-level cryptography is either NOT SUPPORTED, SELECTIVE, or MANDATORY.

CRYPTO KEY ENCIPHERING:
The session cryptography key is enciphered under SLU MASTER KEY.

CRYPTO CIPHER METHOD:
The cryptography cipher method is the DES ALGORITHM.

CRYPTOGRAPHY KEY:
The cryptography key.

PRIMARY NAME:
The primary session partner's name as specified in the BIND or RSP(BIND).

SECONDARY NAME:
The secondary session partner's name as specified in the BIND or RSP(BIND).

USER REQ COR:
User request correlation data.

USER DATA:
User data.

Note: Some of the fields described above may not be present because of a short BIND or RSP(BIND).

Panel Selection and Exit

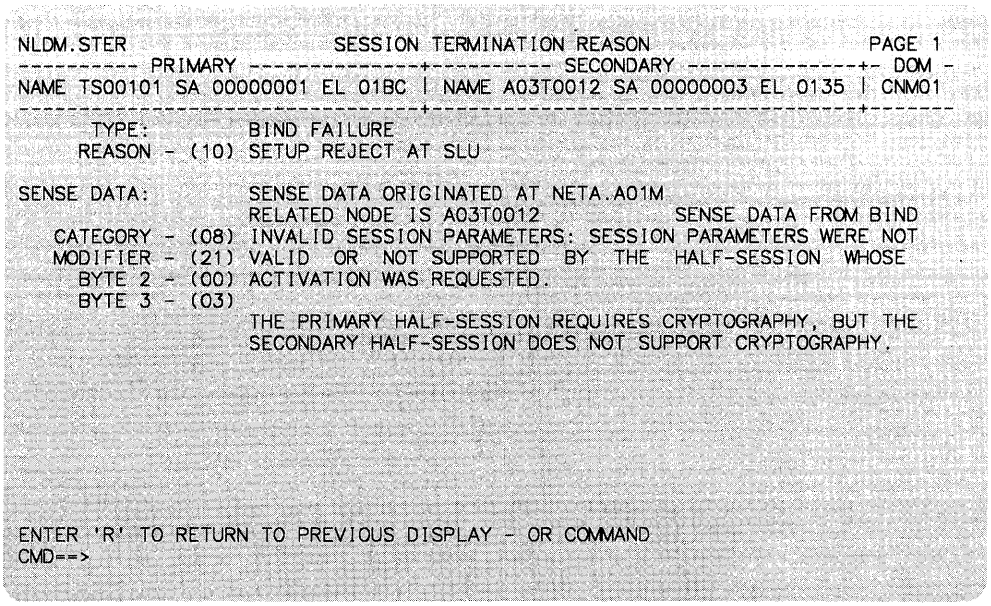
You can select and exit this panel in the following ways:

Panel Selection
You can display this panel by entering **P** on the Session Configuration Data panel for an LU-LU session.

Panel Exit
You can issue a **RETURN** command to exit to the previous Session Configuration Data panel.

You can issue any panel invocation command.

Session Termination Reason Panel



The Session Termination Reason panel presents a detailed description of the reason codes and sense codes issued for an UNBIND, a BIND FAILURE, or an INIT FAILURE.

The Session Termination Reason panel is displayed on page 46.

Field Descriptions

PRIMARY NAME
The name of the primary session partner.

PRIMARY SA
The subarea address of the primary session partner.

PRIMARY EL
The element address of the primary session partner.

SECONDARY NAME
The name of the secondary session partner.

SECONDARY SA
The subarea address of the secondary session partner.

SECONDARY EL
The element address of the secondary session partner.

DOM
The domain of the NetView that supplied the session termination reason data.

TYPE
The session termination type. The valid session termination types are BIND FAILURE, INIT FAILURE, and UNBIND.

REASON

The reason code (in hexadecimal) associated with session termination.

reason code description

A description of the reason code associated with session termination is displayed to the right of the REASON field. This reason code description field is not labeled.

SENSE DATA ORIGINATED AT/GENERATED BY

The network and node that caused the session termination procedure to be executed (for example, NETID.CPNAME). When a boundary function physical unit (PU) generates the extended sense data but the resource originating the session termination procedure is unknown, the adjacent link station's name is appended to the network and boundary PU names (for example, NETID.PUNAME.ALSNAME).

The heading is either SENSE DATA ORIGINATED AT or SENSE DATA GENERATED BY. This field and its associated heading are not displayed if the origin name of the session termination procedure is not available to the session monitor. This information is available only for VTAM V3R2.

RELATED NODE IS

The name of a related resource used to identify the source of the error. For example, for an address assignment error reported cross-domain, the related node might be the name of the physical unit (PU) that rejected the request for a network address assignment (RNAA). An RNAA is a type of request unit (RU).

Note: The related-node name always belongs to the same network as the termination procedure origin name.

This field and its associated heading are not displayed if the related resource name is not available to the session monitor. This information is available only for VTAM V3R2.

SENSE DATA FROM

The name of the request/response unit (RU) from which sense data was obtained, as specified in the extended-sense-data control vector. This field and its associated heading are not displayed if RU information associated with session termination is not available to the session monitor. This information is available only for VTAM V3R2.

CATEGORY

The hexadecimal value of the CATEGORY byte of the sense code. The CATEGORY and MODIFIER bytes of the sense code together determine what is presented in the first paragraph of the sense code description displayed to the right of these two fields. In this first paragraph, a general error category is described.

The following error categories are defined; all others are reserved:

00 User Sense Data Only

08 Request Reject

10 Request Error

20 State Error

40 Request Header (RH) Usage Error

80 Path Error

MODIFIER

The hexadecimal value of the MODIFIER byte of the sense code. The CATEGORY and MODIFIER bytes of the sense code together determine what is presented in the first paragraph of the sense code description displayed to the right of these two fields. In this first paragraph, a general error category is described.

BYTE 2

The hexadecimal value of BYTE 2 of the sense code. BYTE 2 and BYTE 3 together determine what is presented in the second paragraph of the sense code description displayed to the right of these two fields. This second paragraph identifies a specific problem that falls within the general error category described in the first paragraph of the sense code description.

BYTE 3

The hexadecimal value of BYTE 3 of the sense code. See the definition for BYTE 2.

sense code description

A description of the sense code associated with session termination is displayed to the right of the CATEGORY, MODIFIER, BYTE 2 and BYTE 3 fields. This sense code description field is not labeled.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by selecting it from the Session List panel.

Panel Exit

You can return to the Session List panel by issuing the **RETURN** command.

You can issue any panel invocation command.

Session Trace Data Panel

```
NLDM.PIUT                    SESSION TRACE DATA                          PAGE 1
---------- PRIMARY ----------+--------- SECONDARY ----------+- DOM -
NAME CNM01LUC SA 00000005 EL 0006 | NAME CNM20LUC SA 00000014 EL 0027 | CNM01
----------------------------------+-----------------------------------+------
SEL#  TIME   SEQ# DIR  TYPE  ******* REQ/RESP HEADER ******* RULEN SENS N
( 1) 13:22:00 0001 P-S DATA/05 FMH.FC.ER..................   127      T
( 2) 13:22:06 0002 P-S DATA    ....MC.ER..................    64      T
( 3) 13:22:07 0003 P-S DATA    ....MC.ER..................    64      T
( 4) 13:22:08 0004 P-S DATA    ....MC.ER..................    64      T
( 5) 13:22:09 0005 P-S DATA    ....MC.ER..................    64      T
( 6) 13:22:10 0006 P-S DATA    ....MC.ER..................    64      T
( 7) 13:22:10 0007 P-S DATA    ....MC.ER..................    64      T
( 8) 13:34:24 0008 P-S DATA    ....MC.ER..................   131      T
( 9) 13:35:09 0009 P-S DATA    ....MC.ER..................   253      T
(10) 13:41:50 000A S-P INITOTHR FMH.OC.DR..................    55
(11) 13:41:51 000B P-S (-)RSP  FMH.OC.ER..................     7 087D



END OF DATA
ENTER SEL# OR COMMAND
CMD==>
```

The Session Trace Data panel for path information units (PIUS) provides a formatted list of the PIUS that have been collected for the session you select. The selected session is identified in the panel heading. You can specify the number of PIUS to be retained for a session by issuing a **KEEP** command, or you can use the default. The PIUS are displayed in chronological order, from the oldest to the most recent.

A variation of the Session Trace Data panel for PIUS appears when you request a *DISCARD session. The following figure is an example of a discard reason entry.

```
(1) 13:43:03 0001 ISTTSCIS 87.061
(2) 13:42:00 0002 P-S (-)RSP  FMH.OC.ER ..... 7 087D D
```

The format for the first line of each *DISCARD entry is:

hh:mm:ss rrrr ISTTSxmm yy.ddd

Where:

hh:mm:ss

Is the time in hours:minutes:seconds when the discarded PIU was collected.

rrrr

Is the reason code associated with the VTAM module. This code helps identify different discard points and reasons within the same VTAM module. For explanations of the reason codes, see *VTAM Diagnosis Reference*.

ISTTSxmm

Is the CSECT name of the VTAM module that determined the PIU should be discarded (mm = module identifier).

yy.ddd

Is the year and day (Julian date) on which the VTAM module was assembled.

The discarded PIU detail follows this discard reason entry. This information is identified with a D under the N column on the Session Trace Data panel for discarded PIUS.

The Session Trace Data panel is displayed on page 104.

Field Descriptions

PRIMARY NAME

The resource name of the primary session partner.

PRIMARY SA

The subarea address for the primary session partner.

PRIMARY EL

The element address for the primary session partner.

SECONDARY NAME

The resource name of the secondary session partner.

SECONDARY SA

The subarea address for the secondary session partner.

SECONDARY EL

The element address for the secondary session partner.

DOM

The domain of the NetView that provided the panel data.

SEL#

To view the Specific RU Detail Data display, you can enter the selection number (SEL#) of the path information unit (PIU) for which you want more detailed information. If the PIU has a sense code associated with it, the Specific RU Detail Data panel displays an explanation of the sense code.

TIME

A time stamp provided by the access method at the time the path information unit was traced.

SEQ# (REF#)

The sequence number (SEQ#) of the path information unit. For a pre-Systems Network Architecture device, this field is a 1-byte reference number (REF#).

DIR

The direction of path information unit flow. It can be primary-to-secondary (P-S) or secondary-to-primary (S-P).

TYPE

The type of request/response unit (RU) in the path information unit (PIU). It can be a positive response, a negative response, the interpretation of a command, or data.

For binary synchronous (BSC) attached resources, this field contains abbreviations of the basic transmission unit (BTU) commands. (See *NCP*

and EP Reference Summary and Data Areas for more information on BTU commands.)

If * NOTE is displayed in this field, the data is device-dependent, and you should refer to the appropriate device documentation for a command definition. For example, if the device is an NCP, see *NCP and EP Reference Summary and Data Areas*.

REQ/RESP HEADER
The EBCDIC interpretation of the bit settings in the request/response header (RH).

RULEN
The length (in bytes) of the request unit (RU). This information is extracted from the transmission header (TH).

SENS
The Systems Network Architecture sense code for any negative responses.

N
If D appears in the N (notes) field, the path information unit (PIU) has been discarded by the access method. If T appears, the PIU has been truncated.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection
You can display this panel by selecting **PT** on any panel in the Session Configuration Data series if the primary trace point is in the host, or by selecting **ST** if the secondary trace point is in the host.

You can display this panel by selection number from the Session List panel for a *DISCARD session.

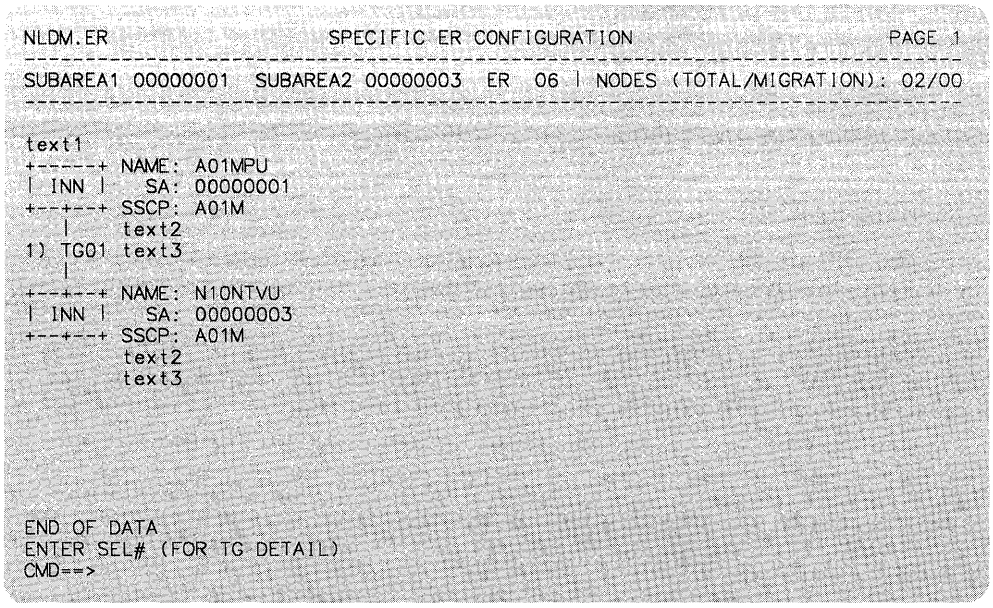
Panel Exit
You can select the Specific RU Detail Data panel.

You can return to the previous Session Configuration Data panel by issuing the **RETURN** command.

If the session is *DISCARD, you can display the Session List panel by issuing the **RETURN** command.

You can issue any panel invocation command.

Specific ER Configuration Panel



This panel displays the specific configuration of an explicit route (ER). Specific ER configuration data includes the translation by the session monitor of subarea physical unit (PU) addresses into network names. Name translation requires the following two conditions:

- NetView, NLDM R3, or NLDM R2 must be installed in at least one of the hosts that activate a link in each transmission group (TG) of each network control program (NCP) in the route.
- The session monitor at the requesting-route end-point must have a conversation with the session monitor that can perform the address translation.

If any subarea PU address cannot be translated into a network name, N/A (not available) appears in the name field.

You can request to view TG detail from this panel.

The Specific ER Configuration panel is displayed on pages 109 and 112.

Field Descriptions

SUBAREA1

The address of the origin subarea of the explicit route.

SUBAREA2

The address of the destination subarea of the explicit route.

ER

The explicit route (ER) number assigned to the selected session.

NODES

The total number of subarea physical units (PUs) and the number of migration-level (pre-SNA Release 4.2) subarea PUs. The difference between these two numbers is the number of nodes on the panel.

INN

A subarea (intermediate network node or endpoint node) in the path of the explicit route.

NAME

In general, the logical name by which the session monitor knows network resources. On this panel, NAME is a subarea physical unit name for an intermediate network node.

SA

The subarea address of the named system service control point (SSCP).

SSCP

The name of the system service control point supplying the name of the subarea node.

TG

The number of the transmission group connecting two subareas in the path of the explicit route.

text1

If the explicit route is detected as inoperative for a migration node, the following message appears:

MIGRATION SA: hhhhhhhh
reason INOP TGnn

where hhhhhhhh = the subarea address of the migration node, reason = PLANNED or UNPLANNED, and nn = the name of the transmission group.

text2

If the explicit route is detected as inoperative for a node, the following message appears:

INOP reason

where reason = PLANNED or UNPLANNED.

text3

If the explicit route is detected as inoperative for a TG, or if it is not known whether the failing component is a node or a TG, the following message appears:

INOP reason

where reason = PLANNED or UNPLANNED.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by entering **ER** on any Session Configuration Data panel or SEL# plus **ER** on either the Active ER List panel or the Active VR List panel.

You can issue a **RETURN** command on the Specific TG Configuration panel.

Panel Exit

You can issue a **RETURN** command to exit to the previous Session Configuration Data panel, Active ER List panel, or Active VR List panel.

You can issue any panel invocation command.

Appendix B. Hardware Monitor Panels

Appendix B. Hardware Monitor Panels

This appendix provides field descriptions and panel selection and exit methods for many of the hardware monitor panels displayed in this book's scenarios. While the panels displayed in the scenarios contain data pertinent to those scenarios, the panels in this appendix are used only to illustrate the panel formats. When you use these panels in your installation, you will receive different data than is displayed in the fields on these appendix panels.

For general information about hardware monitor panels, including a description of the information presented in the headings of these panels, see *NetView Operation*.

Alerts-Dynamic Panel

```
N E T V I E W                                OPER3          03/20/86  11:53:14
 NPDA-30A                  * ALERTS-DYNAMIC *                    DOMAIN:  CNM01

 RESNAME TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
 A03L05  LINE 03/20/11:52 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:50 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:49 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 A03L05  LINE 03/20/11:45 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:43 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:29 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:27 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 A03L05  LINE 03/20/11:18 MODEM ERROR:LOCAL MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/11:01 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:55 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:49 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03L05  LINE 03/20/10:44 SELF TEST-NO RESPONSE:MODEM OFF/LOCAL MODEM
 A03P051 TERM*03/20/10:42 POWER OFF/INVALID ADDRESS:DEVICE
 A03P051 TERM*03/20/10:42 POWER OFF/INVALID ADDRESS:DEVICE
 A03L05  LINE 03/20/10:21 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
 DEPRESS ENTER KEY TO VIEW ALERTS-STATIC

  ???
CMD==>
```

The hardware monitor gathers information about *events* in the network. An event record is created for each unexpected occurrence in the network. An *alert* record is also created for each event that requires immediate attention. When the hardware monitor detects an alert condition, it displays the alert on the Alerts-Dynamic panel.

As failures occur in the network, the newest alert appears at the top of the list on the panel, and the oldest alert is scrolled off the bottom. The hardware monitor provides more details about these alerts, including recommended actions you can take to investigate and solve the problems that caused the alerts.

The Alerts-Dynamic panel is displayed on page 5.

Field Descriptions

RESNAME

The name of the failing resource.

If an asterisk (*) appears after the RESNAME field, it indicates that the resource name is not the resource name associated with the alert data being presented. Instead, the RESNAME given is the name of the resource to which the failing resource is attached or the first Systems Network Architecture device to which the failing resource is attached.

TYPE

The device type associated with the failing resource. Some common resource types are:

COMC Communication controller or transmission control unit

CTRL Link-attached cluster controller

DEV Link-attached device or terminal

LINE Link attachment between the communication controller and the cluster controller or between communication controllers

TERM Terminal or printer

DATE/TIME

The date and time the alert was recorded in the hardware monitor data base.

ALERT DESCRIPTION:PROBABLE CAUSE

A brief description of why the event was generated, followed by the most probable failing component.

An asterisk (*) appearing at the beginning of the ALERT DESCRIPTION:PROBABLE CAUSE field indicates that the condition which caused the alert is being repeated at a rate of at least five per minute.

If a plus sign (+) is displayed at the end of the ALERT DESCRIPTION:PROBABLE CAUSE field, additional probable causes may be viewed on the Event Detail display. These probable causes are listed in descending order of probability.

To display the Event Detail panel:

- Type the selection number of the alert you want to investigate and press ENTER. The Recommended Action for Selected Event panel displays.
- On the Recommended Action for Selected Event panel, type **D** and press ENTER. The Event Detail panel displays.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can press ENTER on the Alerts-Static panel.

You can choose SEL# 1 on the hardware monitor Menu panel.

You can type **ALD** on any hardware monitor panel or **NPDA ALD** on any NetView panel outside the hardware monitor.

Panel Exit

You can press ENTER to display the Alerts-Static panel.

You can issue the **RETURN** command to display the hardware monitor Menu panel.

You can issue any panel invocation command.

Alerts-History Panel

```
N E T V I E W                                    OPER1      03/31/87 15:04:31
NPDA-31A                    * ALERTS-HISTORY *                  PAGE   1 OF  3
                                                                DOMAIN:  CNM01

SEL# RESNAME  TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) LN02PTP *LINE 03/31 14:48 TIMEOUT:DEVICE/REMOTE MODEM OFF/COMMUNICATIONS
( 2) PU32762  CTRL 03/31 14:46 *TIMEOUT:DEVICE OFF/REMOTE MODEM OFF/COMM
( 3) PU32762  CTRL 03/31 14:42 FORMAT EXCEPTION SDLC ROL:OK IF NORMAL/DEVICE
( 4) PU32762  CTRL 03/31 14:42 TIMEOUT:DEVICE OFF/REMOTE MODEM OFF/COMM
( 5) PU32762  CTRL 03/31 14:40 FORMAT EXCEPTION SDLC ROL:OK IF NORMAL/DEVICE
( 6) PU32762  CTRL 03/31 14:40 SDLC CMD REJECT:COMM CTRL PROGRAM/DEVICE
( 7) L020     LINE 03/28 13:04 (COMMUNICATIONS;UNDETERMINED)
( 8) L020     LINE 03/28 11:56 (COMMUNICATIONS;UNDETERMINED)
( 9) RALLINEX LAN  02/28 15:07 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(10) RALLINEX LAN  02/28 15:04 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(11) RALLINEX LAN  02/28 14:28 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(12) RALLINEX LAN  02/28 14:28 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(13) RALLINEX LAN  02/28 12:10 INITIALIZATION FAILURE:RING SUBSYSTEM ATTACHMENT
(14) PU001    PU   02/27 18:18 UNDETERMINED ERROR:PROCESSOR                    +
(15) PU001    PU   02/27 18:16 UNDETERMINED ERROR:PROCESSOR                    +
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)


 ???
CMD==>
```

The Alerts-History panel displays all the alerts stored on the hardware monitor data base. This panel may have multiple pages. You can move from one page to another by pressing the ENTER key or the PF8 key to view the next page in the display, or by pressing the PF7 key to view the previous page.

The Alerts-History panel is shown on pages 65 and 98.

Field Descriptions

SEL#

You can enter the selection number (SEL#) to view the Recommended Action for Selected Event panel for any alert shown on the Alerts-History display.

To view the Most Recent Events panel for the resource associated with an alert, you can enter the selection number and **M**.

You can record an alert in the Information/Management data base by entering the selection number and **P**.

To delete an alert from the hardware monitor data base, enter the selection number and **DEL**. The deleted alert will continue to show on the Alerts-History panel until you exit and re-enter the panel.

RESNAME

The name of the failing resource.

If an asterisk (*) appears after the RESNAME field, it indicates that the resource name is not the resource name associated with the alert data being presented. Instead, the RESNAME given is the name of the resource to which the failing resource is attached or the first Systems Network Architecture device to which the failing resource is attached.

TYPE

The device type associated with the failing resource. Some common resource types are:

COMC Communication controller or transmission control unit

CTRL Link-attached cluster controller

DEV Link-attached device or terminal

LINE Link attachment between the communication controller and the cluster controller or between communication controllers

TERM Terminal or printer

DATE/TIME

The date and time the alert was recorded in the hardware monitor data base.

ALERT DESCRIPTION:PROBABLE CAUSE

A brief description of why the event was generated, followed by the most probable failing component.

If the field is enclosed in parentheses, the input record was not in a format predefined to the hardware monitor. In this case, the text is based on a general interpretation of the record contents.

An asterisk (*) appearing at the beginning of the ALERT DESCRIPTION:PROBABLE CAUSE field indicates that the condition which caused the alert is being repeated at a rate of at least five per minute.

If a plus sign (+) is displayed at the end of the ALERT DESCRIPTION:PROBABLE CAUSE field, additional probable causes can be viewed on the Event Detail display. These probable causes are listed in descending order of probability.

To display the Event Detail panel:

- Type the selection number of the alert you want to investigate and press ENTER. The Recommended Action for Selected Event panel displays.
- On the Recommended Action for Selected Event panel, type **D** and press ENTER. The Event Detail panel displays.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by entering **ALH** on any hardware monitor panel or **NPDA ALH** on any NetView panel outside the hardware monitor.

From the Alerts-Static panel, you can enter **A** to view the Alerts-History panel.

Panel Exit

If you displayed this panel by selecting **A** on the Alerts-Static panel, you can return to the Alerts-Dynamic panel by issuing the **RETURN** command.

If you displayed this panel by entering **ALH** or **NPDA ALH**, you can display the hardware monitor Menu panel by entering the **RETURN** command.

You can issue any panel invocation command.

Alerts-Static Panel

```
N E T V I E W                                    NETOP2     03/16/87 10:35:22
NPDA-30B                    * ALERTS-STATIC *                  DOMAIN:  MNV21

SEL# RESNAME  TYPE  DATE/TIME  ALERT DESCRIPTION:PROBABLE CAUSE
( 1) P4511C3 *CTRL 03/16 10:29 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 2) LDEV0436 LDEV 03/16 09:59 *OPERATION CHECK:HOST PROGRAM
( 3) P4511C3  CTRL 03/16 09:40 ERROR TO TRAFFIC RATIO EXCEEDED:COMMUNICATIONS
( 4) P4511C3  SSYS 03/16 09:36 RESOURCE AVAILABLE
( 5) P4511C3  SSYS 03/16 09:36 RESOURCE AVAILABLE
( 6) EWLINK1  SSYS 03/16 09:33 RESOURCE INACTIVATED
( 7) EWLINK1  LINE 03/16 09:33 DSR FAILED TO RAISE:LOCAL MODEM OFF/LOCAL MODEM
( 8) P4511C3  SSYS 03/16 09:32 RESOURCE AVAILABLE
( 9) L4511    SSYS 03/16 09:24 RESOURCE AVAILABLE
(10) NCP8F    COMC 03/16 09:23 HARDWARE ERROR:LINE ADAPTER                  +
(11) LR686823 SSYS 03/16 09:17 RESOURCE AVAILABLE
(12) LR686823 SSYS 03/16 09:17 RESOURCE INACTIVATED
(13) LR686823 SSYS 03/16 09:15 RESOURCE AVAILABLE
(14) L4511    SSYS 03/16 09:13 RESOURCE INACTIVATED
DEPRESS ENTER KEY TO VIEW ALERTS-DYNAMIC OR ENTER A TO VIEW ALERTS-HISTORY
ENTER SEL# (ACTION), OR SEL# PLUS M (MOST RECENT), P (PROBLEM), DEL (DELETE)


 ???
CMD==>
```

When you press the ENTER key from the Alerts-Dynamic panel, NetView displays the Alerts-Static panel. The Alerts-Static panel provides selection options for existing alerts. Incoming alerts are not displayed on this panel.

The Alerts-Static panel is shown on pages 10, 14, and 21.

Field Descriptions

SEL#

You can enter the selection number (SEL#) to view the Recommended Action for Selected Event panel for any alert shown on the Alerts-Static display.

To view the Most Recent Events panel for the resource associated with an alert, you can enter the selection number and **M**.

You can record an alert in the Information/Management data base by entering the selection number and **P**.

To delete an alert from the hardware monitor data base, enter the selection number and **DEL**. The deleted alert will continue to show on the Alerts-Static panel until you exit and re-enter the panel.

RESNAME

The name of the failing resource.

If an asterisk (*) appears after the RESNAME field, it indicates that the resource name is not the resource name associated with the alert data being presented. Instead, the RESNAME given is the name of the resource to which the failing resource is attached or the first Systems Network Architecture device to which the failing resource is attached.

TYPE

The device type associated with the failing resource. Some common resource types are:

COMC Communication controller or transmission control unit

CTRL Link-attached cluster controller

DEV Link-attached device or terminal

LINE Link attachment between the communication controller and the cluster controller or between communication controllers

TERM Terminal or printer

DATE/TIME

The date and time the alert was recorded in the hardware monitor data base.

ALERT DESCRIPTION:PROBABLE CAUSE

A brief description of why the event was generated, followed by the most probable failing component.

An asterisk (*) appearing at the beginning of the ALERT DESCRIPTION:PROBABLE CAUSE field indicates that the condition which caused the alert is being repeated at a rate of at least five per minute.

If a plus sign (+) is displayed at the end of the ALERT DESCRIPTION:PROBABLE CAUSE field, additional probable causes can be viewed on the Event Detail display. These probable causes are listed in descending order of probability.

To display the Event Detail panel:

- Type the selection number of the alert you want to investigate and press ENTER. The Recommended Action for Selected Event panel displays.
- On the Recommended Action for Selected Event panel, type **D** and press ENTER. The Event Detail panel displays.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can display this panel by pressing ENTER while on the Alerts-Dynamic panel.

Panel Exit

You can return to the Alerts-Dynamic panel by pressing the ENTER key.

You can view the Alerts-History display by entering **A**.

You can go to the hardware monitor Menu panel by entering the **RETURN** command.

You can issue any panel invocation command.

Command List Panel

```
N E T V I E W                                   OPER1          03/31/87 14:41:59
NPDA-10AA                       * COMMAND LIST *                     PAGE  1 OF 2

DATA CONTROL COMMANDS
SEL#   COMMAND                   ACTION
( 1)   ALERTSD    OR  ALD        VIEW ALERTS-DYNAMIC DISPLAY
( 2)   ALERTSH    OR  ALH        VIEW ALERTS-HISTORY DISPLAY
( 3)   MRECENT    OR  MR         VIEW MOST RECENT DATA DISPLAY
( 4)   PURGE(PRG) OR  PRGATT     PURGE DATA
( 5)   TOTAL      OR  TOT        VIEW TOTAL DATA DISPLAY

REPORTING COMMANDS
SEL#   COMMAND                   ACTION
( 6)   COPY                      PRINT THE CURRENT DISPLAY IN THE NCCF LOG
( 7)   REPORTS                   SEQUENTIAL LOGGING FOR REPORT GENERATION

RETRIEVE NETWORK DATA COMMANDS
SEL#   COMMAND                   ACTION
( 8)   CTRL                      RETRIEVE NETWORK DATA FROM SNA CONTROLLER
( 9)   TEST                      RETRIEVE NETWORK DATA FROM IBM MODEMS
ENTER SEL# FOR DESCRIPTION OF COMMAND OR DEPRESS ENTER TO VIEW NEXT PAGE

 ???
CMD==>
```

```
N E T V I E W                                   OPER1          03/31/87 14:42:23
NPDA-10AB                       * COMMAND LIST *                     PAGE  2 OF 2

SET VALUES COMMANDS
SEL#   COMMAND                   ACTION
(10)   SDOMAIN    OR  SD         ESTABLISH CROSS DOMAIN SESSION
(11)   SRATIO     OR  SR         SET ERROR/TRAFFIC RATIO THRESHOLD
(12)   SRFILTER   OR  SRF        SET RECORDING FILTER
(13)   SVFILTER   OR  SVF        SET VIEWING FILTER
(14)   SWRAP      OR  SW         SET WRAP COUNT

DISPLAY VALUES COMMANDS
SEL#   COMMAND                   ACTION
(15)   DDOMAIN    OR  DD         DISPLAY DOMAIN ID
(16)   DFILTER    OR  DF         DISPLAY FILTER STATUS
(17)   DRATIO     OR  DR         DISPLAY ERROR/TRAFFIC RATIO THRESHOLD VALUE
(18)   DWRAP      OR  DW         DISPLAY WRAP COUNT


ENTER SEL# FOR DESCRIPTION OF COMMAND OR B TO VIEW THE PREVIOUS PAGE

 ???
CMD==>
```

The Command List panel is a two-page menu of hardware monitor commands. A brief description of the action carried out by each command is shown beside the command.

To view page 2 of the display, you can press ENTER or PF8. To return to page 1 from page 2, you can type **B** and press ENTER, or press PF7.

The first page of the Command List panel is displayed on page 86.

Field Descriptions

SEL#

For any command listed on this display, you can view a detailed description of the command by entering the selection number for that command. Included in this description are the formats the command can take and explanations of the variables used in each format.

COMMAND

The full command, followed by an abbreviated version of the command (if one exists). NetView will execute the command when you enter either version on the command line of a hardware monitor panel.

ACTION

A brief description of the action that is accomplished by issuing this command.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can select this panel from the hardware monitor Menu panel or Help Menu panel.

You can enter **COMMAND** from any display within the hardware monitor or **NPDA COMMAND** from any other NetView panel.

Panel Exit

You can enter any selection number listed on the Command List panel to view the Command Description panel for that command.

You can issue any panel invocation command.

Line Analysis-Link Segment Level 1 Panel

```
N E T V I E W                                        NETOP1      03/16/87 11:38:32
NPDA-24B          * LINE ANALYSIS-LINK SEGMENT LEVEL 1 *                PAGE 1 OF 1

   MNV21         N456F42        L4511     C3    P4511C3
               +---------+  +-+          +-+  +---------+
   DOMAIN      |  COMC   |  |M|--LINE--|M|  |  CTRL   |
               +---------+  +-+          +-+  +---------+
   ROUND TRIP DELAY: 0 MSEC
                               LOCAL                  REMOTE                ACCEPTABLE
                               MODEM                  MODEM                 LIMITS
TYPE-MODEL:                    5866-02                5866-02
FREQUENCY SHIFT:                 0 HZ                 -3 HZ                 MAX  6 HZ
2ND HARMONIC DISTORTION:       40 DB                  39 DB                 MIN 27 DB
3RD HARMONIC DISTORTION:       40 DB                  37 DB                 MIN 32 DB
SIGNAL TO NOISE RATIO:         40 DB                  18 DB                 MIN 22 DB
PHASE JITTER:                    0 DEG PP              9 DEG PP             MAX 15 DEG PP
RECEIVE LEVEL, LEAST:         -14, -14 DBM           -18, -18 DBM           MIN-32 DBM
IMPULSE HITS:                   0                      0                    15 IN 15 MIN
RLSD LOSSES:                    0                      0
TRANSMIT LEVEL:                  0 DBM                 0 DBM
SPEED, RMT MODEM ADDRESS: 9.6 KBPS(FULL)       9.6 KBPS(FULL), 01


 ???
CMD==>
```

The Line Analysis-Link Segment Level 1 panel displays the results of a Line Analysis test requested via the **TEST** command or the LPDA-2 Command Menu panel. The Line Analysis test gathers information about the quality of the data transmissions being sent across the line between a local modem and a remote modem. The Line Analysis-Link Segment Level 1 panel displays this information along with the acceptable limits for data transmission quality over this line.

If the **TEST** command is processed only by the remote modem, data will be presented in the REMOTE MODEM column of the panel, and the message NO DATA AVAILABLE will be displayed in the LOCAL MODEM column. Similarly, if the **TEST** command is processed only by the local modem, data will be presented in the LOCAL MODEM column and NO DATA AVAILABLE will be displayed in the REMOTE MODEM column.

The Line Analysis-Link Segment Level 1 panel is shown on page 27.

Field Descriptions

ROUND TRIP DELAY

The difference in milliseconds between the time a command was sent and the time it was acknowledged. This measurement occurs at the local modem and does not include the modem's pass-through delay. N/AV appears if this data is not available.

TYPE-MODEL

The four-character modem type and two-character modem model. This information is supplied for both the local and remote modems.

FREQUENCY SHIFT

The difference (measured in hertz) between a signal's frequency at the origination point and its frequency at the destination. N/A is displayed if this measurement is not applicable, and N/AV if it is not available.

2ND HARMONIC DISTORTION

The measurement of the nonlinear distortion characteristics of the channel. This ratio is measured by a "two tones" method (860 - 1380 HZ).

Nonlinearities in amplifiers within the telephone network cause the generation of unwanted signal components which add to the input signal to distort the amplified output signal. These unwanted signals are harmonically related to the fundamental frequencies from which they are derived. Harmonics are measured by their power level (in decibels) with reference to the fundamental frequency tone transmitted at a reference power level.

This field contains N/A if the harmonic distortion measurement is not applicable or N/AV if it is not available.

3RD HARMONIC DISTORTION

See the description for the 2ND HARMONIC DISTORTION field.

SIGNAL TO NOISE RATIO

The separation of the noise power level and the received signal level seen by a modem. This field contains N/A if the measurement is not applicable or N/AV if it is not available.

PHASE JITTER

The phase modulation imposed on the line by a channel to 1004-hertz (Hz) tone. This peak-to-peak phase jitter is measured in a 300 Hz bandwidth. This field contains N/A if the measurement is not applicable or N/AV if it is not available.

RECEIVE LEVEL, LEAST

RECEIVE LEVEL is the decibel level for the receive signal, measured in decibels based on one milliwatt (dBm).

LEAST is the lowest receive level measured during the 15 minutes before the command was issued or before the last modem reinitialization.

If the receive-level function is not installed or not supported in the configuration, the field could contain N/A (not applicable), N/I (not installed), N/AV (not available) or IGN (ignore).

IMPULSE HITS

The number of impulses occurring within I00 milliseconds that are above a threshold of 6 dB, relative to the average signal power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes. If impulse hits are not applicable to this product or with this configuration, N/A is displayed.

RLSD LOSSES

The number of carrier detect losses which were detected during the last 15 minutes before the LA command was executed. Carrier detect loss occurs when the modem detects an unexpected loss of carrier for a period of time or when a noise burst of sufficient amplitude and duration causes the modem to lose synchronization.

If the modem configuration is multipoint, RLSD losses are not counted, and N/A is displayed for the control modem.

TRANSMIT LEVEL

The transmit level measured in decibels based on one milliwatt (dBm).

SPEED, RMT MODEM ADDRESS

SPEED is the current signal transmission speed between the local and remote modems. This field also indicates whether the modem is operating at FULL or BKUP (backup) speed. If ? KBPS is displayed, an invalid speed indication has been received from the modem.

RMT MODEM ADDRESS is the remote modem address as known by the modem. This modem address may differ from the address shown in the pictorial hierarchy, since the address in the pictorial hierarchy is extracted from the controlling node's perspective of the modem address.

This half of the field is not applicable for local modems and is left blank in the LOCAL MODEM column on this panel.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can view this panel by entering one of the following commands:

1. SEL# 7 on the hardware monitor Menu panel
2. TEST name1 name2 LA on any hardware monitor display
3. NPDA TEST name1 name2 LA on any other NetView panel.

In the second and third choices, **name1** is the symbolic (network) name of the communication controller or network controller at the primary end of the link. **name2** is the symbolic (network) name of the controller at the secondary end of the link.

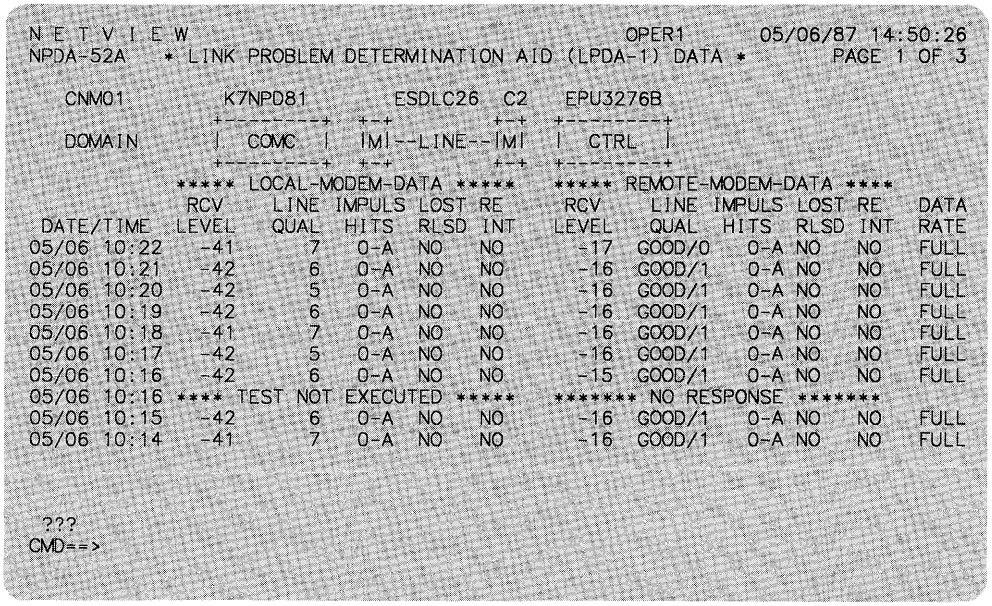
You can also view this panel by choosing selection number 1 (SEL# 1) on the LPDA-2 Command Menu panel.

Panel Exit

You can exit this panel by pressing PF3 or entering the **RETURN** command. If you accessed this panel via the LPDA-2 Command Menu panel, you are returned to it. If you accessed this panel via the **TEST** command, the hardware monitor Menu panel is displayed.

You can issue any panel invocation command.

Link Problem Determination Aid (LPDA-1) Data Panel



```
N E T V I E W                                          OPER1      05/06/87 14:50:26
NPDA-52A   * LINK PROBLEM DETERMINATION AID (LPDA-1) DATA *          PAGE 1 OF 3

   CNM01          K7NPD81          ESDLC26  C2   EPU3276B
                 +--------+  +-+             +-+  +--------+
   DOMAIN        |  COMC  |  |M|--LINE--|M|  |  CTRL  |
                 +--------+  +-+             +-+  +--------+
            ***** LOCAL-MODEM-DATA *****   ***** REMOTE-MODEM-DATA ****
             RCV    LINE IMPULS LOST RE     RCV    LINE IMPULS LOST RE   DATA
 DATE/TIME  LEVEL   QUAL  HITS  RLSD INT    LEVEL   QUAL  HITS  RLSD INT  RATE
 05/06 10:22  -41      7   0-A  NO   NO      -17  GOOD/0   0-A NO   NO   FULL
 05/06 10:21  -42      6   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:20  -42      5   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:19  -42      6   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:18  -41      7   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:17  -42      5   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:16  -42      6   0-A  NO   NO      -15  GOOD/1   0-A NO   NO   FULL
 05/06 10:16 **** TEST NOT EXECUTED *****  ******* NO RESPONSE *******
 05/06 10:15  -42      6   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL
 05/06 10:14  -41      7   0-A  NO   NO      -16  GOOD/1   0-A NO   NO   FULL


 ???
CMD==>
```

The Link Problem Determination Aid (LPDA-1) Data panel displays the outcome of system-initiated modem self-tests for 386X modems that use the Link Problem Determination Aid-1 (LPDA-1).

The Link Problem Determination Aid (LPDA-1) Data panel is displayed on page 17.

Field Descriptions

DATE/TIME

The date and time the record was received.

LOCAL-MODEM-DATA

RCV LEVEL

The decibel level for the receive signal. Values in the range of -48 to -4 dBm for 386X modems or -43 to 0 dBm for 586X modems are displayed in this field. Values outside this range are displayed as <-48 or ≥-3. If the receive-level function is not installed or not supported in the configuration, the field could contain N/A (not applicable), N/I (not installed), or N/AV (not available).

LINE QUAL

A modem-calculated running average that shows the quality of signal received by the modem. This value ranges from 0 to 15. A value of 0 to 4 is considered GOOD, while a value from 5 to 9 is considered indeterminate, and one from 10 to 15 is considered BAD. Bad quality may be reported if the modems are operating at incompatible speeds.

IMPULS HITS

Depending on the modem model, either impulse hits or amplitude hits can be reported.

Impulse hits. The number of impulses occurring within 100 milliseconds that are above a threshold of 6 dB, relative to the average signal

power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes preceding the test request.

Amplitude hits. An amplitude hit occurs when, in a 256-baud block of data, at least one baud is received so distorted that the modem cannot reliably correct it. These hits do not necessarily cause errors but do indicate line impairments that require monitoring. Amplitude hits are distinguished from impulse hits on this panel by "-A" following the number shown in the IMPULSE HITS field (for example, 5-A).

If the remote modem is responding properly, this field will contain either a 0 or a 1 for local modem amplitude hits. A 0 value indicates that a 256-baud test message was successfully sent from the remote modem to the local modem during the link status test. A value of 1 indicates a line hit on the test message.

If the remote modem does not respond, this field will contain a value from 0 to 63 that represents the number of hits since the last time LPDA data was sent by the modem. You can determine if there is no response from the remote modem by viewing the data under the REMOTE-MODEM-DATA heading. If NO RESPONSE is shown under this heading, then the remote modem did not respond.

LOST RLSD

Lost receive line signal detect (RLSD) is a YES or NO value. If YES, it indicates that the modem detected an unexpected loss of carrier for some period of time, or that a noise burst of sufficient amplitude and duration caused the modem to lose synchronization. If the modem configuration is multipoint, N/A will be displayed for the local modem.

REINT

The modem reinitialization indicator is set on when the modem is powered on, when the modem is reset on a hard or soft error, or (for 386X modems) when a change is made to a modem setup switch.

YES or NO appears in this field, depending on whether the modem has been reinitialized.

REMOTE-MODEM-DATA

RCV LEVEL

See the definition in the LOCAL-MODEM-DATA section of this panel description.

LINE QUAL

See the definition in the LOCAL-MODEM-DATA section of this panel description.

IMPULS HITS

Depending on the modem model, either impulse hits or amplitude hits can be reported.

Impulse hits. The number of impulses occurring within 100 milliseconds that are above a threshold of 6 dB, relative to the average signal power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes preceding the test request.

Amplitude hits. An amplitude hit occurs when, in a 256-baud block of data, at least one baud is received so distorted that the modem cannot reliably correct it. These hits do not necessarily cause errors but do

indicate line impairments that require monitoring. Amplitude hits are distinguished from impulse hits on this panel by "-A" following the number shown in the IMPULSE HITS field (for example, 5-A).

For the remote modem, the number of amplitude hits is a value from 0 to 63 that represents the number of hits since the last time LPDA data was sent by the modem. If the remote modem does not respond, NO RESPONSE is shown under the heading REMOTE-MODEM-DATA.

LOST RLSD

See the definition in the LOCAL-MODEM-DATA section of this panel description.

REINT

See the definition in the LOCAL-MODEM-DATA section of this panel description.

DATA RATE

The data rate at which the modem is operating. Possible values are FULL and BKUP (backup).

Panel Selection and Exit

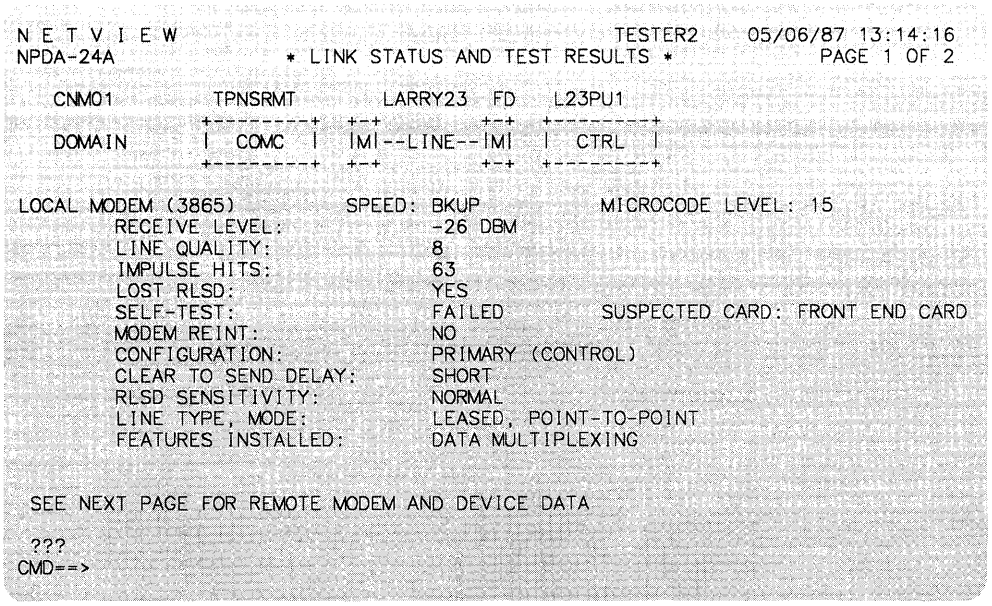
Panel Selection

You can select this panel by entering **A** on the Most Recent Traffic Stats For SDLC Sta. w/LPDA panel.

Panel Exit

You can issue any panel invocation command.

Link Status and Test Results Panel



The Link Status and Test Results panel displays the outcome of modem self-tests you can request for 386X or 586X modems that use Link Problem Determination Aid-1 (LPDA-1) and for 586X modems that use Link Problem Determination Aid-2 (LPDA-2).

This panel is displayed on two pages. The first page shows test results for the local modem, and the second page contains test results for the remote modem and the remote device. Page one of this panel is displayed above. Page two is displayed on page 162 of this appendix.

The Link Status and Test Results panel is shown on pages 18 and 19.

Field Descriptions

LOCAL MODEM

The local modem machine type. The field is left blank when the machine type cannot be determined or if the local modem self-test results indicate NOT EXECUTED, NO RESPONSE, or BAD RESPONSE.

Note: If the modem is running in compatibility mode (for example, a 5866 modem running in 5865 compatibility mode), then the machine type of the modem being emulated (the 5865 in this example) is the machine type that is displayed.

SPEED

Indicates whether the line is operating at FULL or BKUP (backup) speed.

MICROCODE LEVEL

A number which identifies the microcode level installed in the modem.

RECEIVE LEVEL

The decibel level for the receive signal. Values in the range of -48 to -4 dBm are displayed for 386X modems and -43 to 0 dBm for 586X modems. Values outside the range for 386X modems are displayed as $<$-48 or $\geq$-3.

If the receive-level function is not installed or not supported in the configuration, the field could contain N/A (not applicable), N/I (not installed), or N/AV (not available).

LINE QUALITY

A modem-calculated running average that shows the quality of signal received by the modem. This value ranges from 0 to 15. A value of 0 to 4 is considered GOOD, while a value from 5 to 9 is considered indeterminate, and one from 10 to 15 is considered BAD. Bad quality may be reported if the modems are operating at incompatible speeds.

IMPULSE HITS

Depending on the modem model, either impulse hits or amplitude hits can be reported.

Impulse hits. The number of impulses occurring within 100 milliseconds that are above a threshold of 6 dB, relative to the average signal power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes.

Amplitude hits. An amplitude hit occurs when, in a 256-baud block of data, at least one baud is received so distorted that the modem cannot reliably correct it. These hits do not necessarily cause errors but do indicate line impairments that require monitoring. Amplitude hits are distinguished from impulse hits on this panel by "-A" following the number shown in the IMPULSE HITS field (for example, 5-A). If the remote modem is responding properly, this field will contain either a 0 or a 1 value. A 0 value indicates that a 256-baud test message was successfully sent from the remote modem to the local modem during the Link Status test. A value of 1 indicates a line hit on the test message.

If the remote modem does not respond, this field will contain a value from 0 to 63, representing the number of hits since the last time LPDA data was sent by the modem. A no-response from the remote modem can be determined by viewing the remote modem IMPULSE HITS field. If NO RESPONSE is shown in this field, then the remote modem did not respond.

LOST RLSD

Lost receive line signal detect (RLSD) is a YES or NO value. If YES, it indicates that the modem detected unexpected loss of carrier for some period of time, or that a noise burst of sufficient amplitude and duration caused the modem to lose synchronization. If the modem configuration is multipoint, N/A will be displayed for the local modem.

SELF TEST

Contains a PASSED/FAILED indicator for the test. N/A will be displayed if the tone test failed.

SUSPECTED CARD

Shows the type of field-replacable unit in error, if any. Types include FEATURE CARD, PMAU, PMAU-E, and FRONT END. If the TEST RESULTS field says PASSED, this entry will not be displayed. If the TEST RESULTS field says

FAILED but no card is identified, UNDETERMINED is displayed in the SUSPECTED CARD field.

MODEM REINT

The modem reinitialization indicator is set on when the modem is powered on, when the modem is reset on a hard or soft error, or (for 386X modems) when a change is made to a modem setup switch. YES or NO will appear in this field, depending on whether the modem has been powered on.

CONFIGURATION

This field identifies the configured state of the modem. One of two values will be displayed: PRIMARY(CONTROL) or SECONDARY(TRIBUTARY).

Modems on a line are set to allow one of the modems to automatically control the speed of the other(s) by setting this switch. The controlling modem is referred to as the PRIMARY in a point-to-point configuration, and as the CONTROL in a multipoint configuration. The modem(s) being controlled are referred to as the SECONDARY or TRIBUTARY modem(s). Normally, the modem at the central site is set to PRIMARY(CONTROL).

CLEAR TO SEND DELAY

The time period (expressed as SHORT or LONG) between when the DTE raised the Request To Send (RTS) and when the modem responded with Clear To Send (CTS) on the Electronic Industries Association (EIA) interface. The options (SHORT and LONG) are selected by setting a switch on the rear panel of the modem. See the appropriate modem user's guide for the exact values of SHORT and LONG.

RLSD SENSITIVITY

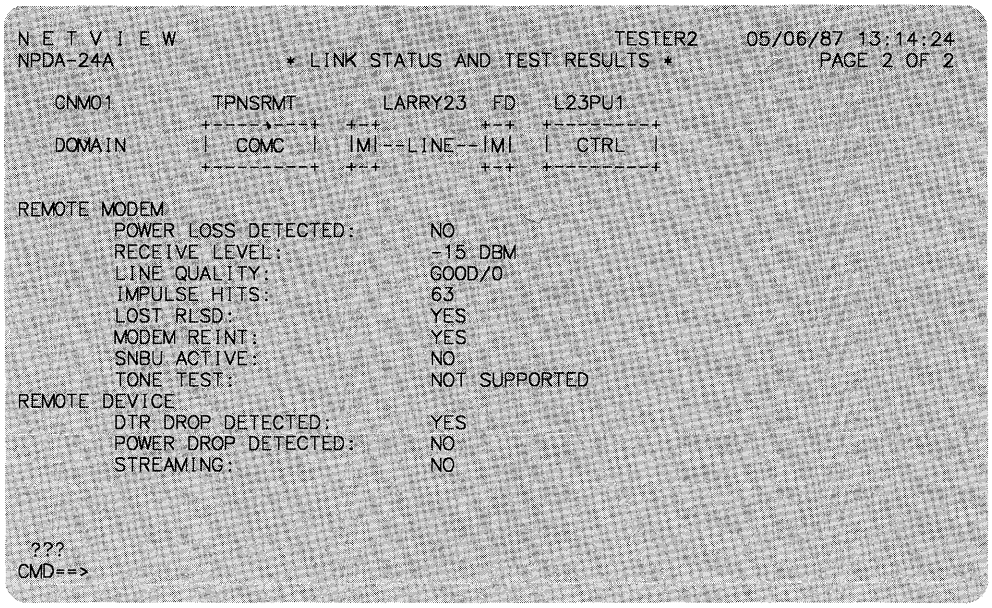
Receive Line Signal Detect (RLSD) Sensitivity is the carrier detect sensitivity, and is expressed as NORMAL or LIMITED. These two options are selected by setting a switch on the rear panel of the modem. The LIMITED position is not often used for 386X modems. The value is always NORMAL for 586X modems.

LINE TYPE, MODE

Indicates the type of line as LEASED or SWITCHED, and the mode as POINT-TO-POINT or MULTIPOINT.

FEATURES INSTALLED

The list of installed features, such as TAC (test alarm card) or SNBU (switched network backup). If no features are identified, this field does not appear on the panel.



REMOTE MODEM

POWER LOSS DETECTED

Possible values are YES, NO, and IGNORED.

A YES value indicates that at least one remote modem has dropped power. This power loss may be associated with the addressed remote modem. A remote self-test (RST) should be run to determine if the addressed remote modem has dropped power.

IGNORE indicates that a power loss was detected but the hardware monitor has ignored the indication because the addressed remote modem also responded with a valid status. For example, on a multi-point link, the power loss could occur for remote modems other than the one addressed by the link status (LS) command.

NO is the normal value.

RECEIVE LEVEL

See the explanation on page 160.

LINE QUALITY

See the explanation on page 160.

IMPULSE HITS

Depending on the modem model, either impulse hits or amplitude hits can be reported.

Impulse hits. The number of impulses occurring within 100 milliseconds that are above a threshold of 6 dB, relative to the average signal power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes.

Amplitude hits. An amplitude hit occurs when, in a 256-baud block of data, at least one baud is received so distorted that the modem cannot reliably correct it. These hits do not necessarily cause errors but do indicate line impairments that require monitoring. Amplitude hits are distinguished from impulse hits on this panel by "-A" following the number shown in the IMPULSE HITS field (for example, 5-A).

For the remote modem, amplitude hits will be a value from 0 to 63, representing the number of hits since the last time LPDA data was sent by the modem. If the remote modem does not respond, then NO RESPONSE is shown under the remote modem IMPULSE HITS heading.

LOST RLSD

See the explanation on page 160.

MODEM REINT

See the explanation on page 161.

SNBU ACTIVE

Indicates whether the switched network backup (SNBU) feature is in use. Possible values are YES and NO. This field is not displayed if the SNBU feature is not installed.

TONE TEST

Possible values for this field are FAILED, IGNORED, and NOT SUPPORTED.

FAILED indicates that at least one remote modem self-test failed. This failure may be associated with the addressed remote modem. Remote self-test (RST) should be run to determine if the addressed remote modem is failing.

IGNORED indicates that a tone-test failure was detected but the hardware monitor ignored it because the addressed remote modem also responded with a valid status. For example, on a multipoint link, the tone-initiated self-test could fail on remote modems other than the one addressed by the link status (LS) command.

NOT SUPPORTED indicates that the test alarm card (TAC) feature is not installed.

REMOTE DEVICE

DTR DROP DETECTED

Displays the status of the data terminal ready (DTR) signal since the last LPDA status report. NO is the normal value. YES is displayed if the DTR signal has dropped at least once since the last LPDA status report.

POWER DROP DETECTED

A value of YES or NO that indicates whether the remote modem or device has lost power or become disconnected since the last LPDA test.

The normal value is NO.

A value of YES indicates the remote device has dropped power or become disconnected at least once since the last LPDA status report. When fanout is installed, power drop is detected only when all attached data terminal equipment drops power.

STREAMING

Possible values are YES (RTS failed to turn off) and NO. Streaming is an error condition in which a station on a multipoint link goes into continuous transmit mode for more than 40 seconds and prevents other stations on that link from transmitting. This condition is not detected unless a rear panel switch on the modem is set to enable anti-streaming.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can view this panel by entering one of the following commands:

1. SEL# 7 from the hardware monitor Menu panel
2. TEST name1 name2 LS from any hardware monitor display
3. NPDA TEST name1 name2 LS from any other NetView panel.

In the second and third choices, **name1** is the symbolic (network) name of the communication controller or network controller at the primary end of the link. **name2** is the symbolic (network) name of the controller at the secondary end of the link.

Panel Exit

You can issue any panel invocation command.

Modem and Line Status Panel

```
N E T V I E W                                     NETOP1        03/16/87 11:56:08
NPDA-22B                    * MODEM AND LINE STATUS *                   PAGE 1 OF 3
             * MODEM AND LINE PARAMETERS-LINK SEGMENT LEVEL 1 *
   MNV21          N456F42         L4511    C3   P4511C3
                +---------+  +-+         +-+  +---------+
   DOMAIN       |  COMC   |  |M|--LINE--|M|  |  CTRL   |
                +---------+  +-+         +-+  +---------+
   DESCRIPTION,PROBABLE CAUSE: NO ERROR DESCRIPTION:NO PROBABLE CAUSE IDENT

                              LOCAL MODEM       REMOTE MODEM       EXPECTED
RECEIVE LEVEL, LEAST:      -14 DBM, -14 DBM   -17 DBM, -17 DBM   -16 +/- 7 DBM
REC LVL THRESH EXCEEDED:    NO                 NO                 NO
RLSD LOSSES, AGE:           0                  0                  0
LINE QUALITY, WORST:        GOOD/0, GOOD/0     BAD/10, BAD/12     GOOD/0-4
IMPULSE HITS, AGE:          0                  0                  0-15/15 MIN
POWER OFF TONE, AGE:        NO                 NO                 NO
REINITIALIZATION, AGE:      NO                 NO                 NO
FAILURE TONE, AGE:          NO                 NO                 NO
BASE MODEM IN ERROR:        NO                 NO                 NO
FEATURE(S) IN ERROR:        NONE               NONE               NONE
SEE NEXT PAGE FOR REMOTE DTE INTERFACE SUMMARY


 ???
CMD==>
```

The Modem and Line Status panel displays the results of a Modem and Line Status test requested via the **TEST** command or the LPDA-2 Command Menu panel.

The test results are displayed on three pages. The first page of the panel (displayed above) shows the results of the test performed on the local and remote modems and the line between them. It also shows the expected outcome of the test for equipment that is working properly. The second page of the panel, displayed on page 168 of this appendix, shows the operational status at the remote data terminal equipment (DTE) interface. The third page of the panel, displayed on page 170 of this appendix, shows configuration data for the two modems and the line between them.

You can press PF8 or ENTER to view the next page of the panel, and PF7 to view the preceding page of the panel.

Pages 1, 2, and 3 of the Modem and Line Status panel are displayed on pages 28, 29, and 30 respectively.

Field Descriptions

DESCRIPTION,PROBABLE CAUSE

A brief description of a possible error in the line, and the probable failing component.

RECEIVE LEVEL, LEAST

RECEIVE LEVEL is the decibel level for the receive signal, measured in decibels based on one milliwatt (DBM). This value can range from -43 to 0 dBm.

LEAST is the lowest receive level measured during the last 15 minutes before the command was executed or since the last modem reinitialization.

If the receive-level function is not installed or not supported in the configuration, the field could contain N/A (not applicable) or N/AV (not available).

REC LVL THRESH EXCEEDED

Indicates whether the receive-level threshold specified by your installation was exceeded.

RLSD LOSSES, AGE

RLSD LOSSES is the number of carrier detect losses detected by the modem during the last 15 minutes before the test was executed. It can range from 0 to 255.

An RLSD loss occurs when the modem detects an unexpected loss of carrier for some period of time or when a noise burst of sufficient amplitude and duration causes the modem to lose synchronization. If the network function of the modem is CONTROL or SNBU is YES, 2-WIRE, then RLSD losses are not counted and N/A is displayed.

AGE is the age of the last loss detected. It is displayed in 8-second increments, up to 112 seconds.

LINE QUALITY, WORST

LINE QUALITY is a modem-calculated running average that shows the quality of signal received by the modem.

WORST is the worst line quality measured during the last two minutes before the test command was executed.

Each of these values can range from 0 to 14. A value of 0 to 4 is considered GOOD, while a value from 5 to 9 is considered indeterminate, and one from 10 to 14 is considered BAD. N/AV (not available) is displayed if the receive-level value is not applicable or could not be measured. If the modems are operating at incompatible speeds, bad line quality may be reported.

IMPULSE HITS, AGE

IMPULSE HITS is the number of impulses occurring within 100 milliseconds that are above a threshold of 6 dB, relative to the average signal power at the input of the modem. The number displayed is the number of impulse hits that have occurred within the last 15 minutes. The expected number of impulse hits ranges from 0 to 15 within this 15-minute interval.

AGE is the age of the last impulse hit detected by the modem. It is displayed in 8-second increments, up to 112 seconds.

POWER OFF TONE, AGE

POWER OFF TONE is a YES or NO value which indicates whether a power-off tone was detected in the adjacent modem of a modem pair.

If IGNORED is displayed, a power-off tone was detected. However, the hardware monitor has determined that the power-off tone was not from the adjacent modem of the modem pair addressed in the modem and line status (MLS) test command. For a control modem in a multipoint link, the tone may have been sent from a tributary modem other than the tributary modem addressed by the MLS command. Otherwise, a false tone was generated by problems on the line.

AGE is the age of the last power-off tone detected by the modem. It is displayed in 8-second increments, up to 112 seconds.

REINITIALIZATION, AGE

The modem reinitialization indicator is set to YES when the modem is powered on, when a hard or soft error occurs, or after some configuration commands. If the modem was reinitialized, the age of the last reinitialization is displayed. The modem reinitialization indicator is set to NO after two minutes have elapsed.

AGE tells how long ago the modem was reinitialized. It is displayed in 8-second increments, up to 112 seconds.

FAILURE TONE, AGE

FAILURE TONE is a YES or NO value indicating whether a failure tone was received from the adjacent modem in a modem pair. This failure tone is sent whenever the modem detects an internal failure. If a failure tone was received, the age of the last detected failure tone is displayed.

If IGNORED is displayed, a failure tone was detected. However, the hardware monitor has determined that the failure tone received was not from the adjacent modem of the modem pair which was addressed in the modem and line status (MLS) test command. For a control modem in a multipoint link, the tone may have been sent from a tributary modem other than the tributary modem addressed by the MLS command. Otherwise, a false tone was generated by problems on the line.

AGE tells how long ago the failure tone was detected. It is displayed in 8-second increments, up to 112 seconds.

BASE MODEM IN ERROR

A YES or NO value indicating whether or not the base modem has detected an error within itself.

FEATURE(S) IN ERROR

A list of modem features that have generated an error. Possible values are FAN OUT, COUPLER, and NONE.

```
N E T V I E W                                     NETOP1      03/16/87 12:13:25
NPDA-22B                 * MODEM AND LINE STATUS *                  PAGE 2 OF 3
  * REMOTE MODEM INTERFACE-REMOTE DEVICE STATUS-LINK SEGMENT LEVEL 1 *
  MNV21        N456F42        L4511     C3    P4511C3
             +---------+  +-+        +-+  +---------+
  DOMAIN     |  COMC   |  |M|--LINE--|M|  |  CTRL   |
             +---------+  +-+        +-+  +---------+
                         STATUS AT COMMAND      ACTIVITY DURING TWO
                         EXECUTION TIME         MINUTES BEFORE COMMAND
REQUEST TO SEND:                OFF                       YES
CLEAR TO SEND:                  OFF                       YES
TRANSMIT DATA:                  OFF                       YES
RECEIVE DATA:                   OFF                       YES
RECEIVE LINE SIGNAL DETECT:     N/A                       NO
DATA SIGNALLING RATE SELECTOR:  ON                        NO
DATA TERMINAL READY:            ON                        NO
DTE POWER LOSS DETECTED:        OFF                       NO
TEST CONTROL:                   N/A                       NO
                          REMOTE DEVICE
                STREAMING DETECTED: NO
SEE NEXT PAGE FOR LINK AND MODEM CONFIGURATIONS


 ???
CMD==>
```

ACTIVITY DURING TWO MINUTES BEFORE COMMAND

The values displayed in this column indicate whether the data terminal equipment (DTE) interface signals listed in the left column of the panel (for example, REQUEST TO SEND) have changed states during the two minutes before the modem and line status (MLS) test command was executed.

YES indications in this column for each of the following fields are to be interpreted as follows:

REQUEST TO SEND Occurred at least once

CLEAR TO SEND Occurred at least once

TRANSMIT DATA Data has been transmitted

RECEIVE DATA Data has been received

RECEIVE LINE SIGNAL DETECT Loss of carrier has been detected at least once

DATA SIGNALLING RATE SELECTOR The speed has changed at least once

DATA TERMINAL READY Has dropped at least once

DTE POWER LOSS Data terminal equipment power loss was detected at least once

TEST CONTROL An LPDA-1 command or an automatic local loopback was executed at least once.

If the fanout feature is installed and the remote DTE interface indicates that the test control signal has changed states during the last two minutes, then the test control display indicates on which DTE interface this was detected.

STATUS AT COMMAND EXECUTION TIME

The values displayed in this column indicate the status of the data terminal equipment (DTE) interface signals at the time when the modem and line status (MLS) test command was executed. Possible values are ON and OFF.

ON values in this column for the following fields are to be interpreted as follows:

REQUEST TO SEND Is on

CLEAR TO SEND Is on

TRANSMIT DATA Activity on this signal

RECEIVE DATA Is on

RECEIVE LINE SIGNAL DETECT
Is not applicable for this column

DATA SIGNALLING RATE SELECTOR
Is on full speed

DATA TERMINAL Is in the ready state

DTE POWER LOSS DETECTED
Data terminal equipment lost power

TEST CONTROL Is not applicable for this column.

REMOTE DEVICE

The data terminal equipment (DTE).

STREAMING DETECTED

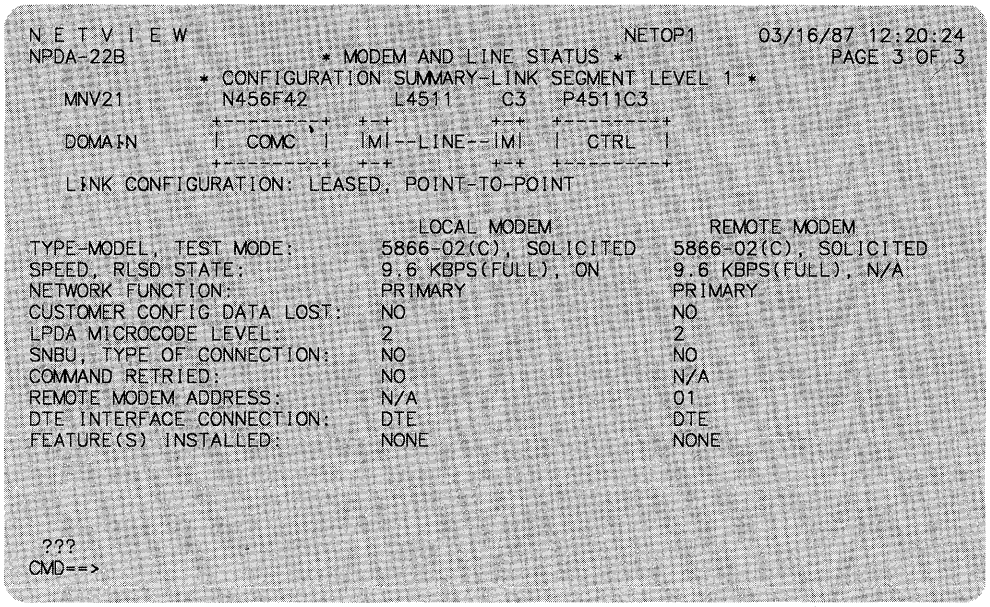
Possible values are YES and NO. YES indicates that the RTS failed to turn off.

Streaming is an error condition in which a station on a multipoint link or fanout configuration goes into continuous transmit mode for more than 40 seconds and prevents other stations on that link from transmitting. This condition is not detected by a tributary modem unless the anti-streaming configuration option is set from the keyboard of the modem or from the host. If streaming occurred, the age of the last detected streaming condition is displayed.

If streaming is detected with the fanout feature installed, and the test control signal does not indicate any activity during two minutes before the modem and line status (MLS) command, then the following indicates which DTE interface kept the request-to-send signal active:

- FO-A, XX
- FO-B, XX
- FO-C, XX
- FO-D, XX

XX denotes the address of the device which is streaming.



LINK CONFIGURATION

The modem and line configuration of the link. The possible values are LEASED, POINT-TO-POINT and LEASED, MULTIPOINT.

TYPE-MODEL, TEST MODE

TYPE is the four-character modem type, and MODEL is the two-character modem model. If (C) is displayed after the model, the modem is in an operating mode and speed that are compatible with 5865 and 5868-52 modems.

TEST MODE is the method of command execution. It is either SOLICITED or UNSOLICITED. A SOLICITED command is initiated from a hardware monitor operator command. An UNSOLICITED command is initiated from the controlling node because of a detection of a permanent link error, a permanent station error, or a counter threshold reached.

SPEED, RLSD STATE

SPEED is the modem transmission speed expressed in kilobits per second (KBPS). This field also indicates whether the modem is operating at FULL or BKUP (backup) speed. If ? KBPS is displayed, an invalid speed indication has been received from the modem.

RLSD STATE is the receive line signal detect state for the local modem. It indicates whether the local modem received a signal from the remote modem when the test command was executed. The value is ON or OFF for the local modem, and N/A (not applicable) for the remote modem.

NETWORK FUNCTION

The network function of a modem is related to its placement on a link of a given topology. The possible network functions are PRIMARY and SECONDARY on a point-to-point link, and CONTROL and TRIBUTARY on a multipoint link.

The network function of a modem governs its transmission characteristics as well as the way it executes LPDA-2 commands. A PRIMARY or CONTROL modem accepts local commands from the DTE and transmits remote commands over the line to its adjacent modem. A SECONDARY or

TRIBUTARY modem accepts local commands from the line, but does not transmit remote commands over the line to its adjacent modem.

Coloring of the network function is based on the link configuration defined by NCP gen parameters.

CUSTOMER CONFIG DATA LOST

Indicates whether there has been an alteration in the modem's nonvolatile memory (where the nonvital operational parameters are stored). If there is a change in the modem's nonvolatile memory, the modem operates with some default values of its nonvital operational parameters. The loss of nonvital operational parameters does not cause the modem to indicate that the base modem is in error, to send a failure tone, or to leave the data state.

Possible values are YES, DEFAULTS USED, and NO. (If the base modem is in error or is not configured at installation time, defaults are used.)

LPDA MICROCODE LEVEL

A number which identifies the Link Problem Determination Aid microcode level installed in the modem.

SNBU, TYPE OF CONNECTION

SNBU is a YES or NO value indicating whether switched network backup is active or not. A YES value indicates that the modem has switched from the primary line (that is unavailable or unusable) to an alternate backup line. When SNBU is active, then the following data is not applicable to the modem and line status command and is displayed as NO on page 1 of the Modem and Line Status panel:

- RECEIVE LEVEL THRESHOLD EXCEEDED
- RLSD LOSSES
- POWER OFF TONE
- FAILURE TONE

The TYPE OF CONNECTION indicates whether the installed coupler is a 2-WIRE or 4-WIRE coupler.

COMMAND RETRIED

Indicates whether the local modem has retried a command to the remote modem because no response or an invalid response was received on the first attempt. Possible values for the local modem are YES and NO. The value is N/A (not applicable) for the remote modem.

REMOTE MODEM ADDRESS

The actual address reported by the remote modem. This address may differ from the address shown in the pictorial hierarchy, since the one shown in the pictorial hierarchy is extracted from the controlling modem's perspective of the DLC address of the remote link station.

DTE INTERFACE CONNECTION

Indicates whether this modem's data terminal equipment (DTE) interface is connected to a DTE or to a MODEM.

FEATURE(S) INSTALLED

A list of the modem features installed. Possible values are FAN OUT, COUPLER, and NONE.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can view this panel by entering one of the following commands:

1. SEL# 2 from the LPDA-2 Command Menu panel
2. TEST name1 name2 MLS from any hardware monitor display
3. NPDA TEST name1 name2 MLS from any other NetView panel.

In the second and third choices, **name1** is the symbolic (network) name of the communication controller or network controller at the primary end of the link. **name2** is the symbolic (network) name of the controller at the secondary end of the link.

Panel Exit

You can exit this panel by pressing PF3 or entering the **RETURN** command to return to the previous panel.

You can issue any panel invocation command.

Most Recent Traffic Stats for SDLC Sta. w/LPDA Panel

```
N E T V I E W                                          NETOP1     03/16/87 10:37:57
NPDA-51A   * MOST RECENT TRAFFIC STATS FOR SDLC STA. W/LPDA *      PAGE 1 OF 1

   MNV21        N456F42      L4511      P4511C3
                +--------+              +--------+
   DOMAIN       |  COMC  |----LINE------|  CTRL  |
                +--------+              +--------+

            STAT    TOTAL  TOTAL   E/T RATIO   TRANSMISSIONS      RECEIVES
 DATE/TIME  TYPE  TRAFFIC  TEMPS   SET CALC  TRAFFIC   TEMPS  TRAFFIC  TEMPS
03/16 10:29 TEMP-1     14      2   3.0 14.3       13       2        1      0
03/16 10:09 TEMP-1      0      0   3.0   .0        0       0        0      0
03/16 10:00 TEMP-1      0      0   3.0   .0        0       0        0      0
03/16 09:52 TEMP-1      0      0   3.0   .0        0       0        0      0
03/16 09:40 TEMP-1    263     26   3.0  9.9      212      26       51      0
03/16 08:42 DACT        0      0   3.0   .0        0       0        0      0
03/15 18:24 DACT       18      0   3.0   .0        9       0        9      0
03/15 18:22 TEMP-1      0      0   3.0   .0        0       0        0      0
03/15 18:16 TEMP-1      0      0   3.0   .0        0       0        0      0
03/15 18:12 TEMP-1      0      0   3.0   .0        0       0        0      0
ENTER A (LPDA DATA) OR EV (EVENT)


 ???
CMD==>
```

The Most Recent Traffic Stats for SDLC Sta. w/LPDA panel provides statistics about the most recent data transmissions sent over the line between the resources you specify. Starting with the most recent data transmission, the panel shows for each transmission the amount of traffic that has traveled over the line, the number of temporary errors that have occurred, and the percentage of the total transmissions that contained temporary errors. The panel also displays a configuration diagram for the resources you specified and other related resources.

This panel can have multiple pages. To view the next page of this display, press ENTER or PF8. To view the previous page, press PF7.

The Most Recent Traffic Stats for SDLC Sta. w/LPDA panel is displayed on pages 16 and 23.

Field Descriptions

DATE/TIME

The date and time the event was recorded in the hardware monitor data base.

STAT TYPE

The value displayed in this field gives an indication of why the statistical record was generated. The following list of possible values applies only to statistical records generated by NCP Version 3. N/A will be displayed for all other records.

TRAF Traffic Count Threshold Reached

TRAF-1 Total Transmission Threshold Reached

TRAF-2 Transmission Threshold Reached (I-Format)

TRAF-3 S-Format Received Threshold Reached

TRAF-4 Total Acknowledged I-Format Threshold Reached

TRAF-5 I-Format Error-Free Received Threshold Reached

TRAF-6 Total Received (I-Format Error-Free + Error) Threshold Reached

TEMP Temporary Error Count Threshold Reached

TEMP-1 Total Retries Threshold Limit Reached

TEMP-2 Receive I-Format Error Threshold Reached

TEMP-3 Total I-Format Retransmission Threshold Reached

DACT Deactivation Process

PERM Permanent Error.

TOTAL TRAFFIC

A count of all transmit and receive operations for SDLC stations, a count of the blocks transmitted for BSC and S/S stations, a count of SIOs for channel-attached communication devices, or the sum of LPIUs received and LPIUs, XIDs, and XID exchange request link headers transmitted for communication devices that are channel-attached to an NCP.

TOTAL TEMPS

A count of all temporary errors. For SDLC stations, this field may be larger than the sum of receive errors and transmission errors. This is usually because poll timeouts (non-response to polls) are included in the TOTAL TEMPS count. These errors are not included in the RECEIVE ERRORS or TRANSMISSION ERRORS fields.

E/T RATIO SET

The threshold value used by the hardware monitor to determine if the E/T RATIO CALC value indicates a performance problem. This threshold value can be established using any of the following:

- The SRATIO command
- Hardware monitor initialization parameters
- Default (set at 3.0% for network controllers or 1.0% for channel-attached communication control units and devices).

E/T RATIO CALC

A ratio (shown as a percentage) of temporary errors to traffic, derived by dividing the TOTAL TEMPS value by the TOTAL TRAFFIC value.

TRANSMISSIONS TRAFFIC

The count of all transmit operations. This applies to SDLC stations and stations attached to a network controller. N/A will be displayed for all other resources.

TRANSMISSIONS TEMPS

The count of temporary transmission errors. This applies to SDLC stations and stations attached to a network controller. N/A will be displayed for all other resources.

RECEIVES TRAFFIC

The count of all receive operations. This applies to SDLC stations and stations attached to a network controller. N/A will be displayed for all other resources.

RECEIVES TEMPS

The count of temporary receive errors. This applies to SDLC stations and stations attached to a network controller. N/A will be displayed for all other resources.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

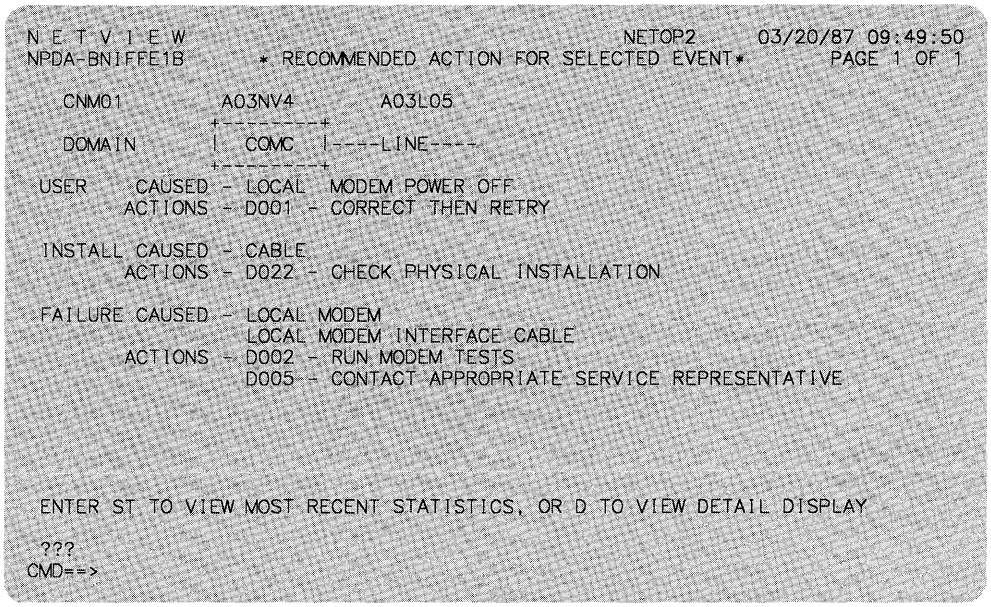
You can view this panel by entering a selection number (SEL#) plus **M** on the Alerts-Static panel, or by entering **ST** on the Recommended Action for Selected Event panel.

Panel Exit

You can enter **A** to view the Link Problem Determination Aid (LPDA) Data panel or **EV** to view the Most Recent Events panel.

You can issue any panel invocation command.

Recommended Action for Selected Event Panel



The Recommended Action for Selected Event panel displays recommendations on how to investigate and correct a problem which has generated an alert on the Alerts-Dynamic panel. The information on this panel is divided into categories of possible failures, with actions recommended for each type of failure.

There are three failure categories: user errors (USER CAUSED), improper resource installation or a mismatch between the hardware and the software (INSTALL CAUSED), and resource failure (FAILURE CAUSED). Listed in each category are possible causes of the alert message along with actions you can take to either bypass or resolve the problem.

The suggested actions are presented in the order they should be performed. They include link tests, modem tests, remote device tests, and traces that you can execute if the necessary facilities are available.

Each action is preceded by an indicator (for example, D001). For actions whose indicators begin with D, you can view more information about a particular action by typing ACTION and the indicator for that action on the command line and pressing ENTER. Help panels are not provided with NetView for generic-alert actions. These actions have indicators that begin with either I or E. Your installation can create help panels for I and E actions.

For information about creating customized help panels, see *NetView Customization*. For more information about the ACTION CLIST, type HELP ACTION on the command line to access the online help panels, or see *NetView Operation*.

The Recommended Action for Selected Event panel can have multiple pages. To view the next page of this display, press ENTER or PF8. To view the previous page, press PF7.

The Recommended Action for Selected Event panel is displayed on pages 11, 15, 22, and 99.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can select this panel by entering the selection number (SEL#) of an alert listed on the Alerts-Static or Alerts-History panel.

You can also view this panel by entering the selection number (SEL#) of an event listed on the Event Summary panel or the Most Recent Events panel, or by entering **A** on the Event Detail panel or the Detail Menu panel (if available).

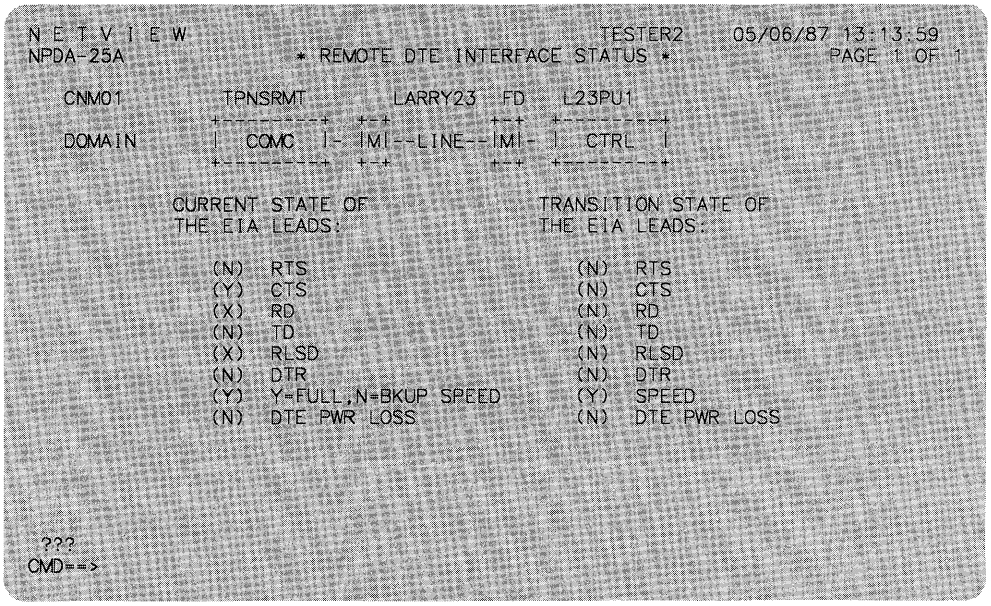
Panel Exit

You can exit this panel by entering **D** to view the Event Detail display for this event, **DM** to view the Event Detail Menu panel (if available), or **ST** to view the Most Recent Statistical Data panel.

You can enter the **RETURN** command to return to the previous hardware monitor panel, unless you came to Recommended Action for Selected Event from the Event Detail Menu panel or the Event Detail panel. If you came from one of these two screens, **RETURN** takes you to the screen you viewed before viewing the Event Detail Menu or Event Detail panel.

You can issue any panel invocation command.

Remote DTE Interface Status Panel



The Remote DTE Interface Status panel shows the current and transition states of the Electronic Industries Association (EIA) leads for the remote station you select. This data is extracted from a record retrieved directly from a 386X modem. The record is not stored in the hardware monitor data base.

When the fanout feature is installed on the remote device, the EIA indicators may not fully represent the conditions of the interface. For a remote modem with fanout, problem determination may have to be done by powering up one terminal at a time and observing the EIA lead states. Please see the notes about fanout that follow the field descriptions.

The Remote DTE Interface Status panel is displayed on page 90.

Field Descriptions

Yes (Y) indications for the CURRENT STATE OF THE EIA LEADS are to be interpreted as follows:

RTS

Request to send is on (see Note 1 and Fanout Note A).

CTS

Clear to send is on (see Note 1 and Fanout Note A).

RD

Receive data. If this is not reported, an X is displayed.

TD

Transmit data is on (see Fanout Note A).

RLSD

Carrier detect has been lost. If this field is not applicable, an X is displayed.

DTR
Data terminal is in ready state (see Fanout Note A).

SPEED
Y indicates full-speed operation (see Fanout Note B).

DTE PWR LOSS
Data terminal equipment lost power (see Fanout Note A).

Yes (Y) indications for the TRANSITION STATE OF THE EIA LEADS are to be interpreted as follows:

RTS
Request to send has occurred at least once (see Note 2 and Fanout Note A).

CTS
Clear to send has occurred at least once (see Note 2).

RD
Data has been received.

TD
Data has been transmitted (see Fanout Note A).

RLSD
Carrier detect has been lost at least once.

DTR
Data terminal ready has dropped at least once (see Fanout Note A).

SPEED
The speed has changed at least once (see Fanout Note B).

DTE PWR LOSS
Data terminal equipment power loss has been detected at least once (see Fanout Note B).

When an invalid condition is determined, one of the following messages is displayed instead of the EIA lead-status display:

BAD RESPONSE
Indicates invalid data, possibly because of device or line failures.

NO RESPONSE
Indicates the test failed, possibly because of device or line failures.

NOT EXECUTED
Indicates the test was not executed, possibly because of communication controller or network controller failures.

Notes:

1. For multipoint operation and for non-continuous-carrier, point-to-point operation, the CTS and RTS current-state leads normally show an N. For continuous-carrier, point-to-point operation, these leads normally show a Y. Variations from these values indicate an exception condition.
2. CTS and RTS transition-state leads normally show a Y. The display of an N indicates an exception condition: It denotes that the lead has turned off and remained off since the last REMOTE DTE INTERFACE command was received.

Fanout Notes

Fanout Note A: Y is displayed if any DTE is in Y status. All DTEs must be in N status to indicate N.

Fanout Note B: N is displayed if any DTE is in N status. All DTEs must be in Y status to indicate Y.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can view this panel by entering one of the following commands:

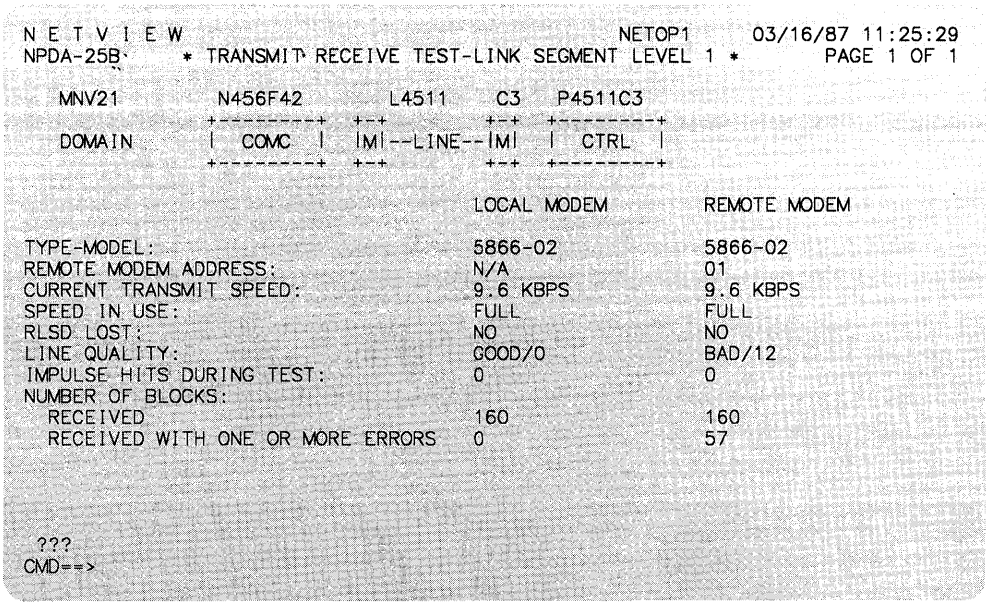
1. SEL# 5 from the Request Data from Network Resource panel
2. TEST name1 name2 DTE from any hardware monitor display
3. NPDA TEST name1 name2 DTE from any other NetView panel.

In the second and third choices, **name1** is the symbolic (network) name of the communication controller or network controller at the primary end of the link. **name2** is the symbolic (network) name of the controller at the secondary end of the link.

Panel Exit

You can issue any panel invocation command.

Transmit Receive Test - Link Segment Level 1 Panel



This panel displays the results of a Transmit Receive Test requested via the **TEST** command or the LPDA-2 Command Menu panel. When you request this test, a command is sent to the local and remote modems directing them to exchange one or more sequences of predefined bit patterns over the line and report the results. The results include information about the line quality and the number of data blocks received in error.

Field Descriptions

TYPE-MODEL

The four-character modem type and two-character modem model. This information is supplied for both the local and remote modems.

REMOTE MODEM ADDRESS

For the remote modem, this is the remote-modem address field as known by the modem. This modem address may differ from the address shown in the pictorial hierarchy because the address in the pictorial hierarchy is extracted from the controlling node's perspective of the modem address. This field is always N/A (not applicable) for the local modem.

If the remote modem has the fanout feature installed, the attached data terminal equipment (DTE) must have the six high-order bits of their addresses identical. The low-order bit values must match the order of the port where the DTE is attached: 00 for port A, 01 for port B, 10 for port C, and 11 for port D. The modem intercepts the command based on the six most significant bits only and, when required, uses the low-order bits to report data specific to one of the DTE interfaces.

CURRENT TRANSMIT SPEED

The current transmission speed, measured in kilobits per second (KBPS), for the remote and local modems. If the value displayed is ? KBPS, an invalid speed indication has been received from the modem.

Valid transmission speeds are:

- 0.6 kbps
- 1.2 kbps
- 2.4 kbps
- 4.8 kbps
- 7.2 kbps (see Note)
- 9.6 kbps (see Note)
- 12.0 kbps (see Note)
- 14.4 kbps (see Note)
- 16.8 kbps
- 19.2 kbps
- 56.0 kbps
- 64.0 kbps

Note: The following speeds are supported only by 586X modems: 7.2 kbps, 9.6 kbps, 12.0 kbps, and 14.4 kbps.

SPEED IN USE

The speed at which each modem operated during the test. Possible values are FULL and BKUP (backup).

RLSD LOST

Lost carrier detected is a YES or NO value. If YES, it indicates that the modem detected an unexpected loss of carrier for some period of time, or that a noise burst of sufficient amplitude and duration caused the modem to lose synchronization. A YES value also indicates that some transmitted blocks of data were not received.

LINE QUALITY

A modem-calculated running average that shows the quality of signal received by each of the modems. This value ranges from 0 to 14. A value of 0 to 4 is considered GOOD, while a value from 5 to 9 is considered indeterminate, and one from 10 to 14 is considered BAD. Bad quality may be reported if the modems are operating at incompatible speeds.

IMPULSE HITS DURING TEST

The number of impulses occurring in a 100-millisecond window during the test that are above a threshold of 6 dB relative to the average signal power at the input of the modem. The maximum acceptable value is 2 percent of the number of blocks of scrambled ones that were sent from one modem to its adjacent modem.

NUMBER OF BLOCKS

RECEIVED — The number of scrambled data blocks received by each of the modems from the other modem. If execution of the command is interrupted by a severe transmission problem, this number is less than 16 times the number specified as the command parameter. The normal value is 16 times the number specified as the command parameter.

For a multipoint control modem, each block received is 32 baud. For all other modems (multipoint tributary, point-to-point primary, and point-to-point secondary), each block received is 256 baud.

RECEIVED WITH ONE OR MORE ERRORS — The number of data blocks received by one modem from its adjacent modem that contained one or more data errors.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can view this panel by entering one of the following commands:

1. SEL# 3 from the the LPDA-2 Command Menu panel
2. TEST name1 name2 TRT from any hardware monitor display
3. NPDA TEST name1 name2 TRT from any other NetView panel.

In the second and third choices, **name1** is the symbolic (network) name of the communication controller or network controller at the primary end of the link. **name2** is the symbolic (network) name of the controller at the secondary end of the link.

Panel Exit

You can exit this panel by pressing PF3 or entering the **RETURN** command to return to the previous panel.

You can issue any panel invocation command.

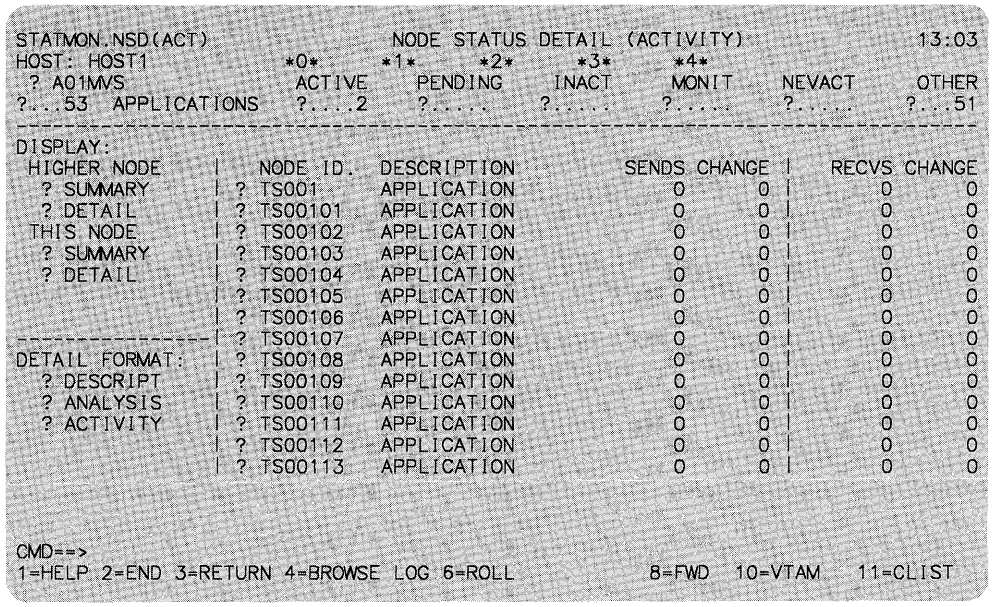
Appendix C. Status Monitor Panels

Appendix C. Status Monitor Panels

This appendix provides field descriptions and panel selection and exit methods for many of the status monitor panels displayed in this book's scenarios. While the panels displayed in the scenarios contain data pertinent to those scenarios, the panels in this appendix are used only to illustrate the panel formats. When you use these panels in your installation, you will receive different data than is displayed in the fields on these appendix panels.

For general information about status monitor panels, including a description of the information presented in the headings of these panels, see *NetView Operation*.

Node Status Detail (Activity) Panel



The Node Status Detail (Activity) panel displays information about the activity between applications and the terminals and logical units (LUs) in session with them. For the application major node you choose, the panel shows the number of messages sent to and received from the session partners of each application within that major node group. You can use this information to monitor how frequently a particular application is accessed and how heavily it is used at any given time of day.

You can use the status indicators (ACTIVE, PENDING, INACT, MONIT, NEVACT, OTHER) displayed in the panel heading to view information about a portion of the resources displayed on this Activity panel. For example, to view information about only the ACTIVE applications, replace the question mark below ACTIVE with any character and press ENTER. The status monitor displays a new Activity panel with information about only the active applications.

The DISPLAY menu on the upper left side of the panel allows you to ask for summary information or more details about the nodes displayed on this Activity panel (THIS NODE) or about the next HIGHER NODE above THIS NODE in the network configuration. To make your selection, replace the question mark next to your choice on the DISPLAY menu with any character and press ENTER, or touch your selection with a light pen and press ENTER.

The DETAIL FORMAT menu on the lower left side of the panel allows you to ask for more status information about the nodes listed in the NODE ID column. You can display a description of the nodes' status by replacing the question mark in front of DESCRIPT with any character and pressing ENTER or by touching DESCRIPT with a light pen and pressing ENTER. To view an analysis of the nodes' status, replace the question mark in front of ANALYSIS with any character and press ENTER, or touch ANALYSIS with a light pen and press ENTER. To display information about a particular node's activity, including a list of its current session partners, replace the question marks in front of ACTIVITY and the node of your choice with any character and press ENTER, or touch ACTIVITY and your node selection with a light pen and press ENTER.

The Node Status Detail (Activity) panel can have more than one page. To view the next page of the panel, you can press PF8 or ENTER. To view the previous page, you can press PF7.

The Node Status Detail (Activity) panel is displayed on pages 41, 42, and 43.

Field Descriptions

NODE ID.

The name assigned to the application in the VTAM resource definition tables.

DESCRIPTION

A brief description of the type of node represented by the name listed in the NODE ID field.

SENDS

The number of messages sent from the application to terminals and LUs since session establishment.

CHANGE

The number of messages sent from the application to terminals and LUs since ENTER was last pressed.

RECVS

The number of messages sent from terminals and LUs to the application since session establishment.

CHANGE

The number of messages sent from terminals and LUs to the application since ENTER was last pressed.

Panel Selection and Exit

You can select and exit this panel in the following ways:

Panel Selection

You can select the ACTIVITY option on the DETAIL FORMAT menu of a Node Status Detail (Description) or Node Status Detail (Analysis) panel.

Panel Exit

You can press PF2 to leave the status monitor and return to the NetView component you accessed before you entered the status monitor. When you press PF2, the status monitor is removed from the list of active components in the "roll stack" for this NetView session. If the status monitor is the first NetView component you have accessed during this session, PF2 takes you to the command facility.

You can press PF3 to return to the previous status monitor panel.

You can press PF4 to access the network log. The most recent messages in the log are presented when you press PF4. You can also access the network log by selecting one of the message indicators (*0*, *1*, *2*, *3*, and *4*) displayed at the top of the screen. Each message indicator from 1 to 4 can be activated by assigning it to a message in the network log. When you select a message indicator from 1 to 4, if the indicator has been activated, the status monitor displays the screen in the network log that contains the message corresponding to your choice. When you select message indicator 0, or when you select an indicator from 1 to 4 that has not been activated, the most recent messages in the network log are presented, just as when you press PF4. To

select a message indicator, type any character to the left of the indicator and press ENTER, or select the indicator using a light pen and press ENTER.

You can press PF6 to return to the component you accessed before you entered the status monitor. When you press PF6, the status monitor remains on the list of active components in the "roll stack" for this NetView session.

You can press PF10 to display the VTAM command options, then select any VTAM command for execution. When the command has been executed, NetView presents a command facility panel.

You can use the DISPLAY and DETAIL FORMAT menus to request more status monitor information about the nodes displayed on this panel or about the next higher node in the network configuration.

You can issue any panel invocation command.

Node Status Detail (Analysis) Panel

```
STATMON.NSD(ANALYSIS)          NODE STATUS DETAIL (ANALYSIS)                    13:03
HOST: HOST1          *0*      *1*      *2*      *3*      *4*     ELAPSED TIME 3:39
 ? A01MVS           ACTIVE    PENDING    INACT     MONIT     NEVACT      OTHER
?...53  APPLICATIONS  ?....2   ?.....    ?.....    ?.....    ?.....     ?...51
---------------------------------------------------------------------------------
DISPLAY:          |              STATUS  |  ACTIVE   PENDING   INACTIVE   OTHER
 HIGHER NODE      |    NODE ID.   SINCE  | COUNT  %  COUNT  %  COUNT  %  COUNT  %
  ? SUMMARY       | ? TS001     A  9:24  |   1 100     0   0     0   0     0   0
  ? DETAIL        | ? TS00101   A 12:59  |   2  14     0   0     0   0     1  86
 THIS NODE        | ? TS00102   O  9:24  |   0   0     0   0     0   0     1 100
  ? SUMMARY       | ? TS00103   O  9:24  |   0   0     0   0     0   0     1 100
  ? DETAIL        | ? TS00104   O  9:24  |   0   0     0   0     0   0     1 100
                  | ? TS00105   O  9:24  |   0   0     0   0     0   0     1 100
                  | ? TS00106   O  9:24  |   0   0     0   0     0   0     1 100
------------------| ? TS00107   O  9:24  |   0   0     0   0     0   0     1 100
DETAIL FORMAT:    | ? TS00108   O  9:24  |   0   0     0   0     0   0     1 100
  ? DESCRIPT      | ? TS00109   O  9:24  |   0   0     0   0     0   0     1 100
                  | ? TS00110   O  9:24  |   0   0     0   0     0   0     1 100
  ? ACTIVITY      | ? TS00111   O  9:24  |   0   0     0   0     0   0     1 100
                  | ? TS00112   O  9:24  |   0   0     0   0     0   0     1 100
                  | ? TS00113   O  9:24  |   0   0     0   0     0   0     1 100

CMD==>
1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL          8=FWD   10=VTAM    11=CLIST
```

The Node Status Detail (Analysis) panel displays statistics about changes in the status of network resources. For the major node you selected to display this panel, the status monitor presents the following information about that major node and the minor nodes grouped under it:

- The current status of each node
- The time of day each node went into its current state
- The number of times each node has been in the ACTIVE, PENDING, INACTIVE, and OTHER state
- The percentage of time each node has been in the ACTIVE, PENDING, INACTIVE, and OTHER state.

A node in the ACTIVE state has been activated and is ready for use. One that is PENDING is in the process of being activated or deactivated. An INACTIVE node has been deactivated and cannot be used until it is made active again. A node in the OTHER state can have any VTAM status other than ACTIVE, PENDING, or INACTIVE.

The status monitor begins collecting statistics about network resources (nodes) when it is initialized. These statistics are updated each time there is a change in a resource's status. You can use the **CLRSTATS** command to request that these statistics be cleared from the status monitor data base. When you issue a **CLRSTATS** command, the status monitor resets its statistical counts to zero and begins accumulating new data as though it had just been initialized.

The amount of time the status monitor has been collecting statistics since its last initialization is displayed in the heading of the Node Status Detail (Analysis) panel under the ELAPSED TIME field. On the panel displayed in this appendix entry, the ELAPSED TIME is 3:39. This means the status monitor had been collecting statistics for three hours and thirty-nine minutes when this panel was requested.

You can use the status indicators (ACTIVE, PENDING, INACT, MONIT, NEVACT, OTHER) displayed in the panel heading to view information about a portion of the resources displayed on this Analysis panel. For example, to view information about only the ACTIVE applications, replace the question mark below ACTIVE with any character and press ENTER. The status monitor displays a new Analysis panel with information about only the active applications.

The DISPLAY menu on the upper left side of the panel allows you to ask for summary information or more details about the nodes displayed on this Analysis panel (THIS NODE) or about the next HIGHER NODE above THIS NODE in the network configuration. To make your selection, replace the question mark next to your choice on the DISPLAY menu with any character and press ENTER, or touch your selection with a light pen and press ENTER.

The DETAIL FORMAT menu on the lower left side of the panel allows you to ask for more status information about the nodes listed in the NODE ID column. You can display a description of the nodes' status by replacing the question mark in front of DESCRIPT with any character and pressing ENTER or by touching DESCRIPT with a light pen and pressing ENTER. To view information about all the nodes' activity with their current session partners, replace the question mark in front of ACTIVITY with any character and press ENTER, or touch ACTIVITY with a light pen and press ENTER. To display information about a particular node's activity, including a list of its current session partners, replace the question marks in front of ACTIVITY and the node of your choice with any character and press ENTER, or touch ACTIVITY and your node selection with a light pen and press ENTER.

The Node Status Detail (Analysis) panel can have more than one page. To view the next page of the panel, you can press PF8 or ENTER. To view the previous page, you can press PF7.

The Node Status Detail (Analysis) panel is displayed on page 38.

Field Descriptions

NODE ID.

The name assigned to the node in the VTAM resource definition tables.

STATUS CODE

A one-character code showing the node's current status is displayed to the right of the NODE ID field. The status-code field is not labeled on the panel. The codes used in this field are:

A	ACTIVE
I	INACTIVE
N	NEVACT
O	OTHER
P	PENDING

Note: Nodes being monitored by the status monitor (those in the MONIT state) appear as I or P.

STATUS SINCE

The time the node last went into its current state, or the time statistics were reset using the **CLRSTATS** command.

ACTIVE COUNT

The number of times the node has been in the ACTIVE state since the statistics were last initialized.

ACTIVE %

The percentage of time the node has been in the ACTIVE state since the statistics were last initialized (see note).

PENDING COUNT

The number of times the node has been in the PENDING state since the statistics were last initialized.

PENDING %

The percentage of time the node has been in the PENDING state since the statistics were last initialized (see note).

INACTIVE COUNT

The number of times the node has been in the INACTIVE state since the statistics were last initialized.

INACTIVE %

The percentage of time the node has been in the INACTIVE state since the statistics were last initialized (see note).

OTHER COUNT

The number of times the node has been in the OTHER state since the statistics were last initialized.

OTHER %

The percentage of time the node has been in the OTHER state since the statistics were last initialized (see note).

Note: The percentages for any one node may not total to 100% due to rounding of numbers. The status monitor rounds up to the next whole number for percentages with a decimal value greater than or equal to 0.5, and down to the next whole number for percentages with a decimal value less than 0.5. Also, a node state may have a count greater than zero but a percentage of zero if the node has not been in that state at least 0.5% of the time.

Panel Selection and Exit

Panel Selection

You can select the Node Status Detail (Analysis) panel from a Node Status Detail (Description) or Node Status Detail (Activity) panel with a DETAIL FORMAT menu.

Panel Exit

You can press PF2 to leave the status monitor and return to the NetView component you accessed before you entered the status monitor. When you press PF2, the status monitor is removed from the list of active components in the "roll stack" for this NetView session. If the status monitor is the first NetView component you have accessed during this session, PF2 takes you to the command facility.

You can press PF3 to return to the previous status monitor panel.

You can press PF4 to access the network log. The most recent messages in the log are presented when you press PF4. You can also access the network log by selecting one of the message indicators (*0*, *1*, *2*, *3*, and *4*) displayed at the top of the screen. Each message indicator from 1 to 4 can be activated by assigning it to a message in the network log. When you select a message indicator from 1 to 4, if the indicator has been activated, the status monitor displays the screen in the network log that contains the message corresponding to your

choice. When you select message indicator 0, or when you select an indicator from 1 to 4 that has not been activated, the most recent messages in the network log are presented, just as when you press PF4. To select a message indicator, type any character to the left of the indicator and press ENTER, or select the indicator using a light pen and press ENTER.

You can press PF6 to return to the component you accessed before you entered the status monitor. When you press PF6, the status monitor remains on the list of active components in the "roll stack" for this NetView session.

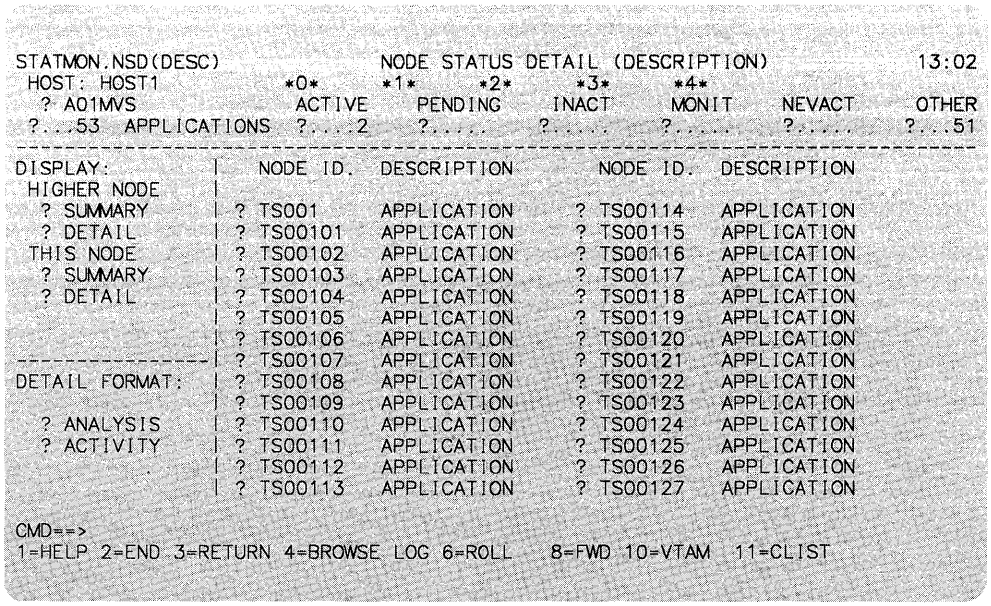
You can press PF10 to display the VTAM command options, then select any VTAM command for execution. When the command has been executed, NetView presents a command facility panel.

You can press PF11 to display a list of CLISTs that you can execute from this panel.

You can use the DISPLAY and DETAIL FORMAT menus to request more status monitor information about the nodes displayed on this panel or about the next higher node in the network configuration.

You can issue any panel invocation command.

Node Status Detail (Description) Panel with Detail Format Menu



The Node Status Detail (Description) panel with DETAIL FORMAT menu displays the name and type of node for each node in the node group you specified when you requested this panel.

You can use the status indicators (ACTIVE, PENDING, INACT, MONIT, NEVACT, OTHER) displayed in the panel heading to view information about a portion of the resources displayed on this Description panel. For example, to view information about only the ACTIVE applications, replace the question mark below ACTIVE with any character and press ENTER. The status monitor displays a new Description panel with information about only the active applications.

The DISPLAY menu on the upper left side of the panel allows you to ask for summary information or more details about the nodes displayed on this Description panel (THIS NODE) or about the next HIGHER NODE above THIS NODE in the network configuration. To make your selection, replace the question mark next to your choice on the DISPLAY menu with any character and press ENTER, or touch your selection with a light pen and press ENTER.

The DETAIL FORMAT menu on the lower left side of the panel allows you to ask for more status information about the nodes listed in the NODE ID column. You can view an analysis of the nodes' status by replacing the question mark in front of ANALYSIS with any character and pressing ENTER or by touching ANALYSIS with a light pen and pressing ENTER. To view information about all the nodes' activity with their current session partners, replace the question mark in front of ACTIVITY with any character and press ENTER, or touch ACTIVITY with a light pen and press ENTER. To display information about a particular node's activity, including a list of its current session partners, replace the question marks in front of ACTIVITY and the node of your choice with any character and press ENTER, or touch ACTIVITY and your node selection with a light pen and press ENTER.

The Node Status Detail (Description) panel can have more than one page. To view the next page of the panel, you can press PF8 or ENTER. To view the previous page, you can press PF7.

The Node Status Detail (Description) panel with the DETAIL FORMAT menu is displayed on pages 37, 40, 93, and 94.

Field Descriptions

NODE ID.

The name assigned to the node in the VTAM resource definition tables.

DESCRIPTION

A brief description of the type of node represented by the name displayed in the NODE ID field.

Panel Selection and Exit

Panel Selection

You can enter the **STATMON nodename** command on any NetView panel, then press PF12 to display the DETAIL FORMAT menu. **nodename** is the name of the network node about which you want information.

You can select the DESCRIPT option on the DETAIL FORMAT menu of a Node Status Detail (Activity) or Node Status Detail (Analysis) panel.

Panel Exit

You can press PF2 to leave the status monitor and return to the NetView component you accessed before you entered the status monitor. When you press PF2, the status monitor is removed from the list of active components in the "roll stack" for this NetView session. If the status monitor is the first NetView component you have accessed during this session, PF2 takes you to the command facility.

You can press PF3 to return to the previous status monitor panel.

You can press PF4 to access the network log. The most recent messages in the log are presented when you press PF4. You can also access the network log by selecting one of the message indicators (*0*, *1*, *2*, *3*, and *4*) displayed at the top of the screen. Each message indicator from 1 to 4 can be activated by assigning it to a message in the network log. When you select a message indicator from 1 to 4, if the indicator has been activated, the status monitor displays the screen in the network log that contains the message corresponding to your choice. When you select message indicator 0, or when you select an indicator from 1 to 4 that has not been activated, the most recent messages in the network log are presented, just as when you press PF4. To select a message indicator, type any character to the left of the indicator and press ENTER, or select the indicator using a light pen and press ENTER.

You can press PF6 to return to the component you accessed before you entered the status monitor. When you press PF6, the status monitor remains on the list of active components in the "roll stack" for this NetView session.

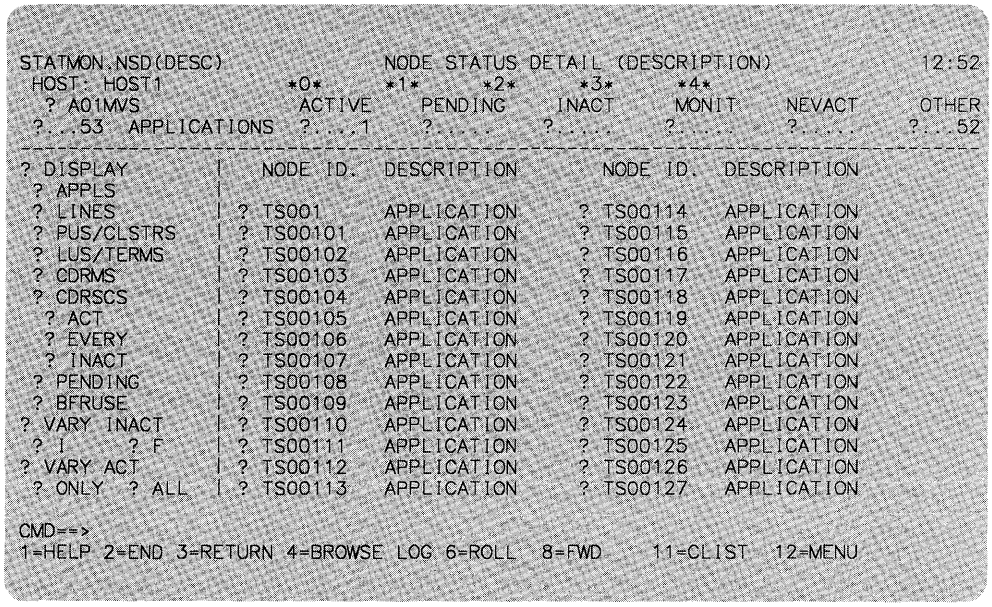
You can press PF10 to display the VTAM command options, then select any VTAM command for execution. When the command has been executed, NetView presents a command facility panel.

You can press PF11 to display a list of CLISTs that you can execute from this panel.

You can use the DISPLAY and DETAIL FORMAT menus to request more status monitor information about the nodes displayed on this panel or about the next higher node in the network configuration.

You can issue any panel invocation command.

Node Status Detail (Description) Panel with VTAM Command Menu



The Node Status Detail (Description) panel with the VTAM command menu displays the name and type of node for each node in the node group you selected to access this panel. You can use any of the VTAM commands listed on this panel to display, activate, or inactivate any of the resources shown on the panel. To make a selection on the VTAM command menu, type any character next to the command you want to use and next to the node for which you want the command performed, then press ENTER. If you are using a light pen, you can touch each selection with the light pen and press ENTER.

For information about the VTAM commands displayed on this panel, enter the **HELP STATMON** command to access the status monitor help panels or see *VTAM Operation*.

You can use the status indicators (ACTIVE, PENDING, INACT, MONIT, NEVACT, OTHER) displayed in the panel heading to view information about a portion of the resources displayed on this Description panel. For example, to view information about only the ACTIVE applications, replace the question mark below ACTIVE with any character and press ENTER. The status monitor displays a new Description panel with information about only the active applications.

The Node Status Detail (Description) panel can have more than one page. To view the next page of the panel, you can press PF8 or ENTER. To view the previous page, you can press PF7.

The Node Status Detail (Description) panel with a VTAM command menu is displayed on pages 36, 39, 92, and 95.

Field Descriptions

NODE ID.

The name assigned to the node in the VTAM resource definition tables.

DESCRIPTION

A brief description of the type of node represented by the name displayed in the NODE ID field.

Panel Selection and Exit

Panel Selection

You can enter the **STATMON nodename** command on any NetView panel. **nodename** is the name of the network node about which you want information.

You can select the DESCRIPT option on the DETAIL FORMAT menu of a Node Status Detail (Activity) or Node Status Detail (Analysis) panel, then press PF10 to display the VTAM command menu.

Panel Exit

You can press PF2 to leave the status monitor and return to the NetView component you accessed before you entered the status monitor. When you press PF2, the status monitor is removed from the list of active components in the "roll stack" for this NetView session. If the status monitor is the first NetView component you have accessed during this session, PF2 takes you to the command facility.

You can press PF3 to return to the previous status monitor panel.

You can press PF4 to access the network log. The most recent messages in the log are presented when you press PF4. You can also access the network log by selecting one of the message indicators (*0*, *1*, *2*, *3*, and *4*) displayed at the top of the screen. Each message indicator from 1 to 4 can be activated by assigning it to a message in the network log. When you select a message indicator from 1 to 4, if the indicator has been activated, the status monitor displays the screen in the network log that contains the message corresponding to your choice. When you select message indicator 0, or when you select an indicator from 1 to 4 that has not been activated, the most recent messages in the network log are presented, just as when you press PF4. To select a message indicator, type any character to the left of the indicator and press ENTER, or select the indicator using a light pen and press ENTER.

You can press PF6 to return to the component you accessed before you entered the status monitor. When you press PF6, the status monitor remains on the list of active components in the "roll stack" for this NetView session.

You can press PF11 to display a list of CLISTs that you can execute from this panel.

You can press PF12 to display the DISPLAY and DETAIL FORMAT menus, which allow you to request more status monitor information about the nodes displayed on this panel or about the next higher node in the network configuration.

You can issue any panel invocation command.

Bibliography

NetView Publications

The following paragraphs briefly describe the library of manuals associated with NetView Release 2.

Learning about NetView (SK2T-0292)

This PC-based tutorial introduces SNA and basic network management concepts to NetView users. It is primarily designed for new or inexperienced network operators.

NetView Installation and Administration Guide (SC30-3476)

This guide helps system programmers install and prepare NetView for operation. It is arranged in a simplified, step-by-step style and is meant to be used in conjunction with the sample network documented in *Network Program Products Samples*.

NetView Administration Reference (SC30-3361)

This reference book is for system programmers and network operators who need a complete understanding of NetView's resource definition statements. This book lists each statement in alphabetical order giving its purpose and location.

NetView Customization (SC30-3462)

This manual is designed for system programmers and others who want to customize NetView to reflect their network's needs or operating procedures. It discusses how to write exit routines, command processors, and subtasks and explains how to modify NetView help panels and problem determination displays.

NetView Command Lists (SC30-3423)

This manual explains how to simplify network operator tasks by using command lists (CLISTS). It provides step-by-step instructions for writing simple and advanced CLISTS and for migrating from NCCF message automation to NetView message automation.

NetView Operation Primer (SC30-3363)

This book, written for new network operators, provides a basic description of the network management task. Topics include starting and stopping a network, controlling resources, monitoring a network, and gathering the necessary data to report a problem.

NetView Operation (SC30-3364)

This manual, designed for system programmers and experienced network operators, provides a comprehensive explanation of network management using NetView. Topics include detailed command explanation and panel flows, as well as information on how the various components interact with each other.

NetView Messages (SC30-3365)

This manual helps system programmers interpret and respond to the error messages issued by NetView. It explains briefly what each message means, what the system action is, what the operator response should be, and what the related commands are.

NetView Operation Scenarios (SC30-3376)

This book shows how to use NetView in a problem determination setting in order to identify and to solve common network operation problems.

NetView Command Summary (SX27-3620)

This reference card provides network operators with a quick way to find the format of all the commands and the more commonly used CLISTS for NetView. The commands are listed in alphabetical order by component.

NetView Diagnosis (LY30-5587)

This manual aids system programmers in identifying a NetView problem, classifying it, and then accurately describing it to an IBM Support Center so a solution can be found.

NetView Hardware Problem Determination Reference (SC30-3366)

This manual provides alert information beyond that offered in the NetView panels. It is designed to assist system programmers, help-desk operators, and network operators determine which specific component is causing the alert. It includes formats of trace records sent to NetView from the products that NetView supports.

NetView Problem Determination Supplement for Management Services Major Vectors 0001 and 0025 (LD21-0023)

This supplement describes major vectors 0001 and 0025. It is intended for system programmers and network operators involved in problem determination or diagnosis tasks. For example, the supplement may

be used for the generic alert option and other problem determination tasks.

Automated Operations Publications

The following paragraphs briefly describe the library of manuals for Automated Operations.

Automated Operations Planning Guide (SC30-3474)

This book is for system planners and system programmers who are developing a strategy for network automation using NetView. The book covers an assortment of planning tasks, such as learning what automated operations is, deciding which network components can be automated, and identifying repetitive operator tasks.

Automated Operations Using NetView Command Lists (SC30-3477)

This manual is designed to help system programmers and network operators write NetView command lists (CLISTS). It gives step-by-step procedures for designing, writing, and testing CLISTS.

NetView/PC Publications

The following list shows the publication for NetView/PC.

NetView/PC Planning and Operation Guide (SC30-3408)

This 2-part book explains how to plan for, install, operate, and diagnose the NetView/PC program. It also provides practical scenarios and a screen-by-screen section for planning configuration set maintenance.

Other Network Program Products Publications

For more information about the manuals listed in this section, see *Network Program Products Bibliography and Master Index*.

Network Program Products General Information (GC30-3350)

Network Program Products Planning (SC30-3351)

Network Program Products Samples (SC30-3352)

Network Program Products Bibliography and Master Index (GC30-3353)

Network Program Products Storage Estimates (SC30-3403)

VTAM Publications

The following list shows the publications for VTAM V3R1.1 and VTAM V3R2.

VTAM Installation and Resource Definition (SC23-0111)

VTAM Customization (SC23-0112)

VTAM Operation (SC23-0113)

VTAM Messages and Codes (SC23-0114)

VTAM Programming (SC23-0115)

VTAM Programming for LU 6.2 (SC30-3400 for V3R2 only)

VTAM Diagnosis Guide (SC23-0116 for V3R1.1 and LY30-5601 for V3R2)

VTAM Diagnosis Reference (LY30-5582)

VTAM Data Areas for MVS (LY30-5584 for V3R1.1 and LY30-5592 for V3R2)

VTAM Data Areas for VM (LY30-5583 for V3R1.1 and LY30-5593 for V3R2)

VTAM Data Areas for VSE (LY30-5594 for V3R2 only)

VTAM Reference Summary (SC23-0135 for V3R1.1 and LY30-5600 for V3R2)

NCP Publications

The following list shows the publications for NCP V4R2 and SSP V3R2.

NCP and SSP Generation and Loading Guide (SC30-3348)

NCP Migration (SC30-3252)

NCP and SSP Resource Definition Guide (SC30-3349)

NCP and SSP Resource Definition Reference (SC30-3254)

NCP and EP Reference Summary and Data Areas (LY30-5570)

NCP and SSP Customization (LY30-5571)

NCP and SSP Messages and Codes (SC30-3169)

NCP and SSP Diagnosis Guide (LY30-5591)

NCP Reference (LY30-5569)

SSP Diagnosis Reference (LY30-5564)

EP Installation, Resource Definition, and Diagnosis (SC30-3338)

Related Publications

Systems Network Architecture Format and Protocol Reference Manual: Management Services (SC30-3346)

Systems Network Architecture Formats (GA27-3136)

Systems Network Architecture Technical Overview (GA30-3073)

Glossary

This glossary defines important NCP, NetView, SSP, and VTAM abbreviations and terms. It includes information from the *IBM Vocabulary for Data Processing, Telecommunications, and Office Systems*, GC20-1699. Definitions from the *American National Dictionary for Information Processing* are identified by an asterisk (*). Definitions from draft proposals and working papers under development by the International Standards Organization, Technical Committee 97, Subcommittee 1 are identified by the symbol **(TC97)**. Definitions from the *CCIT Sixth Plenary Assembly Orange Book, Terms and Definitions* and working documents published by the Consultative Committee on International Telegraph and Telephone of the International Telecommunication Union, Geneva, 1980 are preceded by the symbol **(CCITT/ITU)**. Definitions from published sections of the *ISO Vocabulary of Data Processing*, developed by the International Standards Organization, Technical Committee 97, Subcommittee 1 and from published sections of the *ISO Vocabulary of Office Machines*, developed by subcommittees of ISO Technical Committee 95, are preceded by the symbol **(ISO)**.

For abbreviations, the definition usually consists only of the words represented by the letters; for complete definitions, see the entries for the words.

Reference Words Used in the Entries

The following reference words are used in this glossary:

Contrast with. Refers to a term that has an opposed or substantively different meaning.

Deprecated term for. Indicates that the term should not be used. It refers to a preferred term, which is defined.

See. Refers to multiple-word terms that have the same last word.

See also. Refers to related terms that have similar (but not synonymous) meanings.

Synonym for. Appears in the commentary of a less desirable or less specific term and identifies the preferred term that has the same meaning.

Synonymous with. Appears in the commentary of a preferred term and identifies less desirable or less specific terms that have the same meaning.

ACB name. (1) The name of an ACB macro instruction. (2) A name specified in the ACBNAME parameter of a VTAM APPL statement. Contrast with *network name*.

access method. A technique for moving data between main storage and input/output devices.

activate. To make a resource of a node ready to perform the functions for which it was designed. Contrast with *deactivate*.

active. (1) The state a resource is in when it has been activated and is operational. Contrast with *inactive, pending,* and *inoperative*. (2) Pertaining to a major or minor node that has been activated by VTAM. Most resources are activated as part of VTAM start processing or as the result of a VARY ACT command.

alert. In NetView, a high priority event that warrants immediate attention. This data base record is generated for certain event types that are defined by user-constructed filters.

automatic logon. (1) A process by which VTAM automatically creates a session-initiation request to establish a session between two logical units (LUs). The session will be between a designated primary logical unit (PLU) and a secondary logical unit (SLU) that is neither queued for nor in session with another PLU. See also *controlling application program* and *controlling logical unit*. (2) In VM, a process by which a virtual machine is initiated by other than the user of that virtual machine. For example, the primary VM operator's virtual machine is activated automatically during VM initialization.

available. In VTAM, pertaining to a logical unit that is active, connected, enabled, and not at its session limit.

bind. In SNA, a request to activate a session between two logical units (LUs). See also *session activation request*. Contrast with *UNBIND*.

BIU segment. In SNA, the portion of a basic information unit (BIU) that is contained within a path information unit (PIU). It consists of either a request/response header (RH) followed by all or a portion of a request/response unit (RU), or only a portion of an RU.

blocking of PIUs. In SNA, an optional function of path control that combines multiple path information units (PIUs) into a single basic transmission unit (BTU).

boundary function. In SNA: (1) A capability of a subarea node to provide protocol support for adjacent peripheral nodes, such as: (a) transforming network addresses to local addresses, and vice versa; (b) performing session sequence numbering for low-function peripheral nodes; and (c) providing session-level pacing support. (2) The component that provides these capabilities. See also *path control (PC) network* and *network addressable unit (NAU)*.

browse. A way of looking at a file that does not allow you to change it.

channel-attached. Pertaining to the attachment of devices directly by data channels (I/O channels) to a host processor. Contrast with *link-attached*. Synonymous with *local-attached*.

CNM. Communication network management.

command. (1) A request from a terminal for the performance of an operation or the execution of a particular program. (2) In SNA, any field set in the transmission header (TH), request header (RH), and sometimes portions of a request unit (RU), that initiates an action or that begins a protocol; for example: (a) Bind Session (session-control request unit), a command that activates an LU-LU session, (b) the change-direction indicator in the RH of the last RU of a chain, (c) the virtual route reset window indicator in a FID4 transmission header. See also *VTAM operator command*.

command facility. The component of NetView that is a base for command processors that can monitor, control, and improve the operation of a network.

command list (CLIST). In NetView, a sequential list of commands and control statements that is assigned a name. When the name is invoked (as a command) the commands in the list are executed.

communication controller. A type of communication control unit whose operations are controlled by one or more programs stored and executed in the unit; for example, the IBM 3725 Communication Controller. It manages the details of line control and the routing of data through a network.

communication line. Deprecated term for *telecommunication line* and *transmission line*.

communication network management (CNM). The process of designing, installing, operating, and managing the distribution of information and controls among end users of communication systems.

communication network management (CNM) application program. A VTAM application program that issues and receives formatted management services request units for physical units. For example, NetView.

communication network management (CNM) interface. The interface that the access method provides to an application program for handling data and commands associated with communication system management. CNM data and commands are handled across this interface.

communication network management (CNM) processor. A program that manages one of the functions of a communications system. A CNM processor is executed under control of NetView.

configuration. (1) (TC97) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. The term may refer to a hardware or a software configuration. (2) The devices and programs that make up a system, subsystem, or network. (3) In CCP, the arrangement of controllers, lines, and terminals attached to an IBM 3710 Network Controller. Also, the collective set of item definitions that describe such a configuration.

connected. In VTAM, pertaining to a physical unit (PU) or logical unit (LU) that has an active physical path to the host processor containing the system services control point (SSCP) that controls the PU or LU.

connection. Synonym for *physical connection*.

control program (CP). The VM operating system that manages the real processor's resources and is responsible for simulating System/370s for individual users.

controlling application program. In VTAM, an application program with which a secondary logical unit (other than an application program) is automatically put in session whenever the secondary logical unit is available. See also *automatic logon* and *controlling logical unit*.

controlling logical unit. In VTAM, a logical unit with which a secondary logical unit (other than an application program) is automatically put in session whenever the secondary logical unit is available. A controlling logical unit can be either an application program or a device-type logical unit. See also *automatic logon* and *controlling application program*.

cross-domain. In SNA, pertaining to control of resources involving more than one domain.

data flow control (DFC) layer. In SNA, the layer within a half-session that (1) controls whether the half-session can send, receive, or concurrently send and receive request units (RUs); (2) groups related RUs into RU chains; (3) delimits transactions via the bracket protocol; (4) controls the interlocking of requests and responses in accordance with control modes specified at session activation; (5) generates sequence numbers; and (6) correlates requests and responses.

data link. In SNA, synonym for *link*.

data link control (DLC) layer. In SNA, the layer that consists of the link stations that schedule data transfer over a link between two nodes and perform error control for the link. Examples of data link control are SDLC for serial-by-bit link connection and data link control for the System/370 channel.

data terminal equipment (DTE). (TC97) That part of a data station that serves as a data source, data link, or both, and provides for the data communication control function according to protocols.

deactivate. To take a resource of a node out of service, rendering it inoperable, or to place it in a state in which it cannot perform the functions for which it was designed. Contrast with *activate*.

definite response (DR). In SNA, a value in the form-of-response-requested field of the request header. The value directs the receiver of the request to return a response unconditionally, whether positive or negative, to that request. Contrast with *exception response* and *no response*.

display. (1) To present information for viewing, usually on a terminal screen or a hard-copy device. (2) A device or medium on which information is presented, such as a terminal screen. (3) Deprecated term for *panel*.

domain. (1) An access method, its application programs, communication controllers, connecting lines, modems, and attached terminals. (2) In SNA, a system services control point (SSCP) and the physical units (PUs), logical units (LUs), links, link stations, and all the associated resources that the SSCP has the ability to control by means of activation requests and deactivation requests. See also *single-domain network* and *multiple-domain network*.

domain operator. In a multiple-domain network, the person or program that controls the operation of the resources controlled by one system services control point. Contrast with *network operator* (2).

DTE. Data terminal equipment.

EIA. Electronic Industries Association. Provides interface standards for electrical and electronic equipment.

element. (1) A field in the network address. (2) The particular resource within a subarea identified by the element address. See also *subarea*.

ER. (1) Explicit route. (2) Exception response.

error-to-traffic (E/T). The number of temporary errors compared to the traffic associated with a resource.

E/T. Error-to-traffic.

event. (1) In NetView, a record indicating irregularities of operation in physical elements of a network. (2) An occurrence of significance to a task; typically, the completion of an asynchronous operation, such as an input/output operation.

exception response (ER). In SNA, a negative response shown as a value in the form-of-response-requested field of a request header (RH). An exception response is sent only if a request is unacceptable as received or cannot be processed. Contrast with *definite response* and *no response*. See also *negative response*.

explicit route (ER). In SNA, the path control network elements, including a specific set of one or more transmission groups, that connect two subarea nodes. An explicit route is identified by an origin subarea address, a destination subarea address, an explicit route number, and a reverse explicit route number. Contrast with *virtual route (VR)*. See also *path* and *route extension*.

frame. (1) The unit of transmission in some local area networks, including the IBM Token-Ring Network. It includes delimiters, control characters, information, and checking characters. (2) In SDLC, the vehicle for every command, every response, and all information that is transmitted using SDLC procedures.

generic bind. Synonym for *session activation request*.

generic unbind. Synonym for *session deactivation request*.

half-session. In SNA, a component that provides FMD services, data flow control, and transmission control for one of the sessions of a network addressable unit (NAU). See also *primary half-session* and *secondary half-session*.

hardware monitor. The component of NetView that helps identify network hardware problems from a central control point using interactive display techniques.

help desk. An online information facility that guides the help desk operator through problem determination procedures.

help panel. An online display that tells you how to use a command or another aspect of a product. See *task panel*.

inactive. In VTAM, describes the state of a resource that has not been activated or for which the VARY INACT command has been issued. Contrast with *active*. See also *inoperative*.

Information/Management. A feature of the Information/System program product that provides interactive systems management applications for problem, change, and configuration management.

Information Management System (IMS). A general purpose system whose full name is Information Management System/Virtual Storage (IMS/VS). It enhances the capabilities of OS/VS for batch processing and telecommunication and allows users to access a computer-maintained data base through remote terminals.

inoperative. The condition of a resource that has been active, but is not. The resource may have failed, received an INOP request, or is suspended while a reactivate command is being processed. See also *inactive*.

interface. * A shared boundary. An interface might be a hardware component to link two devices or it might be a portion of storage or registers accessed by two or more computer programs.

item. In CCP, any of the components, such as communication controllers, lines, cluster controllers, and terminals, that comprise an IBM 3710 Network Controller configuration.

line. See *communication line*.

link. In SNA, the combination of the link connection and the link stations joining network nodes; for example: (1) a System/370 channel and its associated protocols, (2) a serial-by-bit connection under the control of Synchronous Data Link Control (SDLC). A link connection is the physical medium of transmission. A link, however, is both logical and physical. Synonymous with *data link*.

Link Problem Determination Aid (LPDA). A series of testing procedures initiated by NCP that provide modem status, attached device status, and the overall quality of a communications link.

link status (LS). Information maintained by local and remote modems.

link-attached. In VTAM, pertaining to devices that are physically connected by a telecommunication line. Synonymous with *remote*. Contrast with *channel-attached*.

local address. In SNA, an address used in a peripheral node in place of an SNA network address and transformed to or from an SNA network address by the boundary function in a subarea node.

local-attached. Deprecated term for *channel-attached*.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs). An LU can support at least two sessions—one with an SSCP and one with another LU—and may be capable of supporting many sessions with other logical units. See also *network addressable unit (NAU)*, *peripheral LU*, *physical unit (PU)*, *system services control point (SSCP)*, *primary logical unit (PLU)*, and *secondary logical unit (SLU)*. Contrast with *physical unit (PU)*.

logical unit (LU) services. In SNA, capabilities in a logical unit to: (1) receive requests from an end user and, in turn, issue requests to the system services control point (SSCP) in order to perform the requested functions, typically for session initiation; (2) receive requests from the SSCP, for example to activate LU-LU sessions via Bind Session requests; and (3) provide session presentation and other services for LU-LU sessions. See also *physical unit (PU) services*.

log on. (1) To initiate a session. (2) In SNA, to initiate a session between an application program and a logical unit (LU).

logon. In VTAM, an unformatted session initiation request for a session between two logical units. See *automatic logon* and *simulated logon*. See also *session-initiation request*.

logon mode. In VTAM, a subset of session parameters specified in a logon mode table for communication with a logical unit. See also *session parameters*.

LPDA. Link Problem Determination Aid.

LS. Link status.

LU. Logical unit.

LU type. A deprecated term for *LU-LU session type*.

LU-LU session. In SNA, a session between two logical units (LUs) in an SNA network. It provides communication between two end users, or between an end user and an LU services component.

LU-LU session type. In SNA, the classification of an LU-LU session in terms of the specific subset of SNA protocols and options supported by the logical units (LUs) for that session, namely:

The mandatory and optional values allowed in the session activation request.

The usage of data stream controls, FM headers, request unit (RU) parameters, and sense codes.

Presentation services protocols such as those associated with FM header usage.

LU-LU session types 0, 1, 2, 3, 4, 6, and 7 are defined.

major node. In VTAM, a set of resources that can be activated and deactivated as a group. See *node* and *minor node*.

message. In VTAM, the amount of FM data transferred to VTAM by the application program with one SEND request.

minor node. In VTAM, a uniquely-defined resource within a major node. See *node* and *major node*.

modem. A device that modulates and demodulates signals transmitted over data communication facilities. The term is a contraction for modulator-demodulator.

multiple-domain network. In SNA, a network with more than one system services control point (SSCP). Contrast with *single-domain network*.

Multiple Virtual Storage (MVS). An IBM program product whose full name is the Operating System/Virtual Storage (OS/VS) with Multiple Virtual Storage/System Product for System/370. It is a software operating system controlling the execution of programs.

Multiple Virtual Storage for Extended Architecture (MVS/XA). An IBM program product whose full name is the Operating System/Virtual Storage (OS/VS) with Multiple Virtual Storage/System Product for Extended Architecture. Extended architecture allows 31-bit storage addressing. MVS/XA is a software operating system controlling the execution of programs.

MVS. Multiple Virtual Storage operating system.

MVS/XA. Multiple Virtual Storage for Extended Architecture operating system.

NAU. Network addressable unit.

NCCF. Network Communications Control Facility.

NCP. (1) Network Control Program (IBM program product). Its full name is Advanced Communications Function for the Network Control Program. (2) Network control program (general term).

negative response. In SNA, a response indicating that a request did not arrive successfully or was not processed successfully by the receiver. Contrast with *positive response*. See *exception response*.

NetView. An IBM program product used to monitor a network, manage it, and diagnose its problems.

network. (1) (TC97) An interconnected group of nodes. (2) In data processing, a user application network. See *path control network, public network, SNA network*, and *user application network*.

network address. In SNA, an address, consisting of subarea and element fields, that identifies a link, a link station, or a network addressable unit. Subarea nodes use network addresses; peripheral nodes use local addresses. The boundary function in the subarea node to which a peripheral node is attached transforms local addresses to network addresses and vice versa. See *local address*. See also *network name*.

network addressable unit (NAU). In SNA, a logical unit, a physical unit, or a system services control point. It is the origin or the destination of information transmitted by the path control network. Each NAU has a network address that represents it to the path control network. See also *network name*, *network address*, and *path control network*.

Network Communications Control Facility (NCCF). (1) An IBM program product that is a base for command processors that can monitor, control, and improve the operations of a network. Its function is included and enhanced in NetView's command facility. (2) A traditional, alternative name for the command facility of NetView.

network control (NC). In SNA, an RU category used for requests and responses exchanged between physical units (PUs) for such purposes as activating and deactivating explicit and virtual routes and sending load modules to adjacent peripheral nodes. See also *data flow control layer* and *session control*.

Network Control Program (NCP). An IBM program product that provides communication controller support for single-domain, multiple-domain, and interconnected network capability. Its full name is Advanced Communications Function for the Network Control Program.

network control program. A program, generated by the user from a library of IBM-supplied modules, that controls the operation of a communication controller.

networking. In a multiple-domain network, communication among domains.

network log. A file that contains all messages processed by NetView.

Network Logical Data Manager (NLDM). (1) An IBM program product that collects and correlates session-related data and provides online access to this information. It runs as an NCCF communication network management (CNM) application program. Its function is included and enhanced in NetView's session monitor. (2) A traditional, alternative name for the session monitor of NetView.

network name. (1) In SNA, the symbolic identifier by which end users refer to a network addressable unit (NAU), a link, or a link station. See also *network address*. (2) In a multiple-domain network, the name of the APPL statement defining a VTAM application program is its network name and it must be unique across domains. Contrast with *ACB name*. See *uninterpreted name*.

network node. Synonym for *node*.

network operator. (1) A person or program responsible for controlling the operation of all or part of a network. (2) The person or program that controls all the domains in a multiple-domain network. Contrast with *domain operator*.

Network Problem Determination Application (NPDA). (1) An IBM program product that helps identify network hardware problems from a central control point using interactive display techniques. It runs as an NCCF

communication network management (CNM) application program. Its function is included and enhanced in NetView's hardware monitor. (2) A traditional, alternative name for the hardware monitor of NetView.

NLDM. Network Logical Data Manager.

node. (1) In SNA, an endpoint of a link or junction common to two or more links in a network. Nodes can be distributed to host processors, communication controllers, cluster controllers, or terminals. Nodes can vary in routing and other functional capabilities. (2) In VTAM, a point in a network defined by a symbolic name. Synonymous with *network node*. See *major node* and *minor node*.

no response (NR). In SNA, a value in the form-of-response-requested field of the request header (RH) indicating that no response is to be returned to the request, whether or not the request is received and processed successfully. Contrast with *definite response* and *exception response*.

notify. A network services request that is sent by an SSCP to a logical unit (LU) to inform the LU of the status of a procedure requested by the LU.

NPDA. Network Problem Determination Application.

online. Stored in a computer and accessible from a terminal.

operator. A person who operates a machine. See *network operator*.

page. (1) The portion of a panel that is shown on a display surface at one time. (2) To move back and forth among the pages of a multiple-page panel. See also *scroll*. (3) (ISO) In a virtual storage system, a fixed-length block that has a virtual address and that can be transferred between real storage and auxiliary storage. (4) To transfer instructions, data, or both between real storage and external page or auxiliary storage.

panel. (1) A formatted display of information that appears on a terminal screen. See also *help panel* and *task panel*. Contrast with *screen*. (2) In computer graphics, a display image that defines the locations and characteristics of display fields on a display surface.

path. (1) In SNA, the series of path control network components (path control and data link control) that are traversed by the information exchanged between two network addressable units (NAUs). A path consists of a virtual route and its route extension, if any. See also *explicit route*. (2) In defining a switched major node, a potential dial-out port that can be used to reach a physical unit.

path control (PC) layer. In SNA, the layer that manages the sharing of link resources of the SNA network and routes basic information units (BIUs) through it. Path control routes message units between network addressable units (NAUs) in the network and provides the paths between them. It converts the BIUs from transmission control (possibly segmenting them) into path information units (PIUs) and exchanges basic transmission units (BTUs) and one or more PIUs with data link control. See also *BIU segment*, *blocking of PIUs*, *data link control layer*, and *transmission control layer*.

path control (PC) network. In SNA, the part of the SNA network that includes the data link control and path control layers. See *SNA network* and *user application network*. See also *boundary function*.

path information unit (PIU). In SNA, a message unit consisting of a transmission header (TH) alone, or of a TH followed by a basic information unit (BIU) or a BIU segment. See also *transmission header*.

PC. Path control.

peripheral LU. In SNA, a logical unit representing a peripheral node.

peripheral PU. In SNA, a physical unit representing a peripheral node.

physical connection. In VTAM, a point-to-point connection or multipoint connection.

physical unit (PU). In SNA, one of three types of network addressable units (NAUs). Each node of an SNA network contains a physical unit (PU) that manages and monitors the resources (such as attached links) of a node, as requested by a system services control point (SSCP) via an SSCP-PU session. An SSCP activates a session with the physical unit in order to indirectly manage, through the PU, resources of the node such as attached links. See also *peripheral PU*, *physical unit (PU) type*, and *subarea PU*.

physical unit (PU) services. In SNA, the components within a physical unit (PU) that provide configuration services and maintenance services for SSCP-PU sessions. See also *logical unit (LU) services*.

physical unit (PU) type. In SNA, the classification of a physical unit (PU) according to the type of node in which it resides. The PU type is the same as its node type; that is, a type 1 PU resides in a type 1 node, and so forth.

PIU. Path information unit.

PLU. Primary logical unit.

positive response. A response indicating that a request was received and processed. Contrast with *negative response*.

primary half-session. In SNA, the half-session that sends the session activation request. See also *primary logical unit*. Contrast with *secondary half-session*.

primary logical unit (PLU). In SNA, the logical unit (LU) that contains the primary half-session for a particular LU-LU session. Each session must have a PLU and secondary logical unit (SLU). The PLU is the unit responsible for the bind and is the controlling LU for the session. A particular LU may contain both primary and secondary half-sessions for different active LU-LU sessions. Contrast with *secondary logical unit (SLU)*.

problem determination. The process of identifying the source of a problem; for example, a program component, a machine failure, telecommunication facilities, user or contractor-installed programs or equipment, an environment failure such as a power loss, or a user error.

PU. Physical unit.

PU type. Physical unit type.

public network. A network established and operated by communication common carriers or telecommunication Administrations for the specific purpose of providing circuit-switched, packet-switched, and leased-circuit services to the public. Contrast with *user-application network*.

PU-PU flow. In SNA, the exchange between physical units (PUs) of network control requests and responses.

Recommendation X.21 (Geneva 1980). A Consultative Committee on International Telegraph and Telephone (CCITT) recommendation for a general purpose interface between data terminal equipment and data circuit equipment for synchronous operations on a public data network.

Recommendation X.25 (Geneva 1980). A Consultative Committee on International Telegraph and Telephone (CCITT) recommendation for the interface between data terminal equipment and packet-switched data networks. See also *packet switching*.

recommended action. Procedures suggested by NetView that can be used to determine the causes of network problems.

remote. Synonym for *link-attached*.

resource. (1) Any facility of the computing system or operating system required by a job or task, and including main storage, input/output devices, the processing unit, data sets, and control or processing programs. (2) In NetView, any hardware or software that provides function to the network.

response time. (1) The amount of time it takes after a user presses the enter key at the terminal until the reply appears at the terminal. (2) For response time monitoring, the time from the activation of a transaction until a response is received, according to the response time definition coded in the performance class.

route. See *explicit route* and *virtual route*.

route extension (REX). In SNA, the path control network components, including a peripheral link, that make up the portion of a path between a subarea node and a network addressable unit (NAU) in an adjacent peripheral node. See also *path, explicit route (ER), virtual route (VR)*.

SA. Subarea.

screen. An illuminated display surface; for example, the display surface of a CRT or plasma panel. Contrast with *panel*.

scroll. To move all or part of the display image vertically to display data that cannot be observed within a single display image. See also *page (2)*.

SDLC. Synchronous Data Link Control.

secondary half-session. In SNA, the half-session that receives the session-activation request. See also *secondary logical unit (SLU)*. Contrast with *primary half-session*.

secondary logical unit (SLU). In SNA, the logical unit (LU) that contains the secondary half-session for a particular LU-LU session. An LU may contain secondary and primary half-sessions for different active LU-LU sessions. Contrast with *primary logical unit (PLU)*.

secondary logical unit (SLU) key. A key-encrypting key used to protect a session cryptography key during its transmission to the secondary half-session.

session. In SNA, a logical connection between two network addressable units (NAUs) that can be activated, tailored to provide various protocols, and deactivated, as requested. Each session is uniquely identified in a transmission header (TH) by a pair of network addresses, identifying the origin and destination NAUs of any transmissions exchanged during the session. See *half-session, LU-LU session, SSCP-LU session, SSCP-PU session*, and *SSCP-SSCP session*. See also *LU-LU session type* and *PU-PU flow*.

session activation request. In SNA, a request that activates a session between two network addressable units (NAUs) and specifies session parameters that control various protocols during session activity; for example, BIND and ACTPU. Synonymous with *generic BIND*. Contrast with *session deactivation request*.

session control (SC). In SNA, (1) One of the components of transmission control. Session control is used to purge data flowing in a session after an unrecover-

able error occurs, to resynchronize the data flow after such an error, and to perform cryptographic verification. (2) A request unit (RU) category used for requests and responses exchanged between the session control components of a session and for session activation and deactivation requests and responses.

session deactivation request. In SNA, a request that deactivates a session between two network addressable units (NAUs); for example, UNBIND and DACTPU. Synonymous with *generic unbind*. Contrast with *session activation request*.

session parameters. In SNA, the parameters that specify or constrain the protocols (such as bracket protocol and pacing) for a session between two network addressable units. See also *logon mode*.

session trace. In NetView, the function that collects session trace data for sessions involving specified resource types or involving a specific resource.

session trace data. Data relating to sessions that is collected by NetView whenever a session trace is started and that consists of session activation parameters, VTAM path information unit (PIU) data, and NCP data.

session-initiation request. In SNA, an Initiate or logon request from a logical unit (LU) to a system services control point (SSCP) that an LU-LU session be activated.

session monitor. The component of NetView that collects and correlates session-related data and provides online access to this information.

simulated logon. A session-initiation request generated when a VTAM application program issues a SIMLOGON macro instruction. The request specifies a logical unit (LU) with which the application program wants a session in which the requesting application program will act as the primary logical unit (PLU).

single-domain network. In SNA, a network with one system services control point (SSCP). Contrast with *multiple-domain network*.

SLU. Secondary logical unit.

SNA. Systems Network Architecture.

SNA network. The part of a user-application network that conforms to the formats and protocols of Systems Network Architecture. It enables reliable transfer of data among end users and provides protocols for controlling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

SSCP. System services control point.

SSCP-LU session. In SNA, a session between a system services control point (SSCP) and a logical unit (LU); the session enables the LU to request the SSCP to help initiate LU-LU sessions.

SSCP-PU session. In SNA, a session between a system services control point (SSCP) and a physical unit (PU); SSCP-PU sessions allow SSCPs to send requests to and receive status information from individual nodes in order to control the network configuration.

SSCP-SSCP session. In SNA, a session between the system services control point (SSCP) in one domain and the SSCP in another domain. An SSCP-SSCP session is used to initiate and terminate cross-domain LU-LU sessions.

SSP. System Support Programs (IBM program product). Its full name is Advanced Communications Function for System Support Programs.

ST. Session configuration screen abbreviation.

status monitor. A component of NetView that collects and summarizes information on the status of resources defined in a VTAM domain.

subarea (SA). A portion of the SNA network consisting of a subarea node, any attached peripheral nodes, and their associated resources. Within a subarea node, all network addressable units, links, and adjacent link stations (in attached peripheral or subarea nodes) that are addressable within the subarea share a common subarea address and have distinct element addresses.

subarea PU. In SNA, a physical unit (PU) in a subarea node.

Synchronous Data Link Control (SDLC). A discipline for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or nonswitched links. The configuration of the link connection may be point-to-point, multipoint, or loop. SDLC conforms to subsets of the Advanced Data Communication Control Procedures (ADCCP) of the American National Standards Institute and High-Level Data Link Control (HDLC) of the International Standards Organization.

system services control point (SSCP). In SNA, a focal point within an SNA network for managing the configuration, coordinating network operator and problem determination requests, and providing directory support and other session services for end users of the network. Multiple SSCPs, cooperating as peers, can divide the network into domains of control, with each SSCP having a hierarchical control relationship to the physical units and logical units within its domain.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through and controlling the configuration and operation of networks.

System Support Programs (SSP). An IBM program product, made up of a collection of utilities and small programs, that supports the operation of the NCP.

task panel. Online display from which you communicate with the program in order to accomplish the program's function, either by selecting an option provided on the panel or by entering an explicit command. See *help panel*.

telecommunication line. Any physical medium such as a wire or microwave beam, that is used to transmit data. Synonymous with *transmission line*.

terminal. A device that is capable of sending and receiving information over a link; it is usually equipped with a keyboard and some kind of display, such as a screen or a printer.

TG. Transmission group.

threshold. In NetView, refers to a percentage value set for a resource and compared to a calculated error-to-traffic ratio.

transmission control (TC) layer. In SNA, the layer within a half-session that synchronizes and paces session-level data traffic, checks session sequence numbers of requests, and enciphers and deciphers end-user data. Transmission control has two components: the connection point manager and session control. See also *half-session*.

transmission group (TG). In SNA, a group of links between adjacent subarea nodes, appearing as a single logical link for routing of messages. A transmission group may consist of one or more SDLC links (parallel links) or of a single System/370 channel.

transmission header (TH). In SNA, control information, optionally followed by a basic information unit (BIU) or a BIU segment, that is created and used by path control to route message units and to control their flow within the network. See also *path information unit*.

transmission line. Synonym for *telecommunication line*.

tutorial. Online information presented in a teaching format.

unbind. In SNA, a request to deactivate a session between two logical units (LUs). See also *session deactivation request*. Contrast with *BIND*.

uninterpreted name. In SNA, a character string that a system services control point (SSCP) is able to convert into the network name of a logical unit (LU). Typically, an uninterpreted name is used in a logon or Initiate request from a secondary logical unit (SLU) to identify the primary logical unit (PLU) with which the session is requested.

user. Anyone who requires the services of a computing system.

user-application network. A configuration of data processing products, such as processors, controllers, and terminals, established and operated by users for the purpose of data processing or information exchange, which may use services offered by communication common carriers or telecommunication Administrations. Contrast with *public network*.

virtual machine. A functional simulation of a computer and its associated devices.

Virtual Machine (VM). A program product whose full name is the Virtual Machine/System Product (VM/SP). It is a software operating system that manages the resources of a real processor to provide virtual machines to end users. As a time-sharing system control program, it consists of the virtual machine control program (CP), the conversational monitor system (CMS), the group control system (GCS), and the interactive problem control system (IPCS).

virtual route (VR). In SNA, a logical connection (1) between two subarea nodes that is physically realized as a particular explicit route, or (2) that is contained wholly within a subarea node for intra-node sessions. A virtual route between distinct subarea nodes imposes a transmission priority on the underlying explicit route, provides flow control through virtual-route pacing, and provides data integrity through sequence numbering of path information units (PIUs). See also *explicit route (ER)*, *path*, and *route extension*.

virtual route (VR) pacing. In SNA, a flow control technique used by the virtual route control component of path control at each end of a virtual route to control the rate at which path information units (PIUs) flow over the virtual route. VR pacing can be adjusted according to traffic congestion in any of the nodes along the route. See also *pacing* and *session-level pacing*.

virtual storage. (ISO) The notion of storage space that may be regarded as addressable main storage by the user of a computer system in which virtual addresses are mapped into real addresses. The size of virtual storage is limited by the addressing scheme of the computer system and by the amount of auxiliary storage available, not by the actual number of main storage locations.

Virtual Telecommunications Access Method (VTAM). An IBM program product that controls communication

and the flow of data in an SNA network. It provides single-domain, multiple-domain, and interconnected network capability.

VM. Virtual Machine operating system. Its full name is Virtual Machine/System Product.

VR. Virtual route.

VTAM. Virtual Telecommunications Access Method (IBM program product). Its full name is Advanced Communications Function for the Virtual Telecommunications Access Method.

VTAM operator command. A command used to monitor or control a VTAM domain.

X.21. See *Recommendation X.21 (Geneva 1980).*

X.25. See *Recommendation X.25 (Geneva 1980).*

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Numerics

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Operation Scenarios
Release 2

Publication No. SC30-3376-1

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Operation Scenarios
Release 2

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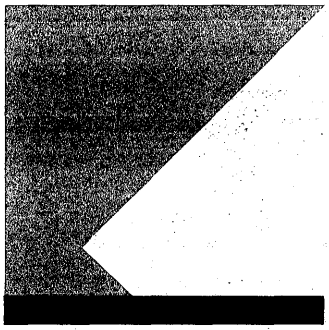

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