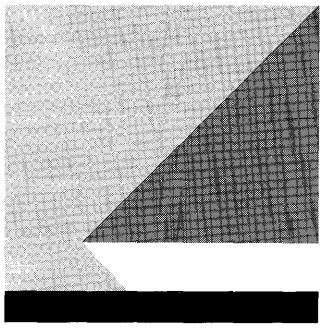
IBM®

NetView™

SC30-3364-1

Operation

Release 2



File Number
S370/4300/30XX-50

Program Numbers
5665-361 (MVS/370)
5665-362 (MVS/XA)
5664-204 (VM)

Second Edition (October 1987)

This edition is a major revision of ST30-3364-0 (formerly SC30-3364-0); however, it neither replaces nor obsoletes ST30-3364-0. 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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About This Book

This book describes the various components of the NetView™ Release 2 program[1] that can be used for network operation.

Who Should Use This Book

This book is intended for use by system console operators, network operators, and system programmers. Before using this book, you should be familiar with the basic functions presented in the *NetView Operation Primer.* Specific operator procedures are defined by the individual installation to suit local requirements.

How To Use This Book

This book is divided into the following parts:

Part 1. NetView describes the various components of NetView, explains how to access each component, and tells how to use the online help. It also gives information on how to use the command facility to control, record, and automate your network and system operations.

Part 2. Hardware Monitor tells how to use the hardware monitor to identify hardware or software-related problems in a network.

Part 3. Session Monitor tells how to use the session monitor to identify session-related problems in a network.

Part 4. Status Monitor tells how to use the status monitor to monitor the status of network components.

Appendix A. List of Commands provides a quick reference with each command listed alphabetically.

Appendix B. List of Panel Fields provides a quick reference with each panel field listed alphabetically by component.

Appendix C. Virtual Route Status Conclusions provides reference information for the session monitor Virtual Route Status panel.

Appendix D. National Receive Signal Levels provides reference information for the hardware monitor Modem and Line Status panel.

Appendix E. Hardware Monitor With Information/Management provides information on sending hardware monitor event data to the Information/Management system.

Appendix F. PF Key Assignments provides quick reference information with PF keys listed for each component.

Bibliography lists publications that have been referenced in this manual.

Glossary introduces new terms that are unique to NetView and redefines some existing terms that carry new meanings in the NetView environment.

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

A detailed table of contents is shown at the beginning of each part.

Throughout this publication, the term MVS means MVS/370 and MVS/XA, and VM means VM/SP and VM/SP HPO, and VM/XA.

What Is New in This Book

The following changes have been made for this release:

- These commands were added to Chapter 3:
  - AUTOTASK command
  - DEFAULTS command
  - GENALERT command
  - LINKDATA command
  - LINKPD command
  - LINKTEST command
  - MVS command
  - OVERRIDE command
  - RELCONID command
  - RUNCMD command
  - SETCGLOB command
  - UPDCGLOB command
- This command was added to Chapter 6:
  - PURGEDB command
- These commands were added to Chapter 9:
  - PURGE command
  - PURGEDB command

Where To Find More Information

When using this book you may find other NetView publications helpful. Those publications are described in the following list.

In addition, Figure 1-1 on page xvi shows all of the books in the NetView Release 2 library, arranged according to related tasks. For more information on related publications, see "Bibliography" on page X-1.

NetView Administration Reference, SC30-3361

NetView Command Lists, SC30-3423

NetView Command Summary, SX27-3620

NetView Customization, SC30-3462

NetView Installation and Administration Guide, SC30-3476

NetView Operation Primer, SC30-3363

NetView Operation Scenarios, SC30-3376

NetView Messages, SC30-3365

NetView Hardware Problem Determination Reference, SC30-3366

Network Program Products Samples, SC30-3352

Learning about NetView, SK2T-0292.

Evaluation and Education

Network Program Products
General Information
GC30-3350

Network Program Products
Bibliography and Master Index
GC30-3353

Learning about NetView
SK2T-0292
(PC Diskettes)

Planning

Network Program Products
Planning
SC30-3351

Automated Operations
Planning Guide
SC30-3474

Network Program Products
Storage Estimates
SC30-3403

Installation and Administration

NetView
Installation and Administration
Guide
SC30-3476

NetView
Administration Reference
SC30-3361

Network Program Products
Samples
SC30-3352

Customization

NetView
Customization
SC30-3462

NetView
Command Lists
SC30-3423

Automated Operations
Using NetView
Command Lists
SC30-3477

Operation

NetView
Operation Primer
SC30-3363

NetView
Operation
SC30-3364

NetView
Messages
SC30-3365

NetView Hardware
Problem Determination
Reference
SC30-3366

NetView Operation
Scenarios
SC30-3376

NetView
Command Summary
SX27-3620

Diagnosis

NetView
Diagnosis
LY30-5587

NetView
Problem Determination
Supplement
LD21-0023

Figure 1-1. NetView Library

Part 1. NetView and the Command Facility

Chapter 1. Getting Acquainted with NetView

As networks grow in size and complexity, it becomes increasingly difficult to manage them without effective tools. The NetView™ program[1] allows you to control and monitor the systems in your network as well as the jobs, subsystems, and online users that run on these systems. It provides a comprehensive set of tools to allow you, the network operator, to perform network management. These tools help you to:

- Control the network
- Monitor the logical network
- Monitor the physical network
- Determine the status of network resources
- Automate the control and monitoring of the network.

NetView consists of the following components:

Command facility	Provides base service functions and automated operations. Included are the operator interface and network/trace logging facilities. The command facility can also operate as a subsystem of MVS. This facility is also called NCCF.
Hardware monitor	Gives information about physical network resources. This includes failure information that shows probable cause and recommended actions. Information on the 4700 support facility (MVS and VSE) is also included. 4700 support facility is called TARA. The hardware monitor is also called NPDA.
Session monitor	Gives information about the logical network resources. This includes session related information, such as response time measurement and the components that make up a session. This facility is also called NLDM.
Status monitor	Displays the status of network resources in a hierarchical manner and allows you to browse the network log. This facility also automatically reactivates minor nodes (except applications and cross domain resources (CDRSCS)). The status monitor is also called STATMON.
Help facility	Displays online help information for the NetView components, panels, and commands. This facility includes a procedure that help desk personnel can use to help with problem determination. An index is provided for quick reference.
Browse facility	Provides capability to browse the network log or a data member (MVS) or file (VM).

Figure 1-1 on page 1-2 shows the relationships among these components.

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

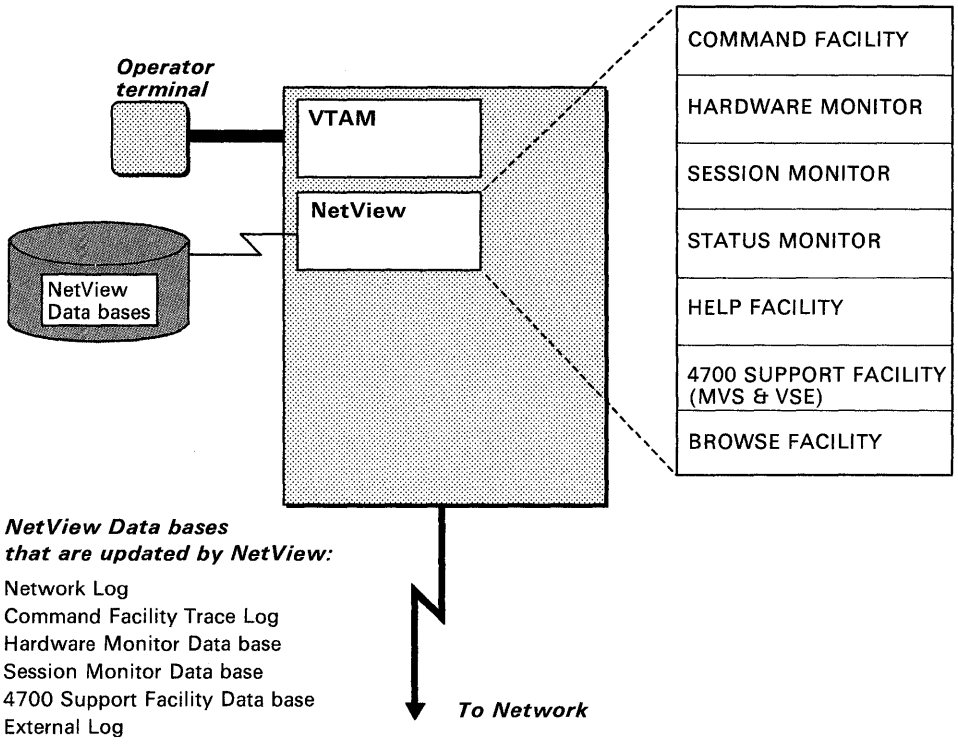


Figure 1-1. NetView

NetView operates as a VTAM application program. It can also operate as a subsystem of MVS. It provides a network log to record information as necessary. You can move from one component to another with a single command.

Tasks

NetView can perform more than one function at a time by allowing many functions to run independently. NetView controls these functions by defining units of work called ***tasks***. The types of tasks are:

OST Operator Station Task. There is one OST for each NetView operator. There are also automated OSTs which perform unattended operations functions related to automation and require no operator.

NNT NetView-NetView Task. There is one NNT for each NetView in another domain with which this NetView communicates. This task controls that communication.

PPT Primary Program Operator Interface (POI) Task. This task processes commands and CLISTs that are not entered by an operator (for example, a timed event or a message-driven CLIST).

DST Data Services Task. This task processes requests for CNM or VSAM data. This is the interface to network management data and VTAM.

Command Types

NetView processes four types of commands:

- Regular commands
- Immediate commands
- Data services task commands
- Both regular and immediate commands.

Most commands and all CLISTs are regular commands. Regular commands can run concurrently with other regular commands. Regular commands can be interrupted by system routines or by immediate commands.

Immediate commands, such as RESET, GO, CANCEL, and AUTOWRAP can interrupt or preempt regular commands. As their name implies, they are run as soon as the command is entered. Only one immediate command runs at a time. Immediate commands can only be run in the command facility.

System Console Operation

In order to use NetView, the system operator may first start NetView from the system console. Generally, this is done automatically when the operating system is initialized.

If you are the system operator, talk with your system programmer about the defined operating procedures for your installation before performing any of the tasks described in this section. In MVS, NetView commands and CLISTs can be entered from system consoles by using the designator prefix character (% is the default) defined for the NetView Subsystem. *Note*: If you are ***not*** the system operator, your operator identification probably will not let you perform the activities described in this section.

Starting NetView

On MVS: Both NetView and the NetView subsystem start as jobs in the system. In order to start NetView manually, you would enter:

```
START NVname CNMPROC
START SSname CNMPSSI
```

where *NVname* is the name of the NetView procedure and *SSname* is the name of the NetView subsystem procedure. These names may vary in your installation. Your system programmer can give you these names. (See *NetView Installation and Administration Guide*.)

Under MVS, NetView can also be started automatically by using the COMMNDXX member of SYS1.PARMLIB. (See *MVS/XA System Programming Library: Initialization and Tuning*.)

On VM: NetView is started with a GCS EXEC by entering:

```
NETSTRT
```

or another EXEC name chosen by your system programmer. Ask your system programmer for this name.

Under VM, NetView can also be started using the following command, which is already in the GCS EXEC:

```
NETVIEW START NETVIEW
```

The NETVIEW START NETVIEW command can be changed so that it attaches the programmable operator-message exchange (PMX). The format for this command is:

```
NETVIEW START PMX PARM userid
```

where *userid* is the identification of the active VM/SP programmable operator. The CANCEL command detaches the main task and the PMX, if active.

Connecting an MVS Operator's Console to NetView

An MVS operator can issue NetView line-by-line commands and CLISTS from an MVS operator's console. An AUTOTASK command in NetView creates an unattended operator station task dedicated to running network commands from a specified MVS console and converting network messages into write-to-operators (WTOs) for that console. The NetView CLISTS or commands must be immediately preceded by the NetView designator character (%), when they are entered at an MVS operator's console.

Replying to NetView's WTOR Message

While you are on the system console (or from ***VM***, the virtual machine that is running NetView), you will see one of the following two messages which indicate that NetView is active:

```
*xx DSI802A domainid REPLY WITH VALID NCCF SYSTEM OPERATOR COMMAND
*xx DSI803A domainid REPLY INVALID. REPLY WITH VALID NCCF TERMINAL OPERATOR
   COMMAND
```

The *xx* in the above messages is the reply number that you can use to enter any of the following commands:

```
CLOSE
CLOSE DUMP
CLOSE IMMED
CLOSE NORMAL
MSG operid,text
MSG LOG,text
MSG SYSOP,text
MSG ALL,text
REPLY Pnn,text
REPLY Lnn,text
```

For example, to send a message to an operator you would enter:

- ***On MVS:***

  ```
  REPLY xx,MSG operid,message
  ```

- ***On VM:***

  ```
  R xx MSG operid,message
  ```

where *xx* is the reply number from the message DSI802A or DSI803A. The *operid* is the operator to whom you are sending the message.

For another example, to stop NetView, you would enter:

- ***On MVS***:

  REPLY xx,CLOSE IMMED

- ***On VM***:

  R xx CLOSE IMMED

Another example would be to reply to a VTAM message. If the VTAM message
P45 IST272A NO INITIAL TEST FOR A08NV6 - REPLY 'U' TO BYPASS - OR CANCEL
appears on the NetView operator's screen, you might enter:

- ***On MVS***:

  REPLY xx, REPLY P45,text

- ***On VM***:

  R xx REPLY P45,text

For detailed explanations of the CLOSE, MSG, and REPLY commands, see Chapter 3, "Command Facility Command Descriptions."

Stopping NetView

The decision to stop NetView implies that you are shutting down a portion of the network or have transferred control of a portion of the network to another NetView. This can be done for routine maintenance or as an error recovery procedure.

If necessary, use REPLY to issue CLOSE IMMED, which immediately stops operator tasks, and then proceeds as CLOSE NORMAL.

From the system operator's console, you may use the system REPLY command to enter the CLOSE command. On MVS, you may issue CLOSE as a NetView subsystem command. For example, enter:

- ***On MVS***:

  % CLOSE
  or
  REPLY xx,CLOSE

- ***On VM***:

  R xx CLOSE

where *xx* is the reply number. NetView will stop automatically when all operators and incoming cross-domain operators have logged off.

Note: If you want to shut down NetView without waiting for all operators to logoff, you should use CLOSE IMMED rather than CLOSE.

Terminal Operation

Before you can begin to use NetView, you must have the logon panel displayed on your screen. Figure 1-2 contains an example. If, however, you do not have the logon panel, check with your system programmer to find out how to log on. To log on, enter:

LOGON APPLID(applid) [LOGMODE(logmode)]

where *applid* is the name of the NetView application that you are logging on to and *logmode* specifies information about your terminal. Before you begin to use NetView as a NetView operator, you must have the logon panel displayed on your screen.

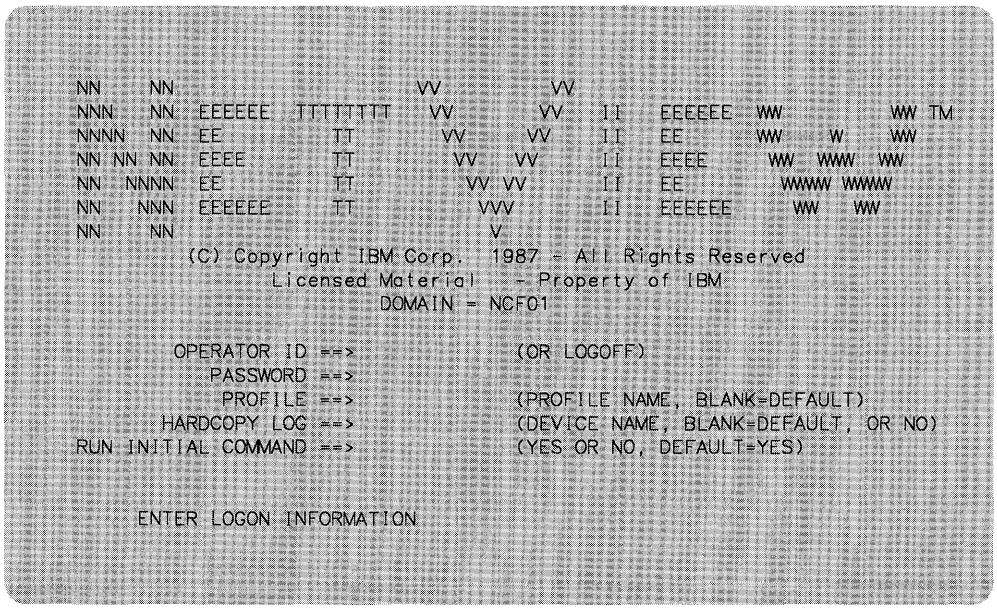


Figure 1-2. Example of Logon Panel

Entering Logon Information

Before logging on, you must have an operator profile defined. Check with your system programmer to see what has been defined for you.

Here is what you enter into the fields of the logon panel (Figure 1-2):

OPERATOR ID
: Specifies what your operator identification is. This could be your name or a word that your system programmer has assigned to you.

PASSWORD
: Is a one- to eight-character string that is used to prevent other people from using your operator identification. To ensure that no one sees your password as you enter it, text entered into the password field is not displayed. If you enter the password incorrectly you will not be able to see where the mistake was made, so if you make a mistake, retype all eight positions of the password field.

PROFILE
: Describes what operator profile to use. This field is optional. The profile has information about your span of control, domains, scope of commands, operator classes, the name of the terminal you use for a hard-copy log, whether you are an authorized receiver or not, and the name of a CLIST (command list) that may run after you have logged on. If you do not enter a profile name, you will receive a default profile. Check with your system programmer for details about your profile.

HARD-COPY LOG

The name of the printer that gives you a printed copy of what has happened during your session. This field is optional. The printer you name will start when you log on. A default printer name may be in your profile. If you do not want to use a printer, enter NO in this field.

RUN INITIAL COMMAND

Runs a predefined procedure (CLIST) when you log on. This CLIST is set up by your system programmer. The default is YES, indicating that you want to use the predefined procedure. If you enter NO, you will not use the predefined procedure.

Successful Logon

If you have logged on successfully, and if receiving the NetView main menu was specified as part of your initial logon CLIST, you will see the following panel:

```
CNM1NETV              N E T V I E W    M A I N    M E N U

                   OPERATOR ID = OPERID   APPLICATION = NCF01

   Enter a command (shown highlighted or in white) and press Enter.

        Browse Facility                 BROWSE command
        Command Facility                NCCF command
        Help Desk Facility              HELPDESK command

        Hardware Monitor                NPDA command
        4700 Support Facility           TARA command (MVS and VSE only)
        Session Monitor                 NLDM command
        Status Monitor                  STATMON command

        News                            NEWS command
        PF Key Settings                 DISPFK command

        To Exit the NetView program     LOGOFF command
                  PF1 ---> Help for Using the Netview Program

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

Figure 1-3. NetView Menu Panel

From this panel, you can:

- Enter any component
- Display the PF key settings
- Exit NetView.

To do any of the above type the name of the command next to the CMD line. For example, to enter the command facility, enter the following command:

```
CMD==> NCCF
```

You can return to the NetView Menu panel by entering the MAINMENU command (see page 3-103), by rolling (PF6) back to the panel, or by returning (PF3) to the panel.

Correcting Mistakes

If you entered incorrect logon information, you can correct what you typed by doing one of the following:

- Reposition the cursor to the field with the mistake. Press the ERASE EOF key and retype the correct information.
- Press the CLEAR key to erase all your input and start over.
- If you pressed the ERASE INPUT key, press the CLEAR key and start again.

Screen Layout

NetView presents data in two formats. The first format is called ***line mode***, where data is presented one line at a time. The second format is called ***full-screen mode***, where data is presented using panels that display a screen of data at a time. Generally, the hardware monitor, session monitor, and status monitor use full-screen mode, while the command facility uses line mode.

Line Mode

The line mode screen has four sections:

- Session Identification Line - Section 1
- Message Area - Section 2
- Response Area - Section 3
- Command Entry - Section 4.

Refer to Figure 1-4 as you read about each section.

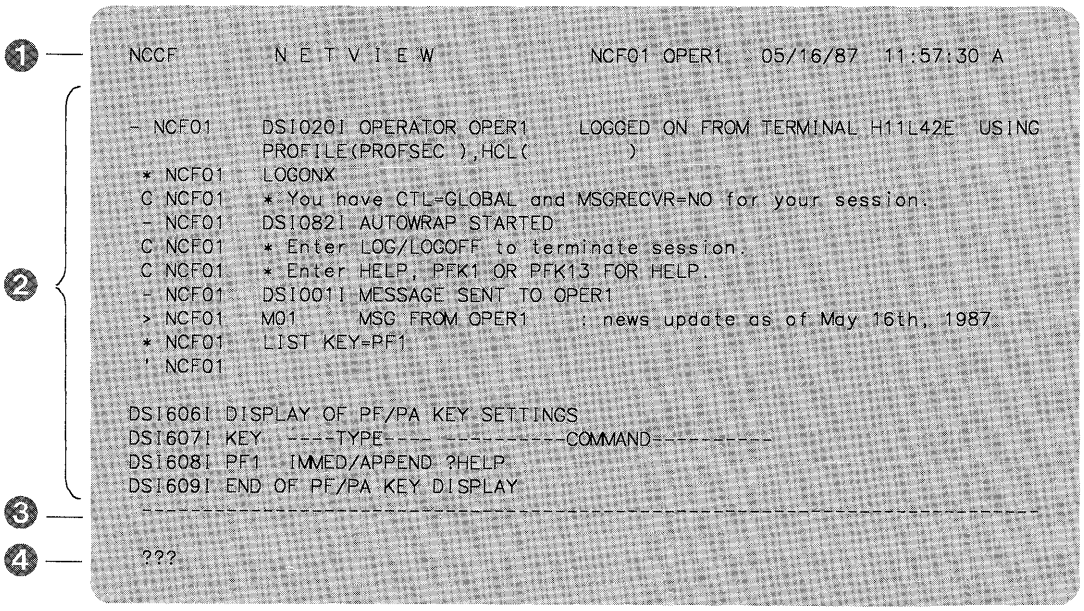


Figure 1-4. Sample Panel

Session Identification Line: Section 1 is the session identification line. It contains the domain identifier (*NCF01*), the operator identifier (*OPER1*), and the date and time as follows:

- *mm/dd/yy* is the date in the order of month, day, and year.
- *hh:mm:ss* is the time in the order of hour, minutes, and seconds.

At the end of this line are indicators about the rules the system is using as you enter commands:

- *A* is the AUTOWRAP indicator. This means that AUTOWRAP is on. AUTOWRAP is explained later in "AUTOWRAP" on page 3-24.
- *H* is the held-screen indicator. This means that the screen will not roll forward unless unlocked by the operator. Held messages are explained in "HOLD" on page 3-78.
- *P* is the PAUSE status indicator. PAUSE is explained later in "CLIST Commands" on page 2-13.
- *W* is the WAIT indicator. WAIT is explained later in "CLIST Commands" on page 2-13.

Message Area: Section ❷ is the message area. This area displays the messages, commands, data, and responses that come from and go to this terminal. The size of this area depends on the size of the command area and your screen size. A broken line appears in section ❷ to separate the newest message from the oldest message. The line above the broken line is the newest message. The line below the broken line is the oldest. Each new message replaces the existing broken line and a new broken line replaces the oldest message, giving the appearance that the broken line moves down the screen.

Most messages have the following format:

type domid code msgno text

where:

type is the message type (see Figure 1-5 on page 1-10)

A	Message automated to drive CLIST or command
C	Message or command generated during CLIST processing
E	External message
M	Message from an MSG command
Q	Unsolicited message from VTAM
S	Message text provided by a user exit routine
U	Message from installation-written code
V	VTAM command from the system console
W	Message satisfying CLIST WAIT
Y	VTAM message from the system console
Z	Message from the Data Services Task
!	Cross-domain or immediate command message
-	DSI-prefix message
*	Command echo
blank	Solicited message from VTAM
+	Message generated by a command other than a NewView command
>	Reply required
'	DSI-prefix message headings for multiple-line message
"	DSI-prefix messages following a heading
=	User-written full-line message

Figure 1-5. Message Type Symbols

domid is the domain or application that the message came from.

code is a code as follows (see Figure 1-6):

P	The message came from the PPT.
%	The message is sent only to the authorized receiver of the messages.
P%	The message is to the authorized receiver and came from the PPT.
*	The message is to a secondary receiver.
+	The message has been copied and sent to this receiver.

Figure 1-6. Message Codes

msgno is the message number that you can use to look up more information.

text is the text of the message.

Note: In some cases, the left portion of the message (*type domid code*) is displayed on a line by itself as a title, and the right portion of the message (*msgno text*) is on the following line.

Generally, messages disappear as the screen scrolls. The two exceptions are reply messages and held messages.

Reply messages are messages to which you must reply before you can delete them from the screen. These messages will appear in high intensity on your screen with a P*nn* or L*nn* after the message number, where *nn* is a 2 digit number. Unsolicited reply messages received on the system console remain outstanding even after a reply is given. These messages must be deleted manually using the MVS control (K) command.

Held messages are messages that are defined by your system programmer to be held on the screen. This means they will not be removed from the screen until you specifically delete them. These messages appear in high intensity (or are otherwise highlighted) and are located at the top of the message area. If there are more messages being held than can be displayed on your type of terminal, then these are queued and only appear when existing ones are deleted. It is not apparent that messages are being queued. To delete a held message, move the cursor one position in on the left side of the message line. Enter any character in the space. If you type a character in the space and then decide not to delete the message, press the CLEAR key.

Response Area: Section ❸ is the response area. It looks like this:

??? *ind message*

where:

??? identifies the start of the response area.

ind is the lock or unlock indicator. If the indicator is blank, the screen is unlocked and messages can be displayed. If the indicator contains three asterisks (***), no messages can be displayed until one of the following occurs:

- You press CLEAR
- You press ENTER with no data in the command area
- You enter another command

message is a message indicating the status of system processing. When you press any action key (ENTER, PF, PA, or CLEAR), the response area is erased.

Command Area: Section ❹ is the command area. The system positions the cursor at the beginning of this area. This is where you type your commands. You can set the size of this area with the INPUT command.

The length of the command area is limited to 240 characters. To indicate the end of the command area, enter a blank followed by < < <. When you press any action key (ENTER, PF, PA, or CLEAR), the command area is erased.

If your system programmer defined a suppression character, you can use this character to prevent all writing of an entered command, including output to your screen and the network log.

To suppress a command, enter the suppression character immediately before the command name with no intervening blanks. For example, if a question mark (?) is coded as a suppression character and you enter:

```
?LIST STATUS=TASKS
```

Command suppression only works in command facility.

The command LIST STATUS=TASKS does not appear on your terminal's screen or on the network log. However you do get a listing of the tasks' status.

Your system programmer may also specify on the CMDMDL statement in DSICMD that a command will not be shown on your screen when you enter it.

Ask your system programmer about suppression characters and command echo suppression.

Full-Screen Mode

In full-screen mode, color and highlighting are used to identify problems or areas of possible concern. Wherever possible, the system makes a decision on the severity of a message or the contents of a status field. This decision is displayed using color or highlighting, depending on your screen type.

Seven-Color Terminals: Most components permit the use of color. For terminals that can display seven colors, the following colors are used to show the system's decision as to the importance of the information displayed:

Green	Good or normal condition.
Yellow	Marginal or warning condition.
Red	Bad or error condition.

Four-Color Terminals: For terminals that can display four colors, the following colors are used to show the system's decision as to the importance of the information displayed:

Blue	Good, normal, marginal, or warning conditions.
White	Bad or error condition.

Monochrome Terminals: For monochrome terminals, the following highlighting is used to show the system's decision as to the importance of the information displayed:

Normal Intensity	Good, normal, marginal, or warning conditions.
High Intensity	Bad or error condition.

The Keyboard

The keyboard is your means of communicating with the system. You type in commands to ask the system to do work for you. You use the ENTER, CLEAR, ATTN, PA, or PF keys in combination with information typed into the command area.

ENTER Key

After you have typed a command in the command area, you press the ENTER key to tell the system to do the requested work. The ENTER key also unlocks the message area on the screen. To unlock the screen without entering a command, press the ENTER key with no data in the command area.

CLEAR Key

When you use the regular screen and press the CLEAR key, the screen is completely erased except for Held messages. The CLEAR key also unlocks the output area. Any output messages that still require responses are written in order at the top of your screen, starting with the oldest message. New messages will then be displayed after these reply messages.

PF Keys

For the most part, PF key definitions are consistent across all components. The PF keys will not be defined unless you run PFKDEF CLIST.

Note: Ask your lead operator if your default PF key settings are established.

A description of the PFKDEF CLIST is in "PFKDEF" on page 3-122. The standard definitions are as follows:

PF1 HELP — Displays help information.

PF2 END — Returns the system to the previous component that you were using. If there was no previous component, you are returned to the command facility. Any PF keys that you set while in the current component are discarded.

PF3 RETURN — Returns the system to a previous level. If the point where this panel was requested is another component, this key functions in the same way as the END key (PF2), except that any PF keys that were set by you during this session are saved.

PF4 TOP — Displays the first page of the series for a multipage panel.

PF5 BOTTOM — Displays the last page of the series for a multipage panel.

PF6 ROLL — Moves the name of the current component at the beginning of the sequence in which you go from one component to another, and re-enters the component at the end of the sequence, displaying the panel that was displayed when you last left that component. For example, if you enter NLDM, followed by HELP, followed by NPDA, the sequence remembered is:

```
NLDM - HELP - NPDA
```

Pressing the ROLL PF key changes the remembered sequence to:

```
NPDA - NLDM - HELP
```

and displays the help panel that was displayed when you left the help facility.

Pressing the ROLL PF key again changes the remembered sequence to:

```
HELP - NPDA - NLDM
```

		and displays the panel that was displayed when you left the session monitor (NLDM).
PF7	BACKWARD	Displays the previous page of the series for a multipage panel.
PF8	FORWARD	Displays the next page of the series for a multipage panel.
PF10	DISPFK	Displays the current PF key settings.
PF12	RETRIEVE	Places the previously entered command in the command area within the current component.

If your keyboard has 24 PF keys, keys 13 through 24 are set up exactly as PF keys 1 through 12. Some of the components vary in their PF key usage. See Appendix F, "PF Key Assignments by Component" on page F-1 for the variations by component.

Moving among Components

You can get to the various NetView components in several ways:

- From any component, you can enter another component name, for example, NPDA. The last panel viewed in hardware monitor (NPDA) appears.
- From any component, you can direct a command to another component. For NLDM, NPDA, and TARA (4700 support facility) commands, you prefix the command with the component name unless you are already in the component. For example, from the status monitor, you can enter:

  ```
  NPDA TOT ST
  ```

  to view the total statistics information in the hardware monitor (NPDA).

  If you are already in NPDA, you can enter:

  ```
  TOT ST
  ```

  From the session monitor, you can enter:

  ```
  MONIT START ALL
  ```

  without prefixing it with STATMON, as it is not one of the components named above.
- NetView allows you to have multiple components active at the same time. The ROLL function allows you to move among active components in a continuous loop. To access the ROLL function, press PF6. ROLL returns you to the last panel you viewed in an active component.

  Note: Ask your lead operator if your default PF key settings are established. You can find a discussion on PF keys in Appendix F, "PF Key Assignments by Component" on page F-1.

Help Information

NetView provides the following types of online help information:

- Product overview—provides an overview for the network management capabilities of the system
- Immediate help—provides an overview for the requested component

- Command help—explains command and command list (CLIST) usage and syntax
- Error code help—explains SNA sense codes, return codes, feedback codes, status codes, and recommended actions for error conditions
- Help desk facility—guides help desk operators through problem resolutions
- Index—provides access to help information by subject.

While you are reviewing information using the help facility, you cannot be interrupted by messages from NetView. At any point in the help facility, you can issue a NetView command by entering the command in the ACTION field. You can then go directly to the component for which you entered the command. When you leave the component (PF6 or PF3), the system returns you to the point in the help facility that you were reviewing.

Product Overview

To enter the product overview, enter HELP NETVIEW. The system then displays the following panel:

```
CNMKNEEW              HELP FACILITY MAIN MENU

Select     To get information about

    1      Communication Network Overview

    2      Using the NetView program to Control and Monitor the Network
    3      Using the NetView program and NPM to Isolate Network Problems
    4      Using NPM to Track and Gather Network Performance Data

    5      Quick Reference for Commands and CLISTs
    6      NetView Help Desk for Operators

    7      Customizing the NetView program
    8      Index

    PF1 ---> Help about Help

 Type a number (1 through 8), then press ENTER.

Action===>

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

Figure 1-7. The NetView Help Main Menu

You can now select any topic by entering the appropriate number in the ACTION field. For example, to get an overview of NetView, enter 1 next to the Action field. For example,

Action= = = > 1

As you finish reading each panel, press PF8. When you are through with this selection, press PF3 to return to the main menu. At this point, you can select another topic or press PF2 to leave the help facility.

Immediate Help

To enter the immediate help facility, enter:

```
HELP component
```

where *component* is the name of the NetView component for which you want help. For example, to display online help for the status monitor, enter:

```
HELP STATMON
```

The system displays a menu panel. After making your selection, press ENTER. As you finish reading each page of the panel, press PF8. When you are through with this selection, press PF2 to return to the panel where you entered HELP STATMON.

For more information on the HELP command, see "HELP" on page 3-74.

Command Help

You can request online help for NetView commands in two ways. If you already know the name of the command (or CLIST) but are unsure of the syntax, type the command name in the command area and press PF1. If online information is available, it is displayed.

The second way is to request a list of commands by component. To do this, enter:

```
HELP component COMMANDS
```

where *component* is the name of the NetView component for which you are requesting help. For example, to display online help for the status monitor commands, enter:

```
HELP STATMON COMMANDS
```

The system displays a menu panel with all the commands available for the particular component. After making your selection, press ENTER. When you finish reading the panel, press PF2 to return to the point where you requested help.

For additional information on the HELP command, see "HELP" on page 3-74.

Error Code Help

Online information can help you understand the various messages that you may receive in NetView. Information is available for the following:

- Sense codes
- VTAM return and feedback codes
- VTAM status codes and status modifiers
- Recommended action codes.

Sense Codes

If you receive a message containing an SNA sense code concerning an error on a VTAM resource, you can get an explanation of the sense code by entering:

```
SENSE code
```

The *code* is the sense code. For example, for an explanation of sense code x'0806', enter:

```
SENSE 0806
```

For more information on this command, see page 9-38.

VTAM Return and Feedback Codes

If you receive a message containing a VTAM return code and feedback code, you can get an explanation of these codes by entering:

```
RCFB rtncd,fdbk2
```

The *rtncd* represents the VTAM return code and *fdbk2* represents the associated feedback code. If you were not given a feedback code, enter nothing.

For example, if you receive a message containing the following information:

```
RTNCD=14
FDBK2=10
```

you can get an explanation of this return code and feedback code by entering:

```
RCFB 14,10
```

For more information on this command, see page 3-127.

VTAM Status Codes and Status Modifiers

If you receive a message containing a VTAM status code and status modifier, you can get an explanation of these codes by entering:

```
STATUS code
```

The *code* represents the VTAM status code.

For example, if a DISPLAY command shows:

```
STATUS=ACTIV----Y
```

you can find out what ACTIV means by entering:

```
STATUS ACTIV
```

For more information on this command, see page 3-153.

Recommended Action Codes

If you receive a recommended action code on a hardware monitor panel, you can get an explanation of this code by entering:

```
ACTION code
```

The *code* represents the recommended action code.

For example, if you receive a recommended action of D023, you can find out what it means by entering:

```
ACTION D023
```

For more information on this command, see page 6-3.

NetView Help Desk

You can use the help desk to help determine what a user's problem may be. This facility leads you through a series of panels to teach you techniques in problem determination.

To enter the help desk, enter HELPDESK. The system then displays the following panel:

```
CNMHDESK                    NETVIEW HELP DESK

Select      To get information about

   1     A terminal not working

   2     A transaction or an application not working

   3     Slow response time

   4     Problems identified through network monitoring

   5     System message cross-reference

Type a number (1 through 5), then press ENTER.

      PF1 ---> Recommendations for the Setup and Use of the help Desk

                    HELP NETVIEW ---> NetView Help Menu

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

Figure 1-8. Help Desk Panel

You can now select any topic by entering the appropriate number in the ACTION field. For example, to learn techniques on determining the reason for slow response time, enter 3:

```
Action===> 3
```

As you finish reading each panel, press PF8. When you are through with this selection, press PF3 to return to the main menu. Remember that at any point you can enter a NetView command. To leave the help desk facility, press PF2.

Chapter 2. Using Command Facility Commands

The purpose of this chapter is to illustrate the capabilities of the command facility (NCCF) commands. The page number next to each command refers you to a description of the command syntax.

Screen Control Commands

Use the screen control commands to control the operation of the terminal. These commands should not be used under an automation task. See "AUTOTASK" on page 3-22). The commands are:

- *INPUT* (page 3-83)

  Sets the size of the command area of the screen.

- *AUTOWRAP* (page 3-24)

  Changes how and when the screen is scrolled.

- *HOLD* (page 3-78)

  Prevents the screen from unlocking until you are ready to receive messages.

- *AGAIN* (page 3-7)

  Sends the last command you entered back to the system for processing.

- *RETRIEVE* (page 3-135)

  Causes the last command you entered to be placed in the command area. You can then alter the command and press the ENTER key to send the command to the system for processing.

Security

For the most part, your system programmer sets up the authority and security measures. One such measure is called ***span of control***. Span of control restricts an operator's control to selected network resources.

Another security measure that your system programmer can set up is called ***scope of commands***. Scope of commands restricts the use of commands and operands to a single operator or group of operators.

Span of Control

If your system programmer set up a span of control for your operator identification, you can enter only the VTAM commands and the START and STOP RESOURCE commands for resources that are within that span of control. The restriction ensures that you are controlling a specific resource.

Sometimes in a network, your operator's span of control may cross other spans of control. The network resource name is the basis of control and network routing. When more than one operator has authority to control a given resource, this condition is called an overlapped span of control. Either operator can control the network resource. The result on that resource is the cumulative effect of the com-

mands from the overlapped operators, depending on the sequence in which VTAM received them.

You may be defined as having global authority over all spans. This means that you have control over the whole network and that span of control does not apply.

Use the commands below to check your span of control or to change your span of control.

- *LIST SPAN* (page 3-93)

  Displays the name of the profile that contains your span definitions. For example,

  ```
  LIST operid
  ```

  To display your profile to find out the names of the spans that you can control. For example,

  ```
  LIST PROFILE=profilename
  ```

  You can use the LIST SPAN command to find out which resources are in the specified span.

  ```
  LIST SPAN=spanname
  ```

- *START* (page 3-149)

  Adds a span list to your span of control.

  You can use the START RESOURCE command to start a resource within your span of control.

- *STOP* (page 3-154)

  Takes a span list out of your span of control.

  You can use the STOP RESOURCE command to stop a resource within your span of control.

Scope of Commands

Your system programmer sets up scope authority. The authority is filed for use by the system when commands are entered.

For example, the system programmer may want to restrict the use of the CLOSE or STOP FORCE commands to a subset of operators. If you enter a command that is not within your scope of commands, you get an error message on your screen. Commands and operands not specifically restricted are available to all operators. If your profile does not contain scope limits, you are considered to have unlimited scope. All commands and operands are accepted.

In MVS, your system programmer can restrict the use of operands on any commands. Extending scope of commands to check accessibility to command parameters allows the system programmer to choose what keywords and values need to be restricted. See *NetView Installation and Administration* for more information.

You can use the LIST SCOPE command (page 3-93) to find out which commands you are authorized to use.

Displaying the Status of Network Resources

Use the network display commands to find out the status of various resources that make up that part of the network over which you have control. The display commands and CLISTS are:

- *AINQ* (page 3-8)

  Displays information from the alias translation tables about the names of logical units (LUS), classes of service (COSS), or logmode names that are the same in more than one network.

- *APPLS* (page 3-10)

  Displays the status of network application programs.

- *APPLSACT* (page 3-11)

  Displays the application programs that are active.

- *APPLSPEN* (page 3-12)

  Displays sessions that are waiting to become active.

- *BFRUSE* (page 3-26)

  Displays VTAM buffer usage information.

- *CDRMS* (page 3-42)

  Displays cross-domain resource manager (CDRM) major nodes in your domain.

- *CDRSCS* (page 3-43)

  Displays cross-domain resource (CDRSCS) major nodes in your domain.

- *CLSTRS* (page 3-47)

  Displays the status of all type 1 and type 2 physical units (or cluster controllers) and their respective major nodes.

- *DISG* (page 3-54)

  Displays resource status and connectivity information for LUS, PUS, lines, NCPS, and major nodes.

- *DROUTE* (page 3-61)

  Displays the status of explicit routes (ERS) and virtual routes (VRS) in your domain.

- *LINES* (page 3-85)

  Displays the status of lines and channel links in your domain.

- *MAJNODES* (page 3-104)

  Displays the status of all active major nodes in your domain.

- *NCPSTOR* (page 3-114)

  Displays the contents of an NCP.

- *NODE* (page 3-117)

  Displays information about a specific major or minor node.

- *PATHS* (page 3-120)

  Displays dial-out path information for a switched PU.

- *PENDING* (page 3-121)

  Displays information about nodes in the domain that are pending activation.

- *STATIONS* (page 3-152)

  Displays the status of all cross domain link stations within each node.

- *TERMS* (page 3-160)

  Displays the status of all the LU device types in active major nodes.

You can also enter the VTAM DISPLAY command from your terminal. For more information on this command, see the *VTAM Operation* manual.

Controlling the Network

Use the network commands to change the status of various resources that make up that part of the network over which you have control, to modify what your network has or does, and to reply to network messages. The commands are:

- *ACQ* (page 3-3)

  Causes VTAM to take over control of a resource.

- *ACT* (page 3-5)

  Activates a resource.

- *AUPD* (page 3-17)

  Alters the information in the alias translation table. You can add or delete logical unit, class of service, or logmode definitions, or replace existing definitions with a new set.

- *AUTOTR* (page 3-23)

  Controls buffer tracing for cross-domain terminals.

- *DRDS* (page 3-60)

  Reconfigures an NCP.

- *FTRACE* (page 3-70)

  Starts a trace (IO, buffer, transmission groups, lines, or VTAM) or changes current trace.

- *INACT* (page 3-80)

  Deactivates a resource.

- *INACTF* (page 3-81)

  Forces a resource to be inactivated.

- *MVS* (page 3-111)

  Allows you to send commands to the MVS operating system of the domain you are in.

- *NCPDUMP* (page 3-112)

  Dumps an active NCP.

- *NETWORK* (page 3-115)

  Displays all networks defined to an NCP.

- *NOSTAT* (page 3-118)

  Stops the recording of tuning statistics.

- *RECYCLE* (page 3-128)

  Deactivates and then activates a network resource.

- *REDIAL* (page 3-129)

  Dials a switched line.

- *REL* (page 3-130)

  Releases a previously acquired NCP or PU.

- *TNSTAT* (page 3-163)

  Changes or restarts the recording of tuning statistics for VTAM.

You can also enter the following VTAM commands from your terminal:

```
DISPLAY
MODIFY
VARY
```

For more information on these commands, see the *VTAM Operation* manual.

3710 Network Controller Commands

Use the 3710 network controller commands (sometimes referred to as the Network Product Support commands) to do network management tasks for the IBM 3710 Network Controller. The commands are:

- *CANCMD* (page 3-37)

  Cancels outstanding 3710 commands.

- *DISPCMD* (page 3-56)

  Displays a list of the current outstanding 3710 commands.

- *DISPCNFG* (page 3-57)

  Displays a 3710 configuration or a single element of the configuration.

- *DSISAPDR* (page 3-63)

  Changes the service adapter password for the 3710.

- *LINESTAT* (page 3-86)

  Controls a specific line. With this command you can:

  - Set the line speed to half or full
  - Set a line to a switched backup line
  - Start the secondary link.

- *LPDA* (page 3-100)

  Changes or queries the LPDA status of a line or station attached to a node.

- *RUNDIAG* (page 3-143)

  Performs online diagnostics in a 3710. The diagnostic tests that you can run are to test the:

  - Communication adapter
  - Cable
  - Service modem.

- *THRESH* (page 3-161)

  Displays or changes the current threshold value for stations attached to the 3710 and the NCP.

586X Modem Commands

Use the 586X modem commands to do network management tasks involving the IBM 586X family of modems. The commands are:

- *CANCMD* (page 3-37)

  Cancels outstanding 586X commands except the MDMCNFG command.

- *DISPCMD* (page 3-56)

  Displays a list of the current outstanding 586X commands.

- *LPDA* (page 3-100)

  Changes or queries the LPDA status of a line or station attached to a node.

- *MDMCNFG* (page 3-105)

  Allows you to browse and update the 586X modem configuration.

- *MDMCNTL* (page 3-107)

  Allows you to:

  - Change the transmission speed
  - Close or open a contact (built-in relay)
  - Detect the current of a sensor
  - Dial a station using the switched network backup line
  - Disconnect a station using the switched network backup line.

- *THRESH* (page 3-161)

  Displays or changes the current threshold value for stations attached to the 586X and the NCP.

Listing Operator-Related Resources

Use the LIST command (page 3-93) to display information about operator-related resources, such as:

- Network log
- Trace log
- NetView tasks

- Operator identification
- Profile
- Terminal status.

Message Control Commands

You can use the message control commands to send and receive messages to other operators or to the network log. The commands are:

- *ASSIGN* (page 3-13)

  Allows you to direct messages to other operators or to the network log. This function is also provided in the message automation table.

- *AUTOMSG* (page 3-20)

  Activates the message automation function. It can also be used to display the status or deactivate all automation functions.

- *LIST MSG* (page 3-93)

  Lists the operators that are authorized to receive messages.

- *MSG* (page 3-110)

  Allows you to write and send a message to other operators or to the network log.

Network Log and Trace Log Commands

Use the network log, which includes NetView or VTAM commands, responses, and unsolicited messages, to record terminal activity. Each message contains the date and time it was sent and the name of the sender, destination, and message type from which it was sent.

NetView maintains the network and trace logs on a VSAM file. The network log and trace log can be started automatically by the operator. When the primary file is filled with information, logging switches automatically to a secondary file, if one is defined. When the secondary file is filled, the recording may stop or switch back to the primary file. Ask your system programmer how this works on your system.

You can use the following commands to control the network and trace logs:

- *LIST DSILOG* (page 3-93)

  Displays the status of the network log.

- *LIST DSITRACE* (page 3-93)

  Displays the status of the trace log.

- *START* (page 3-149)

  Starts the network and trace logs.

- *STOP* (page 3-154)

  Stops the network and trace logs.

- *SWITCH* (page 3-159)

  Switches the network and trace log files.

You can print the inactive network and trace log files in batch mode while the system is using the active file as the log.

On an MVS system the printing is done using the JCL program DSIPRT. You may also be able to print the active log using DSIPRT. For information, ask your system programmer.

On a VM system you can print the log as follows:

- Use the CMS EXEC DSIPRT. When using DSIPRT you must specify either PRIMARY or SECONDARY as a parameter, depending on which log you want to print.
- Use the PRINTLOG CLIST. This CLIST is included in the sample NCCFLST files. For more information, see your system programmer or the *NetView Installation and Administration Guide*.
- Use the START TASK=DSIPRT command from the system console. Before you do this, you must first send the following commands to the system to set up the required files:

  ```
  FILEDEF DSIINP DUMMY (LRECL 80 PERM
  FILEDEF DSILST PRINTER (LRECL 132 PERM
  DLBL DSILT fm DSN log (PERM VSAM)
  ```

  where *fm* is the VSAM minidisk access mode and *log* is the file name defined by the system programmer.

You can browse the contents of the network log by using the status monitor (see 11-1) or the *BROWSE* command (page 3-32).

Service Point Commands

Use the service point commands to provide facilities for a network operator to initiate or terminate sessions between logical units. The commands are:

- *DISPCMD* (page 3-56)

  Displays a list of the outstanding NPS commands.

- *CANCMD* (page 3-37)

  Allows you to cancel any outstanding network product support (NPS) commands except for CANCMD, DISPCMD, and MDMDNFG.

- *LINKDATA* (page 3-87)

  Requests that a service point application return device data for a given link or link segment.

- *LINKPD* (page 3-89)

  Requests that a service point application do problem determination on a given link or link segment.

- *LINKTEST* (page 3-91)

  Requests that a service point application test a given link or link segment.

- *RUNCMD* (page 3-142)

  Allows service point application commands to be sent to a service point and executed by a given service point application.

Automation Commands

Use the automation commands to do routine activities automatically. Commands may be started by a timer, either at a specific time or repetitively at intervals you specify. You do not have to be logged on when the commands are scheduled to run. Commands can also be started whenever certain messages are issued in the system or received on the network. The automation commands and CLISTS are:

- *AT* (page 3-15)

  Schedules a command to be run once at a specific time of day. For example, at 2:00 P.M..

- *AUTOMSG* (page 3-20)

  Activates a message automation member of DSIPARM. The IF...THEN... automation statements will determine which conditions within messages should cause commands or CLISTS to be run.

- *DELAY* (page 3-50)

  Tells the system to wait for a specified amount of time and then, if a command is specified, send it to the system.

- *EVERY* (page 3-67)

  Schedules a command to be run during certain intervals of the day. For example, every 20 minutes.

- *PURGE* (page 3-124) or *DELAY2* (page 3-51)

  Stops a timer request scheduled by the AT or EVERY command.

- *LIST TIMER* (page 3-93)

  Displays the status of a timer request.

Data Services Task Commands

Use the data services task (DST) commands to control data services tasks such as the network and trace logs. The following operator commands are used to control the data services tasks:

- *LIST STATUS* (page 3-93)

  Displays the status of data services tasks.

- *PURGE* (page 3-124)

  Purges a data services task request.

- *START* (page 3-149)

  Activates a data services task.

- *STOP* (page 3-154)

  Forces a task to be ended.

- *SWITCH* (page 3-159)

  Lets you use either the primary or secondary network and trace logs, or switch control of the DST tasks. Check with your system programmer. Your network

and trace logs may switch automatically between the primary and secondary files, as needed.

Operating System Commands

In MVS systems, system operator commands can be entered from NetView operator stations and CLISTS. MVS commands or system command verbs can be used directly if CMDMDLS are defined. (See *NetView Installation and Administration Guide*.)

- *MVS* (page 3-111)

  Is used to enter an MVS system operator command from NetView.

Communicating with Multiple NetViews

Communicating with more than one NetView from your operator station is sometimes referred to as a NetView-NetView task (NNT). The commands to do this are:

- *LIST STATUS* (page 3-93)

  Displays the current configuration for a specified operator or the status of all cross-domain NetView sessions.

- *ROUTE* (page 3-138)

  Sends commands to a NetView in another domain.

- *START* (page 3-149)

  Starts a cross-domain session with another NetView.

- *STOP* (page 3-154)

  Ends the cross-domain session with another NetView.

Automatic Routing of Commands

You can also automatically route VTAM commands to other domains. Your installation can define resources as being controlled by another NetView (in another domain). When you enter a VTAM command for one of these resources, the system automatically sends the command to the right domain. Before entering the command, you must be logged on to the other domain using the START command and be defined as having the proper span authority in the other domain. For example, an operator in domain D1 could enter the following command for a resource in domain D2:

```
DISPLAY NET,ID=LU2024A1
```

D1 searches its table of resources for resource LU2024A1. Not finding that resource, the system searches the resource routing defaults (RRD) statements and finds that the resource is in domain D2. The command is sent to D2 and, if LU20241A is in the operator's span of control in D2, information about the device is displayed to the operator in D1.

In some situations, you must override the system's understanding of which domain controls the resources. If a new VTAM takes over the resources, the operator entering commands must prefix the resource name with the name of the domain that now controls the resource. You use manual routing in this case to override automatic routing.

When resources are controlled with span of control, you can use START RESOURCE and STOP RESOURCE commands to change the implicit routing for a resource.

Connecting to VTAM Applications

You can connect to VTAM applications from NetView. This is sometimes referred to as the terminal access facility (TAF). You can use the VTAM applications in either full-screen session or operator-control session. VTAM applications that you can access are IMS/VS, CICS/VS, TSO, HCF, NPM, and other NetView sessions. While you are in VTAM applications, NetView processing continues.

The commands that you would use to access VTAM applications from NetView are:

- *BGNSESS* (page 3-28) *BOSESS* (page 3-31) and *BFSESS* (page 3-27)

  Starts a session with another subsystem.

- *SENDSESS* (page 3-144)

  Sends commands and messages to VTAM applications.

- *LISTSESS* (page 3-96) or *LSESS* (page 3-102)

  Displays the sessions that you are connected to and obtains information about each session.

- *RTRNSESS* (page 3-140) or *RSESS* (page 3-139)

  Returns to a disconnected session with a VTAM application.

- *ENDSESS* (page 3-64) or *ESESS* (page 3-66)

  Ends a session with a VTAM application.

At any time during a full-screen session, you can disconnect from the session by pressing a disconnection key. A disconnection key can be any PA or PF key or the CLEAR key. It is defined on BGNSESS and the RTRNSESS command. If you have not defined one, the PA1 key is your default disconnection key.

For chained sessions (when you connect to another NetView and then from there to VTAM applications), the disconnection key for each session should be different.

When you press the disconnection key, a disconnection menu is displayed. Among the several choices is the ability to go back to regular line mode. When you return to regular line mode, any messages that were delayed are now displayed. Here are what the options for the disconnection panel mean:

- *Option 1* interrupts the full-screen session and displays the regular line mode panel. Any messages that were delayed are now shown. You are now disconnected from your full-screen session. To resume the session, you must enter the RTRNSESS command. If your terminal receives information for the disconnected session, you are notified with this message:

  ```
  DSI479I DATA RECEIVED ON FULL-SCREEN SESSION FROM APPLID=applid
  ```

  Processing on the disconnected session stops until you enter the RTRNSESS command to resume the session.

- *Option 2* interrupts the session and shows the regular line mode panel. Any messages that were delayed are now shown. You are disconnected from the full-screen session. To return to it, you must enter the RTRNSESS command. You

are not notified if any information is received for the disconnected session. Processing continues with your disconnected session as if you had left your terminal unattended.

- *Option 3* has two meanings, depending on when you pressed the disconnection key.

  If you pressed the key after entering a command or message but before you received a reply (your keyboard is locked), option 3 reads "SEND ATTENTION TO applid". This option sends an attention interruption to a VTAM application.

  If you pressed the disconnection key when the keyboard was unlocked, option 3 shows which key you pressed (either a PA, PF, or CLEAR key). This option sends the key command to the VTAM application where it is interpreted according to the specifications of that subsystem. In this way, one key can be used both by the subsystem and as the disconnection key.

- *Option 4* cancels the disconnection sequence and returns you to the full-screen session as it was before you pressed the disconnect key. This is the default if you enter anything except the options given.

  If you use the CLEAR key as a disconnection key, you must be careful using option 4, or using the RTRNSESS command. In these cases, the screen is erased when you return to the session. You must then press the refresh key as defined by the VTAM application to which you are connected. This is so the screen will be reformatted by the VTAM application.

You can receive online help information on connecting to other VTAM applications by entering the following command:

```
HELP  TAF
```

Interconnected Networks

The alias name translation facility lets networks be interconnected through a gateway node without each network having to rename logical units, classes of service, or logon mode names that are the same in more than one network. The names of your NetViews must be unique. The commands that you can use are:

- *AINQ* (page 3-8)

  Retrieves information from the alias translation table.

- *AUPD* (page 3-17)

  Alters alias translation tables.

Recording NetView Processing

Use the *TRACE* command (page 3-164) to initiate a sequence trace that records (in either an internal table or the trace log) a sequence of NetView processing.

Ending Commands or CLISTs

The *RESET* command (page 3-133) or the ATTN key, ends some commands or CLISTS.

Error Recovery Commands

Use the error recovery commands when the defined error count is reached for your operator identification or terminal. This condition is called error recovery status. The authorized operator receives the message DSI143I indicating that your terminal or identification is in error recovery status. When your operator identifier is in error recovery status you cannot log on or off. Another operator, however, can issue one of the following commands:

- *AUTOTASK* (page 3-22)

  Starts the automated operator specified. If the automated operator has stopped for any reason, the AUTOTASK command restarts it. If the automated operator was not previously defined, the AUTOTASK command creates one.

- *MOVE* (page 3-109)

  Shifts work from one terminal to another.

- *START* (page 3-149)

  Re-establishes a terminal in error recovery status or restarts a session in error recovery status between a terminal and its associated task.

- *STOP* (page 3-154)

  Can be used to:

  - Stop a session between an operator and the terminal
  - Stop a particular task
  - Deactivate the network log
  - Deactivate the trace log
  - Deactivate a cross-domain NetView session
  - Deactivate a terminal session with NetView.

Ending Your NetView Session

The LOGOFF command (page 3-99) ends your session with NetView. See the note on Stopping NetView (page 3-154).

CLIST Commands

You can code sequences of commands (CLISTS) to perform functions that you might otherwise perform routinely. For example, a CLIST can perform a function when a particular message is sent to the system.

CLISTS are stored in a file and are called by name. You can use CLISTS like other commands by entering the CLIST name and any data. You can enter many commands in sequence with very little effort. To find out how to write CLISTS, refer to *NetView Command Lists*.

You can use the *LIST* command (page 3-93) or the *BROWSE CLIST* (page 3-32) to display the contents of a CLIST.

Some CLISTs pause for you to enter information. During this pause, a P or W appears in the upper right hand corner of the screen. While the CLIST is pausing, you can enter only a screen control command or one of the following CLIST commands:

- *GO* (page 3-73)

  Tells the CLIST to continue processing. You can use this command to pass values to the CLIST.

- *CANCEL* (page 3-36)

  Stops CLIST processing. You can then enter any command you like.

- *STACK* (page 3-148)

  Suspends CLIST processing so that you can enter other commands. The P or W in the upper right corner of the screen disappears when STACK is entered.

- *UNSTACK* (page 3-168)

  Reinstates CLIST processing after a pause. The P or W in the upper right corner of the screen reappears when UNSTACK is used.

CLISTs can also use a WAIT facility. When a CLIST is in WAIT status, a W appears in the upper right-hand corner of the screen. WAIT status is similar to &PAUSE, except that the CLIST is waiting for messages or other events, rather than operator data. Other commands may be delayed until the CLIST is finished. When in WAIT status, you can enter only GO, CANCEL, STACK, UNSTACK or screen control commands. When in WAIT status, you cannot enter data with the GO command. Use the GO command to end the WAIT without canceling the CLIST.

The &WAIT function provides you with a way to specify a time-out option. When &WAIT is used under an automation task, &WAIT should specify a reasonable time-out value, so that the CLIST does not get trapped in an endless wait.

&PAUSE should not be used under the automation task because it does not provide a time-out facility.

Note: It is possible to use &PAUSE combined with using the GO command as a result of an automated message. The GO command in this case would serve to break the wait implied by the &PAUSE.

You can use the STACK command to suspend a CLIST WAIT so that you can enter commands or other CLISTs. You then use the UNSTACK command to reinstate the CLIST WAIT.

BROWSE Command

You can use the BROWSE command to look at members in the CNMPNL1, DSICLD, DSIPARM, DSIVTAM, or DSIPRF libraries. For VM these are separate files with a file type of NCCFLST or VTAMLST. The BROWSE command is also used to look at the network log.

You can use the BROWSE command (page 3-32), for example, if you would like to see the contents of a CLIST, a network log, an operator profile, or a VTAMLST member.

On VM, the first time a VTAMLST member is browsed, an OPEN ERROR message will be received. The message results because NCCFLST is searched first, and then VTAMLST. Ignore the message; the function will execute correctly.

Chapter 3. Command Facility Command Descriptions

This section describes the formats of the base the NetView program commands and CLISTs. These commands can be entered from the command facility or any other NetView component.

The commands are listed in alphabetical order. Each command description includes the format and description of operands and, where applicable, usage notes, responses, and examples.

The syntax and notation conventions used for the commands and CLISTs are as follows:

- Items shown in braces { } represent alternatives. You must choose one.

  For example,

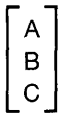
  

  or {A|B|C}

  indicates that you must specify one item only: A, B, or C.

- Items shown in brackets [ ] are optional. You may choose one.

  For example,

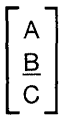
  or [A|B|C]

  indicates that you may enter A, B, or C, or you may omit the operand.

- A series of three periods (...) indicates that a variable number of items may be included in the list.

- An underscored item shows the alternative, or default, the system will choose if you do not specify an item.

  For example,

  If no operand is specified, B is assumed.

- Lowercase italicized items are variable; substitute your own value for them.

- Uppercase items must be entered exactly as shown.

- Parentheses must be entered as shown.

- Where operands can be abbreviated, the abbreviations are shown in capital letters.

  For example,

  All

  can be entered as A or ALL.

- Where brackets ([ ]) are nested, you must include commas to denote the absence of the required positional operands. For example,

  ```
  Act     A
          [,B
          [,C]]
  ```

  To specify C only, enter ACT A,,C.

For online help on the command facility (NCCF) commands, enter:

```
HELP NCCF COMMANDS
```

For help on a specific command, enter:

```
HELP command
```

where *command* is the name of the command.

ACQ

From a backup SSCP (VTAM), you can use the ACQ CLIST to acquire resources that belong to another SSCP. This CLIST is used mainly for backup and recovery.

The format of the ACQ CLIST is:

```
ACQ          idname
              [,Act
              [,All|,Comp|,Only|,U
              [,luname[,logmode]]]]
```

where:

idname — is the name of the resource to be acquired. This resource must be either an NCP major node or a physical unit within an NCP major node.

Act — specifies that the acquired resources should be activated.

All — specifies that all the acquired subordinate resources should also be activated, regardless of their defined ISTATUS (initial status) values in the resource definition statements. These values are set up by the system programmer.

Comp — specifies that during the activation of the major node, any subordinate minor nodes being acquired should also be activated, according to their ISTATUS values. This is the default.

Only — means to activate the acquired resource only, regardless of its defined ISTATUS values.

U — specifies that all the acquired subordinate resources should also be activated, according to their defined ISTATUS (initial status) values.

luname — is the name of a primary LU to which any device-type logical units are to be logged on.

logmode — is the logmode name to be used for any logon initiated for a logical unit as a result of this CLIST.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  ACQ
```

For more information on this command, see *VTAM Operation*.

If you omit a positional operand, you must indicate its absence by a comma. For instance, in the following example the third operand has been omitted:

```
ACQ A04NV4,ACT,,NCF01
```

Example

If HOST2 with NCP21 has failed, and you would like to take over its resources, you would use the following command:

```
ACQ NCP21
```

Response

If the ACQ request is successful, the system responds with the following messages:

```
IST097I  VARY     ACCEPTED
IST670I  VARY ACQ PROCESSING FOR ID=NCP21 COMPLETE
```

ACT

The ACT CLIST activates VTAM resources.

The format of the ACT CLIST is:

```
ACT        idname
            [,All|,Comp|,Only|,U|,WARM]
            [,ON|,OFF]|[,YES|,NO]
            [,LOGON=luname[,LOGMODE=logmode]]
            [,DUMPSTA=name]
            [,LOADSTA=name]
            [,U=channelname]
            [,RNAME=name|,RNAME=(name1,...,name13)]
```

where:

idname — is the name of the resource to be activated.

All — specifies that the resource named in the *idname* operand and all the subordinate resources should be activated, regardless of their defined ISTATUS values in the resource definition statements. These values are set up by the system programmer.

Comp — specifies that all subordinate minor nodes should also be activated, according to their ISTATUS (initial status) values. This is the default.

Only — means to activate the resource specified by *idname* only; none of the subordinate resources should be activated, regardless of their defined ISTATUS values.

U — specifies that the resource named in the *idname* operand and all of the appropriate subordinate resources defined with ISTATUS=ACTIVE should be activated.

WARM — This option is valid only under MVS. It causes VTAM to restore the minor nodes to the status recorded for them in their configuration restart data set. However, if the major node's configuration restart data set has never been used for status recording, or if the major node does not have a configuration restart data set, VTAM rejects the ACT CLIST.

ON — specifies that a switched SDLC line is to be put in answer mode. Do not use this operand with RNAME, LOGON, LOADSTA, DUMPSTA, U, LOGMODE, or WARM.

OFF — specifies that a switched SDLC line is to be taken out of answer mode. Do not use this operand with RNAME, LOAD, LOGON, LOADSTA, DUMPSTA, U, LOGMODE, or WARM.

YES — specifies that the communication controller associated with the specified NCP is to be reloaded with the appropriate NCP load module.

NO	specifies that the communication controller associated with the specified NCP is not to be loaded during the processing of this ACT CLIST.
LOGON = luname	is the name of a primary LU to which any logical units within the scope of this CLIST are to be logged on.
LOGMODE = logmode	is the logmode name to be used for any logon initiated for a logical unit as a result of this CLIST.
DUMPSTA = name	applies only to the first activation of an NCP. DUMPSTA is the name of a link station in an adjacent subarea node through which any later static dump operations for this NCP are to be carried out.
LOADSTA = name	applies only to the first activation of an NCP. LOADSTA is the name of a link station in an adjacent subarea node through which any load operations for this NCP are to be carried out.
U = channelname	applies only to the activation of an inactive channel-attached NCP, or an SNA physical unit, or an inactive channel link to an adjacent host subarea. The U operand specifies the channel attachment to a communication controller, to an adjacent host, or to an SNA physical unit as it is known to the operating system and through which VTAM is to establish connectivity to the specified NCP, VTAM, or physical unit.
RNAME = name	applies only to the first activation of an NCP. RNAME specifies the names of up to 13 SDLC link stations in adjacent NCP subarea nodes through which the specified NCP is attached to the network. It also specifies which SDLC link stations (and associated links) in adjacent NCP subarea nodes are to be activated automatically as part of the activation of the specified NCP.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  ACT
```

For more information on this command, see *VTAM Operation*.

Example

If you would like to activate physical unit P12175 and all resources under it, you would use the following command:

```
ACT  P12175,ALL
```

Response

If the ACT request is successful, the system responds with the following messages:

```
IST097I  VARY     ACCEPTED
IST093I  P12175   ACTIVE
```

AGAIN

The AGAIN command causes the last command or CLIST you entered to be rerun. The AGAIN command is valid only in the command facility.

The format of the AGAIN command is:

```
AGAIN
```

AINQ

The AINQ command retrieves information from the alias translation tables.

The format of the AINQ command is:

```
AINQ    {ORIGNAME=name|TARGNAME=name}
         [,ORIGNET=name]
         [,TARGNET=name]
         [,TYPE={LU|COS|MODE}]
```

where:

ORIGNAME = name — is the resource name as the origin network knows it. For a logical unit, this is an alias name. For a class of service (COS) or logon mode, this is the name of the COS or logon mode entry, known in the originating network, that is equivalent to the entry specified for the target network.

TARGNAME = name — is the resource as it is known to the target network. For a logical unit, this is the real name. For a COS or logon mode entry, this is the local name defined in the target network.

ORIGNET = name — is the source network (the identifier of the network to which the name type applies). If you do not specify this, ORIGNET becomes the network identifier of the network that NetView is running on. If NetView is running in a non-gateway host, you should specify the ORIGNET operand.

TARGNET = name — is the network identifier of the target network. TARGNET is not required if you specify ORIGNAME and TYPE=LU.

TYPE = LU — specifies that the ORIGNAME or TARGNAME is an LU. This is the default.

TYPE = COS — specifies that the ORIGNAME or TARGNAME is a class of service.

TYPE = MODE — specifies that the ORIGNAME or TARGNAME is a logon mode.

Usage Note

Scope checking is done on the AINQ command and on the ORIGNET and TARGNET operands. The default values for ORIGNET and TARGNET can also be scope checked.

Example

You are logged on to NetView in network NETA. You know that the alias name of a specific terminal LU in NETA is TERMA1, and you want to display the real name of that LU as it is known in target network NETB.

To get translation information for TERMA1 in network NETB, enter:

```
AINQ ORIGNAME=TERMA1,ORIGNET=NETA,TYPE=LU,TARGNET=NETB
```

Response

The system responds with the following messages:

```
DSI743I  INQUIRY DATA - ORIGNAME=TERMA1,ORIGNET=NETA,TYPE=LU, TARGNET=NETB

DSI744I  INQUIRY RESULT - TARGNAME=TERMB1,TARGNET=NETB, CDRM=SSCPIDB
```

The response contains the translated name (TERMA1 translates to TERMB1).

APPLS

The APPLS CLIST displays active, inactive, or all application program minor nodes for each active application program major node.

The format of the APPLS CLIST is:

```
APPLS          [Act|ALL|Inact]
```

where:

Act displays all active application program minor nodes within each major node.

ALL displays all application program minor nodes within each major node.

Inact displays all inactive application program minor nodes within each major node.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  APPLS
```

For more information on this command, see *VTAM Operation.*

Example

To display all application programs, use the following command:

```
APPLS ALL
```

Response

If the APPLS request is successful, the system responds with the following messages:

```
IST097I DISPLAY ACCEPTED
IST350I VTAM DISPLAY - DOMAIN TYPE = APPL MAJ NODES/NAMES
IST089I VTAMSEG   TYPE = APPL SEGMENT     , ACTIV
IST360I APPLICATIONS:
IST080I CDRM12     ACTIV    ISTOLTEP ACTIV    ISTATA00 CONCT
```

APPLSACT

The APPLSACT CLIST displays VTAM application programs in a specific state. The default state is ACTIVE.

The format of the APPLSACT CLIST is:

```
APPLSACT        [ACTIV|INACT|CONCT]
```

where:

ACTIV displays active application programs. This is the default.

INACT displays inactive application programs.

CONCT displays connected application programs.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  APPLS
```

For more information on this command, see *VTAM Operation*.

The APPLSACT CLIST cannot run under the PPT.

CAUTION:
Incorrect results may occur when running the APPLSACT CLIST while MSGMOD is on.

Example

To display all active applications, use the following command:

```
APPLSACT
```

Response

The system responds with the following messages:

```
CNM307I APPLSACT : THE FOLLOWING ARE IN THE ACTIVE STATE
CNM308I APPLSACT : CDRM12      ISTNOP
CNM308I APPLSACT : CDRM21      CDRM22
```

The active applications are CDRM12, ISTNOP, CDRM21, and CDRM22.

APPLSPEN

The APPLSPEN CLIST displays sessions for particular application programs in a specific state. The default state is PENDING ACTIVE.

The format of the APPLSPEN CLIST is:

```
APPLSPEN        applid
                 [,status]
```

where:

applid — is the application program for which sessions will be displayed.

status — is from one to eight characters long. Any session status matching the characters that you enter are displayed. The default is PND.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  NET,E,ID=&APPLID
```

For more information on this command, see *VTAM Operation*.

The APPLSPEN CLIST cannot run under the PPT.

CAUTION:
Incorrect results may occur when running the APPLSPEN CLIST while MSGMOD is on.

Example

To display all active sessions with the application named APPL1, use the following command:

```
APPLSPEN APPL1,ACT
```

Response

If the APPLSPEN request is successful, the system responds with the following messages:

```
CNM309I APPLSPEN : NAME= APPL1 ,STATUS= ACTIV ,DESIRED  STATE= ACTIVE
CNM309I APPLSPEN : ACTIVE SESSIONS= 0003  SESSION REQUESTS = 0001
CNM311I APPLSPEN : NAME     STATUS    SESSION ID
CNM313I APPLSPEN : APPL2    ACTIV-SEC 008000019D5EA889
CNM313I APPLSPEN : A5SUBA9  ACTIV-PRI 0000 0000  2   1 OURNETID
CNM313I APPLSPEN : LUB203   ACTIV-SEC 0000 0000  3   1 NETB
CNM312I APPLSPEN :          3 SESSION(S) IN THE ACT STATE FOR APPL1
```

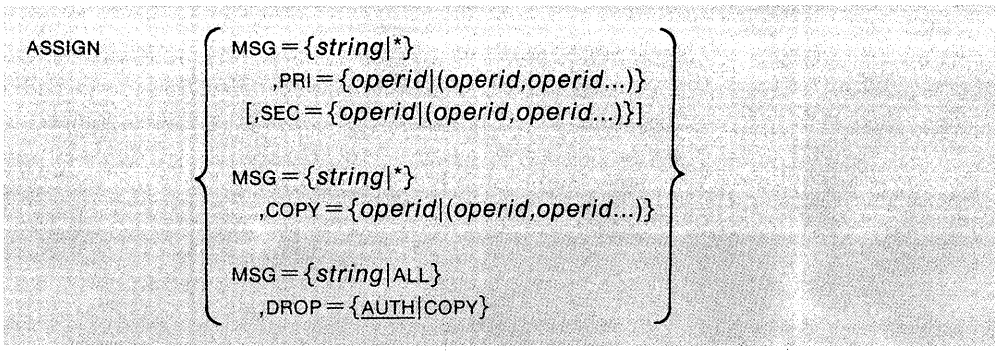
Notice that since you requested a status of ACT, you received both ACTIV-SEC and ACTIV-PRI.

ASSIGN

The ASSIGN command defines which operators receive copies of solicited messages. The ASSIGN command with the DROP option removes assignments made with previous ASSIGN commands. The ASSIGN command with the COPY option identifies operators who receive copies of solicited messages.

If ASSIGN defines SYSOP or LOG as the primary receiver for a message for which message automation is in effect, then that message will not be automated.

The format of the ASSIGN command is:



where:

MSG=string — identifies the messages that are to be routed to a specified operator, copied to other operators, or dropped from the routing tables. You can use an abbreviated form to specify groups of messages by prefixes by ending the prefix with an asterisk. For example, to specify all messages beginning with DSI, use:

```
DSI*
```

MSG=* — means to send all messages and commands to the operators listed.

MSG=ALL — drops all messages from the routing tables.

PRI=operid — is the list of operators to receive a copy of the solicited or authorized message. Only the highest priority operator in the list who is logged on will be notified. Operator priority is determined by the order they are defined in DSIOPF.

SEC=operid — is the list of operators who are to receive copies of the solicited or authorized message. SEC applies only if PRI is also specified. All operators in this list receive the message if they are logged on, and at least one operator in the PRI list is logged on.

COPY=operid — specifies that the listed operators receive copies of solicited messages indicated by MSG whenever messages are sent to any terminal in this domain. If you specify MSG=*, the listed operators receive copies of all commands as well as all solicited messages. The message sent to the COPY receiver is flagged with a "+" in the last position of the domain ID field. COPY lets you collect network status information by routing access method events such as active or inactive messages.

operid — is an operator's ID or a list of operator ids. SYSOP, the system console operator, is a reserved ID. You can specify SYSOP to route messages to the system operator. If you specify *operid* as LOG, additional copies of the messages are sent to the network log.

DROP=AUTH — drops the specified messages from the PRI and SEC assignments. AUTH is the default.

DROP=COPY — drops the specified messages from the COPY assignments.

Usage Note

The ASSIGN command does not work for full-screen response messages.

For multiple-line write-to-operator (MLWTO) messages, the entire set of message lines are assigned, as a unit, when the first line (control line) is assigned. Individual lines (other than the first line) cannot be assigned separately from the rest of the MLWTO.

Example

To direct all your solicited and authorized messages to OPER2, type:

```
ASSIGN MSG=*,PRI=OPER2,SEC=OPER3
```

Response

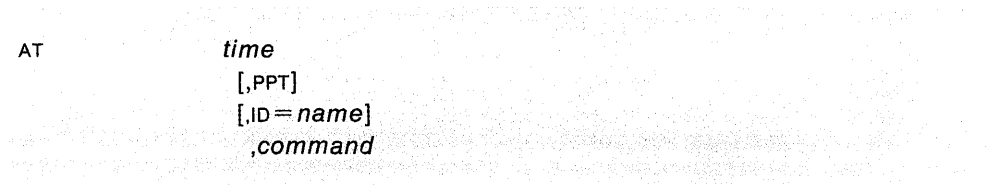
All solicited and authorized messages will be sent to OPER2 if the operator is logged on. Copies of the messages will be sent to OPER3 if OPER2 and OPER3 are logged on. The messages will be marked with a % in the last position of the domain ID field on OPER2's screen and with an * on OPER3's screen to indicate that they are solicited messages.

Note: The functions of the ASSIGN command can also be performed using the ROUTE and CMD actions of the message automation table (see *NetView Administration Reference* IF...THEN.. automation statement).

AT

The AT command sets a timer that causes a command or CLIST to be executed at the specified time of day.

The format of the AT command is:



where:

time — indicates the time of day when the command is to be executed. Time is specified in the form hours:minutes, using a 24-hour clock.

PPT — specifies that the command is to be executed whether or not the operator is logged on when the timer expires. The following commands cannot be run under the PPT: AGAIN, AUTOWRAP, BGNSESS FLSCN, CANCEL, CLEAR, CLOSE, DISG, ENDSESS FLSCN, GO, HALT, INPUT, LINKDATA, LINKTEST, LIST, LISTSESS FLSCN, LOGOFF, MDMCNTL, MDMCNFG, MODIFY, MOVE, REPLY, RESET, RETRIEVE, RETURN, ROLL, ROUTE, RTRNSESS, SET, STACK, START, STOP, SWITCH, UNSTACK.

ID=name — a one- to eight-character identifier that you define for this timer request. The name cannot be ALL and cannot start with SYS.

command — the command or CLIST to be executed when the timer expires. This must be the last operand.

Usage Note

Commands defined as "regular" or "both" when NetView was installed may be used with AT and EVERY. Commands defined as "immediate" cannot be used with AT. Commands scheduled under the PPT cannot run in the order that you specified if the value of the time operand is the same for each command.

If the PPT is not coded, the command runs only if you are logged on at the indicated time. The command is run under the task where the AT command was issued, and all responses are sent back to that operator.

No scope-checking is done for commands running under the PPT. Therefore, make sure that scope-checking for the PPT operand is defined during installation.

Example

If it is 14:05 and you want all the major nodes displayed 5 minutes from now, type:

```
AT 14:10,MAJNODES
```

To schedule the command MAJNODES to run at a specific time even if you are *not* logged on, use the following command:

```
AT 14:10,PPT,MAJNODES
```

Response

You will see the following messages on your screen if the AT command runs successfully.

```
DSI034I COMMAND SCHEDULED BY AT/EVERY COMMAND - commandtext
DSI201I TIMER REQUEST SCHEDULED FOR EXECUTION ID=name
```

AUPD

Use the AUPD command to alter the alias translation tables. You can add definitions, delete definitions, and replace definitions with a new set.

The format of the AUPD command is:

```
AUPD        MEMBER=aliasname
             [,ORIGNET={name|*}]
             [,TYPE={LU|COS|MODE|ALL}]
             [,ADD|,DELETE]
```

where:

MEMBER=aliasname	is the name of the member that is to be altered. For VM, this is the name of the NCCFLST file.
ORIGNET=name	identifies the network associated with the member.
ORIGNET=*	means all networks represented in the member and the alias tables are the subject of the request.
TYPE=LU	identifies LU as the type of alias definition to be updated in the table.
TYPE=COS	identifies COS as the type of alias definition to be updated in the table.
TYPE=MODE	identifies the logon mode as the type of alias definition to be updated in the table.
TYPE=ALL	means that all types pertaining to the member name and ORIGNET in either the alias table or member are the subject of the request. If the TYPE operand is omitted, TYPE=ALL is assumed.
ADD	lets you add new translation definitions to the alias translation tables or replace existing translation definitions. If any records already exist in the translation table for these members, they are deleted before the new records are written.
DELETE	causes the translation definitions in ORIGNET and TYPE to be deleted from the translation tables.

Usage Note

The records read in from the definition tables are processed sequentially, one at a time. If there is a syntax error, an error message is issued, the record is ignored, and the next record is read. Unusual conditions, such as an input or output error while reading, can cause the AUPD request to stop with only part of the tables updated. The processed record count, along with any error messages, tell you whether the command was successful.

When adding or replacing translation tables, the AUPD command reads the predefined translation records from the specified member and adds these records to the tables in storage. The AUPD command does not let you alter predefined records in the alias definition members. If you want to change a translation record that is cur-

rently in use, you must first determine the member name that contains the record to be changed. In order to change a translation record that is in use, you must change the record in the same member that was used by the alias task to construct the translation tables. The translation record can be changed using a system editor. Once the member contains the information you want, you can enter the AUPD command specifying, with the ADD option, the same member name you just changed.

In VM, if you specify a member that does not exist, you will receive unpredictable results.

Example

If the NetView ALIASMEM initialization statement specified member names DEF001 and DEF002, then the translation tables would be built as shown in Figure 3-1.

The definitions are kept together by network name, but NetView remembers which *member* each definition record came from.

If you entered:

```
AUPD MEMBER=DEF001,ORIGNET=NETWRKA,DELETE
```

then all the translation table entries for NETWRKA would be deleted because they were all defined in member DEF001.

If you entered:

```
AUPD MEMBER=DEF001,ORIGNET=NETWRKC,DELETE
```

then only the first two definitions (TERM1 and TERM2) for NETWRKC would be deleted. The definitions for NETWRKA would remain unchanged, and the TERM3 and TERM4 definitions for NETWRKC would remain unchanged because they were defined in member DEF002.

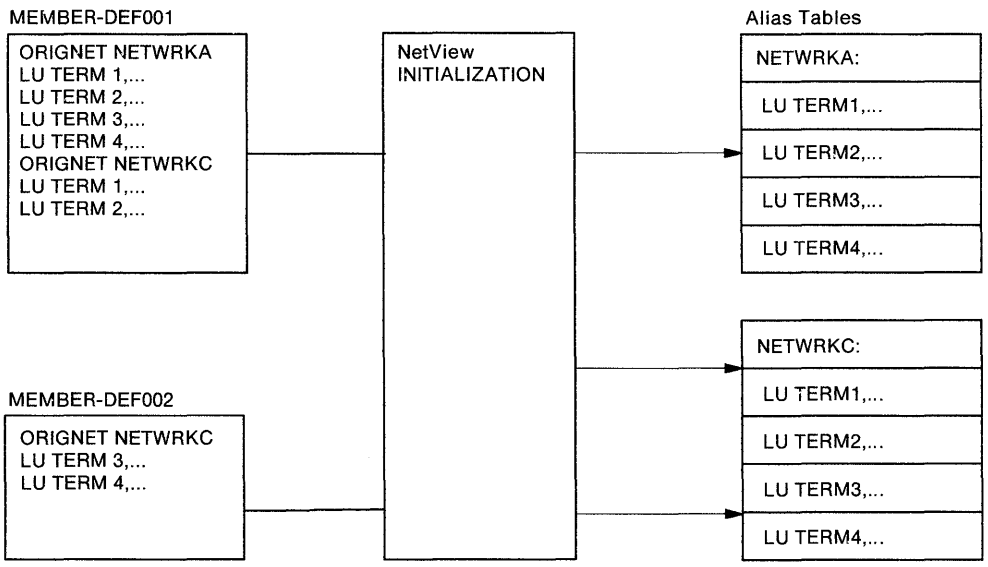


Figure 3-1. Example of Alias Translation Tables

The output from the AUPD command tells how many records were added to or deleted from the translation tables.

The records read from the definition tables are processed sequentially, one at a time. Syntax errors cause error messages. The record is ignored and the next record read. Unusual conditions such as an input or output error while reading the member can cause the AUPD request to stop with only part of the tables updated. The processed record count, along with any error messages, tell you whether or not the command was successful.

Response

If an AUPD command is issued and the ADD option is specified for a member not already initialized, the following messages appear at your terminal:

```
*AUPD MEMBER=DEF03
-DSI751I  COUNT OF RECORDS ADDED FOR UPDATE OF MEMBER=DEF03 -
ORIGNET=nn, LU=nn, COS=nn, MODE=nn
```

If you issue an AUPD command with the DELETE option, the following messages appear:

```
*AUPD MEMBER=DEF03,DELETE
-DSI738I  COUNT OF RECORDS DELETED FOR UPDATE OF MEMBER=DEF03 -
LU=nn, COS=nn, MODE=nn
```

If you issue an AUPD command with the ADD option to replace an existing member, then message 738 will precede message 751.

AUTOMSG

The AUTOMSG command activates the message automation function by specifying a member of DSIPARM to be used to identify the messages that are to invoke CLISTs or command processors. The command can also be used to display the status or deactivate all automation functions.

The format of the AUTOMSG command is:

```
AUTOMSG        {OFF|STATUS|MEMBER=membername [,TEST]}
```

where:

MEMBER=membername — indicates the DSIPARM member you want to activate. For VM, this is file name 'membername' and file type NCCFLST. This member contains IF...THEN automation statements. The IF...THEN... automation statements identify the messages that are to invoke CLISTs or commands.

The member loaded will be used for message automation throughout the system, so only one member will be used at any time. The MEMBER operand can be used to change the member being used or to reload an updated member.

OFF — deactivates the message automation function.

STATUS — displays the name of the member in use, or a message stating that the message automation function is inactive.

TEST — Allows the users to perform syntax checking of a message automation file.

Note: No other operands are allowed with TEST (for example, STATUS, OFF).

Usage Note

It is recommended that this command be scope-checked to limit its use to the initialization CLIST and a small set of authorized operators.

Only the operator who issues the AUTOMSG command is notified that a member has been activated. Since this activity affects all other operators on the system, you may want to use the ASSIGN command to route the notification message (DSI410I) to all operators currently logged on.

When a command or CLIST is automated, the command or CLIST is *not* processed immediately; it is queued to the task for processing at the next interrupt.

If a command within a CLIST results in a message that in turn drives a second CLIST, the first CLIST will be processed completely before the second one is processed. If synchronous processing of the CLIST is necessary, you can use an &WAIT with the command, or the second CLIST can be invoked directly within the first CLIST.

The &WAIT function provides you with a way to specify a time-out option. When &WAIT is used under an automation task, &WAIT should specify a reasonable time-out value, so that the CLIST does not get trapped in an endless wait.

&PAUSE should not be used under the automation task, because it does not provide a time-out facility.

Note: You can use &PAUSE combined with the GO command as a result of an automated message. The GO command in this case would serve to break the wait implied by the &PAUSE.

Example

To deactivate the message automation function, type:

```
AUTOMSG OFF
```

Response

You will see the following message on your screen:

```
DSI411I MESSAGE AUTOMATION INACTIVE
```

AUTOTASK

The AUTOTASK command conditionally starts the automated operator specified. If the operator is already active, the command does nothing. If the automated operator had been stopped for any reason, the AUTOTASK command restarts it. If the automated operator was not previously defined, the AUTOTASK command defines one.

Note: An error message is issued if the operid was not defined to NetView.

The format of the AUTOTASK command is:

```
AUTOTASK        {OPID=operid} [,CONSOLE=nn|,DROP]
```

where:

OPID=operid	is the operator ID to use for the automation task.
MVS CONSOLE=nn	is an optional operand that can be used to dedicate the automation task to a specific MVS operator console. The value 'nn' is the console ID that uniquely identifies the MVS console that can enter commands to and get responses from the automation task.
MVS DROP	is an optional operand that can remove the association between a specific MVS console and a NetView operator ID. If DROP is used, the automation task remains in its current state (active or inactive).

Example

To start an automation task when NetView starts up, include the following in your initial CLIST (NCCFIC):

```
AUTOTASK OPID=AUTOOP
```

Response

The AUTOTASK command will return a return code to the CLIST when it is invoked in a CLIST.

AUTOTR

The AUTOTR CLIST sets the buffer trace on or off for cross-domain resources belonging to the CDRM minor node name specified.

The format of the AUTOTR command is:

```
AUTOTR        nodename      [ON|,OFF]     [,ALL]
```

where:

nodename — specifies a CDRM minor node name (required).

ON — starts the buffer trace (default).

OFF — stops the buffer trace.

ALL — specifies that trace ON or OFF is to affect all resources in ACF/S or ACF/S----Y status under the designated CDRM, including any exceptions that your installation may have coded into the CLIST.

Usage Notes

This command generates the following VTAM commands:

```
DISPLAY ID
MODIFY TRACE
```

For more information on these commands, see *VTAM Operation*.

If you omit a positional operand, indicate its absence with a comma.

The AUTOTR CLIST cannot run under the PPT.

You can customize this CLIST so that buffer traces can be started only for specific resources.

CAUTION:
Incorrect results may occur when running the AUTOTR CLIST while MSGMOD is on.

Examples

```
AUTOTR CDRM10,ON
```

activates buffer trace for cross-domain resources under the specified CDRM. If you customize the CLIST to affect only certain terminals under the named CDRM, then buffer trace will be started for those terminals only.

```
AUTOTR CDRM10,ON,ALL
```

activates buffer trace for all terminals under node CDRM10, in ACT/S or ACT----Y status, regardless of any customization statements coded in the CLIST.

```
AUTOTR CDRM10,OFF
```

inactivates buffer trace for the CDRSCs under CDRM10.

AUTOWRAP

The AUTOWRAP command controls whether your terminal will be locked when the screen is full of data, or if and when the screen will be automatically overlaid with new data.

The format of the AUTOWRAP command is:

```
AUTOWRAP        [0|nnn|NO]
```

where:

0 means the system will overlay the screen when it is full. This is the default.

nnn is the number of seconds (1-999) that the system will wait before it unlocks the screen and presents new information.

NO specifies that autowrap is to stop. With AUTOWRAP NO you must press a PF, PA, CLEAR, or ENTER key to unlock the screen.

Usage Note

The AUTOWRAP command is both a regular and an immediate command.

The screen is always either unlocked, locked, or held. When the screen is unlocked, new messages can be added to the bottom of the output area. When the screen is locked, it must be unlocked to let the system write the next message at the top of the screen. When the screen is held, the system will not write over the message already on the screen until you unlock the screen (by pressing the ENTER or CLEAR key) from the keyboard only. You hold the screen when you want to read it and not have the system write over it.

Specify AUTOWRAP 0 only if you are sure you do not want NetView to stop for you to read the messages on the screen. Specifying AUTOWRAP 0 is useful when you leave your terminal and wish to avoid delay.

AUTOWRAP does not apply to full-screen mode. When you return from full-screen mode, the AUTOWRAP you had before is still in effect except that time expiration of AUTOWRAP will not cause the first screen to go away.

Example

To set your display so that it will not wrap, enter:

```
AUTOWRAP NO
```

All you will see are the date and time in the upper right-hand corner of your screen.

To set your display so that it will wrap, enter:

```
AUTOWRAP
```

You will see an A in the upper right hand corner of your screen.

Response

If you type AUTOWRAP 0 or AUTOWRAP nnn, you will see an A at the top right corner of your screen. You do not see an A if you enter AUTOWRAP NO. If you hold the screen, you will see an H where the AUTOWRAP A normally appears.

If you have turned on AUTOWRAP successfully, you will see the following in the immediate message area:

```
DSI082I AUTOWRAP STARTED
```

If you ask for the AUTOWRAP NO, you will see this message:

```
DSI083I AUTOWRAP STOPPED
```

BFRUSE

The BFRUSE CLIST displays information about VTAM buffer usage.

The format of the BFRUSE CLIST is:

```
BFRUSE
```

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  BFRUSE
```

For more information on this command, see *VTAM Operation*.

BFSESS

The BFSESS CLIST starts a full-screen session with another subsystem.

The format of the BFSESS CLIST is:

```
BFSESS      applid
            [,srclu
            [,disc
            [,logmode
            [,vigil
            [,DEFER]]]]]
```

where:

applid — is the name of the logical unit in the destination subsystem.

srclu — is the name of the secondary logical unit for the session.

disc — is the disconnection key for the session (PA*n*, PF*n*, or CLEAR). If you do not specify this operand, the default key is the PA1 key.

logmode — is the logmode entry indicating the desired session bind operands. The default value is M2SDLCNQ.

vigil — specifies whether or not to notify you of messages. This can be either Y (yes) or N (no). Y is the default.

DEFER — specifies that the actual establishment of the session is deferred until the destination subsystem chooses to initiate the session. Deferring permits another subsystem to acquire the logical unit. Not all destination subsystems initiate sessions. Your systems programmer can tell you whether a particular subsystem initiates the session.

Usage Note

This CLIST generates a BGNSESS command. See "BGNSESS" on page 3-28 for more information.

If you omit a positional operand, you must indicate its absence by a comma.

Example

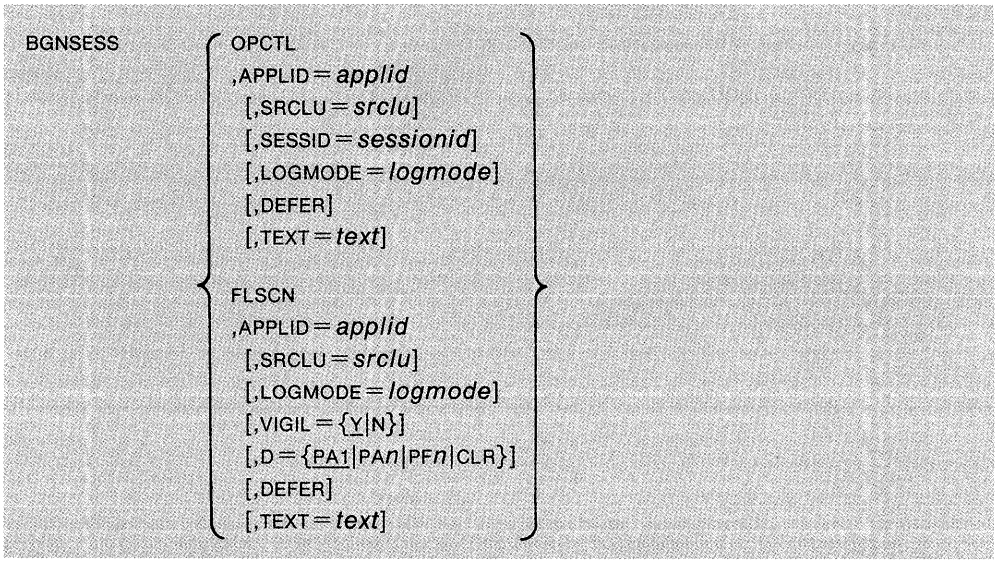
To begin a full-screen TSO session (MVS), enter the following CLIST:

```
BFSESS TS01
```

BGNSESS

Use the BGNSESS command to start a session with another subsystem.

The format of the BGNSESS command is:



where:

OPCTL	starts an operator-control session.
FLSCN	starts a full-screen session.
APPLID=applid	specifies the name of the logical unit in the destination subsystem. Scope checking is done on this operand.
SRCLU=srclu	specifies the name of the logical unit you are using as a secondary logical unit for this session. Scope checking is done on this operand.
SESSID=sessionid	is a one- to eight-character session identifier associated with this specific operator-control session. You must use this session identifier in front of the command text sent with every SENDSESS command. The identifier is displayed in the domain name field of the screen to tell you where the message came from. If you do not specify SESSID, the APPLID value is used as the session identifier. You must use SESSID if you establish multiple operator-control sessions to the same destination. All session identifiers used by one operator must be different from any other SESSID or APPLID.
LOGMODE=logmode	is the logmode entry indicating the desired session BIND operands. If not specified, LOGMODE becomes the default BIND image table entry as defined to VTAM. If you have used the DEFER operand, do not use the LOGMODE operand.

DEFER — specifies that the actual establishment of the session is deferred until the destination subsystem chooses to initiate the session. Deferring permits another subsystem to acquire the logical unit. Not all destination subsystems initiate sessions. Your system programmer can tell you whether a particular subsystem initiates the session.

TEXT=text — is the text associated with the LOGON command of the subsystem you want started. If you specify TEXT, it must be the last operand. If you have used the DEFER operand, do not use the TEXT operand. Ask your system programmer for the correct operand.

VIGIL=Y — means that you will hear the terminal alarm when information is sent to NetView. You will also hear this alarm when you press ENTER or a PA or PF key. The alarm will continue until you disconnect from the session. You may then return to your session and the alarm will not sound until another message (information) is received.

VIGIL=N — means that you will not hear the terminal alarm when information is sent to NetView. You can display the messages (information) when you disconnect from the subsystem.

D=PA1|PAn|PFn|CLR — specifies which key is the disconnection key for this full-screen session. PA1 is the default.

Usage Note

Things you should know for operator-control sessions:

- For 8100/DPPX systems, you must have a separately defined logical unit for each 8100.
- For IMS/VS and CICS/VS systems, you must have a logical unit specified on the BGNSESS OPCTL command if you currently have no OPCTL sessions.
- If BGNSESS OPCTL commands are entered without specifying a logical unit name, SRCLU defaults to the last SRCLU that was explicitly specified by this operator on a BGNSESS OPCTL command that is still active. Specify SESSID if the default is used.
- No more than 30 operator-control sessions can be established from one SRCLU value.

Things you should know for full-screen sessions:

- Only one SRCLU operand for each operator can be used for full-screen sessions.
- The SRCLU operand is required for the first BGNSESS FLSCN command. It will be ignored if it is specified on subsequent BGNSESS FLSCN commands, if at least one full-screen session is active.
- If you logged on to your terminal with a non-query logmode (see *NetView Installation and Administration Guide*), you cannot use the terminal access facility to go to another application with a query logmode. Both logmodes must be non-query. For example, if you use the following command:

```
LOGON APPLID(CNM01) LOGMODE(M2BSCNQ)
```

and then try to use the terminal access facility to go to an application with LOGMODE MSDLCQ, you receive the following message:

```
DSI462I INVALID BIND PARAMETER
```

- For terminal access facility sessions, always use an SDLC logmode. Sample supplied logmodes (for example MSDLCQ and MSDLCNQ) can be found in the *NetView Installation and Administration Guide*.
- No more than 30 full-screen sessions can be established for one operator.
- For MVS, when starting a session with TSO, you should use one of the TSO LU names and not the ACB name, which is always TSO. If you try to start a session with TSO rather than the appropriate ACB name, you will receive the following message:

  ```
  DSI461I SRCLU=xxx: IS UNABLE TO ACCEPTA SESSION FROM APPLID=TSOxxx
  ```

  Although you will not be able to use the session, you must issue an ENDSESS command to end the session.
- The VIGIL operand replaces the existing INT operand. INT is still a valid operand but now functions the same way as VIGIL; the operator is no longer interrupted but only alerted by the terminal alarm of information coming to NetView.

If a session is started with a destination system that does not automatically send an initial output screen (for example, the CICS/VS "good morning" screen), you must enter RTRNSESS before you can begin sending your initial input panel.

Example

To begin a full-screen session with CICS (MVS) using MYCICS as the session ID name and TAF555 as the FLSCN SRCLU, type:

```
BGNSESS FLSCN,APPLID=CICS,SRCLU=TAF555
```

Note: When using AUTOWRAP you do not need to press ENTER to display full-screen output. The screen unlocks automatically.

Response

When you have started a full-screen session successfully, you receive these messages:

```
DSI456I  SESSION STARTING TO APPLID=applid FROM SRCLU=srclu
SESSID=sessionid
DSI463A  A SESSION HAS BEEN STARTED TO APPLID=applid FROM
SRCLU=srclu
DSI493A PRESS ENTER TO DISPLAY FULL SCREEN
```

BOSESS

The BOSESS CLIST starts an operator control session with another subsystem which supports line by line. The operator control session will allow you to send commands and receive responses from subsystems, line by line. Thus, you can have concurrent sessions with one or more subsystems.

The format of the BOSESS CLIST is:

```
BOSESS      applid
             [,srclu
             [,sessid
             [,logmode
             [,DEFER]]]]
```

where:

applid — is the name of the logical unit in the destination subsystem.

srclu — is the name of the secondary logical unit for the session.

sessid — is a one- to eight-character session identifier associated with this specific operator-control session. You must use this session identifier in front of the command text sent with every SENDSESS CLIST.

logmode — the logmode entry indicating the desired session bind operands. The default is M3767.

DEFER — specifies that the actual establishment of the session is deferred until the destination subsystem chooses to initiate the session. Deferring permits another subsystem to acquire the logical unit. Not all destination subsystems initiate sessions. Your systems programmer can tell you whether a particular subsystem initiates the session.

Usage Note

This LIST generates a BGNSESS command. See "BGNSESS" on page 3-28 for more information.

If you omit a positional operand, you must indicate its absence by a comma.

Example

To begin an operator session with IMS, use the following command:

```
BOSESS IMS,TAFFL11,IMSA
```

You could now send any supported command to IMS.

BROWSE

The BROWSE CLIST allows you to look at the network log, members of a partitioned data set (MVS), or files (VM). The names of the partitioned data sets and files are:

CNMPNL1 contains panels.

DSICLD contains CLISTs.

DSIPARM contains system operand definitions, data service definitions, command definitions, and operator definitions.

DSIPRF contains profile definition statements, such as your class, profile, and span.

DSIVTAM contains node definition statements.

For MVS, the members are contained in a partitioned data set (PDS). For VM, these files have a file type of NCCFLST or VTAMLST.

The format of the BROWSE CLIST is:

```
BROWSE          {NETLOGA|NETLOGI|NETLOGP|NETLOGS|membername}
```

where:

NETLOGA is the active network log.

NETLOGI is the inactive network log.

NETLOGP is the primary network log file.

NETLOGS is the secondary network log file.

membername is the member name in the CNMPNL1, DSICLD, DSIPARM, DSIPRF, or DSIVTAM library, or a file with a filetype of NCCFLST or VTAMLST.

Usage Note

The storage needed to browse a file or member varies depending on file or member size; the larger the file or member, the more storage needed. However, browsing the network log is NOT affected by storage size.

If both network log files are inactive, specify either NETLOGP or NETLOGS.

Because of the length of the information or the effect of left and right scrolling in a network log line that contains KANJI data, up to three consecutive dummy characters (periods) may appear at the start and end of the line to correct KANJI information that is incomplete. Invalid KANJI characters are replaced by double-byte asterisks.

If you specify a member name to browse, NetView searches the libraries in the following order:

1. CNMPNL1
2. DSICLD
3. DSIPRF
4. DSIPARM
5. DSIVTAM.

When you use this CLIST, the browse facility remains on the NetView component stack that is used with ROLL until the browse facility is ended.

You can browse a CLIST using a command synonym name. A message indicating the actual name of the CLIST file appears on the second line of the browse screen.

You cannot use BROWSE to view the network log or the trace log. You can print the network log or the trace log using DSIPRTA (MVS) and DSIPRT (VM).

The first time a VTAMLST member is browsed (in VM), an OPEN ERROR message will be received. The message results because NCCFLST is searched first, and then VTAMLST. Ignore the message; the function will execute correctly.

In addition to the PF keys that are used throughout NetView, the browse facility provides the following additional PF key functions:

PF4 - Top
: This key moves the screen to the top of the information being browsed.

PF5 - Bottom
: This key moves the screen to the bottom of the information being browsed.

PF7 - Backward
: This key moves the screen backward through the information being browsed. You can vary the amount that you go back by entering one of the following values in the SCROLL field:

  - Half—Moves back half a screen
  - Max—Moves back to the beginning of the member being browsed
  - Page—Moves back one screen
  - *nnnn*—A one- to four-digit number, specifying the number of lines to move back.

PF8 - Forward
: This key moves the screen forward through the information being browsed. You can vary the amount that you go forward by entering one of the following values in the SCROLL field:

  - Half—Moves forward half a screen
  - Max—Moves forward to the end of the member being browsed
  - Page—Moves forward one screen
  - *nnnn*—A one- to four-digit number, specifying the number of lines to move forward.

PF9 - Repeat FIND
: This key causes the previously entered FIND command to be issued again.

PF10 - LEFT
: Network log only. Moves the screen left over the network log. You can vary the amount that you go left by entering one of the following values in the SCROLL field in the upper right corner of the panel:

  - Half—Moves to the left half a screen
  - Max—Moves the screen to the left-hand margin of the log
  - Page—Moves to the left one screen

- *nnnn*—A one- to four-digit number that specifies the number of columns to move left.

PF11 - RIGHT

Network log only. Moves the screen right over the network log. You can vary the amount that you go right by entering one of the following values in the SCROLL field in the upper right corner of the panel:

- Half—Moves to the right half a screen
- Max—Moves the screen to the right-hand margin of the log
- Page—Moves to the right one screen
- *nnnn*—A one- to four-digit number that specifies the number of columns to move right.

PF12 - ALL or ONE

Network log only. This key toggles between ALL and ONE. ALL means that any messages that have set off the important message indicators appears in their corresponding indicator's color. ONE means that if an important message indicator is selected, messages corresponding to that indicator number appears in that indicator's color while all other messages appear in turquoise. The words ALL or ONE are located next to the PF key explanation on the bottom of the screen, to let you know which mode you are using.

PF12 - Position cursor

Library browse only. This key positions the cursor in the command field.

Example

To look at the CLIST ACT, type:

```
BRowse ACT
```

The following screen is displayed:

```
 NETVIEW.BRWS ------ BROWSE CNME0002 (DSICLD  ) --- LINE 0001 TO 0018 OF 0325
 ACT IS A COMMAND SYNONYM FOR CNME0002                    SCROLL ===> HALF
****************************** TOP OF DATA ******************************
  CLIST
&CONTROL ERR
* See the NetView Operation manual and/or enter HELP CLIST name
*   for a description of function and syntax for this CLIST.

*********************************************************************
*    (C) COPYRIGHT IBM CORP. 1986, 1987                             *
*                                                                   *
*    LAST CHANGE:  04/08/86          3:12:21    SSI=60981512        *
*                                                                   *
*    IEBCOPY   SELECT MEMBER=((CNME0002,ACT,R))                     *
*                                                                   *
*    OUTPUTS:                                                       *
*        SAME AS VTAM COMMAND                                       *
*    CNME0002 CHANGED ACTIVITY:                                     *
*    CHANGE CODE     DATE      DESCRIPTION                          *
*********************************************************************


 CMD==>

 1=HELP  2=END  3=RET        5=BOT  6=ROLL       8=FWD  9=RPTFND  12=CURSOR
```

Figure 3-2. Sample BROWSE Panel

Notice the information:

```
LINE 0001 TO 0018 OF 0347
```

on the top line of the screen. This information indicates the position of the screen in the member being browsed.

0001 is the first line being displayed.

0018 is the last line being displayed.

0347 is the number of lines in the member or file being browsed.

MVSNote: If a member of a partitioned data net with secondary extents is edited while NetView is up, it is possible that BROWSE will then be unable to find that member (until next time NetView is down and brought back up).

CANCEL

The CANCEL command ends a CLIST that is in ACTIVE, WAIT, PAUSE, or STACK status, without running the rest of the commands. If the CLIST is in a pause or wait status, NetView removes the P or W from the upper right corner of the screen. Canceling a nested CLIST cancels the entire nested family.

The format of the CANCEL command is:

```
CANCEL
```

Usage Note

The CANCEL command is both a regular and an immediate command.

Example

If the CLIST MYCLIST is waiting and you want to cancel it, type:

```
CANCEL
```

Response

If the CANCEL request is successful, you get this message on your screen:

```
DSI009I COMMAND LIST MYCLIST CANCELED BY OPERATOR REQUEST
```

CANCMD

The CANCMD command allows you to cancel any outstanding network product support (NPS) commands except for CANCMD, DISPCMD, and MDMCNFG. You can cancel a command entered under either your ID or another operator's ID.

The format of the CANCMD command is:

CANCMD {TAG=*tag*|ID=*name*|SP=*spname*}

where:

TAG=tag — specifies the unique identifier of the command being canceled. Use DISPCMD to obtain this value.

ID=name — specifies the network name of a device.

SP=spname — specifies the network name of a service point.

Usage Note

You can use the CANCMD command to cancel a Network Product Support (NPS) command. In some cases, several commands may be issued for a given device, but only one goes to that device at a time. Thus, you may need to cancel an active command to let other commands be sent to that device. *Note:* If any MDMCNFG commands are outstanding for a certain ID, and the CANCMD is issued for that ID, no commands including the MDMCNFG command can be canceled.

When a command is canceled, its processing is terminated. However, no action is taken to undo any effects of the command, or to reset the state of the device's physical unit. Depending on when the command is entered, the command may or may not have taken effect. You may need to issue the INACT and ACT commands to reset the device's physical unit.

If the NPS DST appears to be hung due to all of its solicited DSRBs being in use (perhaps because NPS commands never completed), use the PURGE command with the DST keyword to free up the DSRBS (PURGE DST=DSIGDS,REQ=ALL,OP=DSIGDS). Once the DSRBs are freed up, then use CANCMD to free the NPS storage associated with the commands that are queued up under the NPS task.

Example

To cancel any outstanding commands sent to device NY3710, type:

```
CANCMD ID=NY3710
```

CCPDR

The CCPDR command sends dynamic reconfiguration data to a 3710 Network Controller. You cannot enter the CCPDR command. This command must be issued from a CCP-generated CLIST, or it will be rejected. It will also be rejected if it is issued under the PPT.

The format of the CCPDR command is:

```
CCPDR        name
             {,F|,M|,L|,O}
             ,data
```

where:

name specifies the network name of the 3710 to which data is to be sent.

F indicates that this is the first CCPDR command in a sequence.

M indicates that this is the middle CCPDR command in a sequence.

L indicates that this is the last CCPDR command in a sequence.

O indicates that this is the only CCPDR command in a sequence.

data specifies the data (in hexadecimal) to be sent to the specified 3710.

Usage Note

The name operand can be scope-checked to control which operators can dynamically reconfigure each 3710. The scope for the name operand can be controlled with the KEYCLASS statement in the initialization decks. See the *NetView Installation and Administration Guide*.

Return codes from this command are:

0 Successful processing of the command. The request was sent to the 3710, and the 3710 accepted and processed the request successfully.

4 Error in processing the request. The error occurred in transmitting the request to the 3710, or the 3710 rejected the request.

CCPLOADF

The CCPLOADF command sends signals that a load sequence has completed. The load sequence sends configuration definition data to a 3710 Network Controller. You cannot enter the CCPLOADF command. This command must be issued from a CCP-generated CLIST, or it will be rejected. It will also be rejected if it is issued under the PPT.

The format of the CCPLOADF command is:

```
CCPLOADF        name
```

where:

name specifies the network name of the 3710 to which data is to be sent.

Usage Note

The name operand can be scope-checked to control which operators can load each 3710. The scope for the name operand can be controlled with the KEYCLASS statement in the initialization decks. See the *NetView Installation and Administration Guide*.

Return codes from this command are:

0 Successful processing of the command. The request was sent to the 3710, and the 3710 accepted and sent the request successfully.

4 Error in processing the request. The error occurred in transmitting the request to the 3710, or the 3710 rejected the request.

CCPLOADI

The CCPLOADI command sends signals that a load sequence has started. The load sequence sends configuration definition data to a 3710 Network Controller. You cannot enter the CCPLOADI command. This command must be issued from a CCP-generated CLIST, or it will be rejected. It will also be rejected if it is issued under the PPT.

The format of the CCPLOADI command is:

```
CCPLOADI        name
```

where:

name specifies the network name of the 3710 to which data is to be sent.

Usage Note

The name operand can be scope-checked to control which operators can load each 3710. The scope for the name operand can be controlled with the KEYCLASS statement in the initialization decks. See the *NetView Installation and Administration Guide*.

Return codes from this command are:

0 Successful processing of the command. The request was sent to the 3710, and the 3710 accepted and sent the request successfully.

4 Error in processing the request. The error occurred in transmitting the request to the 3710, or the 3710 rejected the request.

CCPLOADT

The CCPLOADT command sends load text information to a 3710 Network Controller. You cannot enter the CCPLOADT command. This command must be issued from a CCP-generated CLIST, or it will be rejected. It will also be rejected if it is issued under the PPT.

The format of the CCPLOADT command is:

```
CCPLOADT        name
                ,data
```

where:

name specifies the network name of the 3710 to which data is to be sent.

data specifies the load text (in hexadecimal) to be sent to the 3710.

Usage Note

The name operand can be scope-checked to control which operators can load each 3710. The scope for the name operand can be controlled with the KEYCLASS statement in the initialization decks. See the *NetView Installation and Administration Guide*.

Return codes from this command are:

0 Successful processing of the command. The request was sent to the 3710, and the 3710 accepted and sent the request successfully.

4 Error in processing the request. The error occurred in transmitting the request to the 3710, or the 3710 rejected the request.

CDRMS

The CDRMS CLIST displays cross-domain resource manager (CDRM) major nodes known in your domain.

The format of the CDRMS CLIST is:

```
CDRMS          [Act|Inact|ALL]
```

where:

Act — displays information about all the active CDRM minor nodes within each major node.

Inact — displays information about all inactive CDRM minor nodes within each major node.

ALL — displays information about all CDRM minor nodes within each major node, regardless of their status.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  CDRMS
```

For more information on this command, see *VTAM Operation.*

Example

To display all the CDRM major nodes for your domain, type:

```
CDRMS
```

Response

If the CDRMS request is successful, the system responds with the following messages:

```
IST097I DISPLAY ACCEPTED
IST350I VTAM DISPLAY - DOMAIN TYPE = CROSS-DOM. RSRC MGR
IST089I XNETCDRM TYPE= CDRM SEGMENT      ,ACTIV
IST482I NETAHOST NEVAC ,SUBAREA = N/A ,EL = N/A    ,NETID=NETA
IST482I NETBHOST ACTIV ,SUBAREA = 075 ,EL = 000012 ,NETID=NETB
IST314I END
```

Notice that for each active major node, the name, status, subarea number, element address, and the network ID (if one exists) of each subordinate CDRM minor node is listed.

CDRSCS

The CDRSCS CLIST displays cross-domain resource (CDRSC) major nodes known in your domain.

The format of the CDRSCS CLIST is:

```
CDRSCS          [Act|Inact|ALL]
                  [,netid]
```

where:

Act — displays information about all the active CDRSC minor nodes within each major node.

Inact — displays information about all inactive CDRSC minor nodes within each major node.

ALL — displays information about all CDRSC minor nodes within each major node, regardless of their status.

netid — displays only those CDRSCS within the indicated network. If you only use the *netid* operand, omit the comma.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  CDRSCS
```

For more information on this command, see *VTAM Operation*.

Example

To display all the CDRSCS major nodes for your domain, type:

```
CDRSCS
```

Response

If the CDRSCS request is successful, the system would respond with the following messages:

```
IST097I DISPLAY ACCEPTED
IST350I VTAM DISPLAY - DOMAIN TYPE = CROSS-DOM. RESOURCES
IST089I ISTCDRDY TYPE= CDRST SEGMENT      ,ACTIV
IST483I NC100001 ACT/S----Y,  CDRM = CDRM10
IST483I L1920    ACT/S----Y,  CDRM = CDRM10
IST314I END
```

Notice that for each active CDRSC major node, the name, status, owning CDRM and NETID of each subordinate CDRSC minor node is listed.

CLEAR

The CLEAR command clears the screen.

The format of the CLEAR command is:

```
CLEAR
```

Usage Note

The CLEAR command works similarly to the CLEAR key.

Held messages or reply messages are rewritten to the screen.

CLOSE

The CLOSE command ends NetView.

The format of the CLOSE command is:

```
CLOSE          [NORMAL|IMMED|DUMP]
```

where:

NORMAL means that you will end NetView in an orderly way. NetView sends a message to all active operators to tell them a shutdown will occur after current sessions are logged off. New logons from NetView terminals and new cross-domain logons are not accepted. The sessions that already exist continue until they are logged off. NetView restricts operators from using certain commands that would start new NetView sessions. A normal shutdown is the default.

IMMED causes the NetView operator station, NetView to NetView, and hard-copy tasks to end immediately and then proceeds as if CLOSE NORMAL has been issued. Operators receive no warning messages. You can enter this command even while a normal close is still going on.

DUMP causes the NetView program main task to end immediately and to take a dump. The NetView operators receive no warning messages. You can enter and run this command even while a normal close is still going on.

Usage Note

If you use the CLOSE NORMAL command, every OST and NNT must be logged off before NetView can end. If NetView does not stop after you have entered the CLOSE command, you can use the system REPLY command to issue the CLOSE IMMED or CLOSE DUMP command, which causes an immediate abnormal end. Do ***not***, however, issue the CLOSE NORMAL command again.

Warning: CLOSE ends all NetView activity including system automation and network control.

If you use either the CLOSE IMMED or the CLOSE DUMP command and have an optional task that has an ESTAE coded, then that task cannot post any other subtask or issue any macros that post while the CLOSE IMMED or CLOSE DUMP is processing.

Example

To end the NetView session normally, enter:

```
MSG PPT
```

This command tells the system that you want to enter a command.

```
@xx DSI807A NCCF READY FOR COMMUNICATIONS
```

Then enter:

xx CLOSE

where *xx* is the number from message DSI807A.

NetView ends when all operators and incoming cross-domain operators have logged off their terminals.

CLSTRS

The CLSTRS CLIST displays the status of all cluster controllers (type 1 and type 2 physical units) and their respective major nodes.

The format of the CLSTRS CLIST is:

```
CLSTRS          [Act|Inact|ALL]
```

where:

Act displays information about all the active physical units.

Inact displays information about all inactive physical units.

ALL displays information about all physical units, regardless of their status.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  CLSTRS
```

For more information on this command, see *VTAM Operation*.

Example

To display all the inactive physical units for your domain, type:

```
CLSTRS I
```

Response

If the CLSTRS request is successful, the system responds with the following messages:

```
IST097I DISPLAY ACCEPTED
IST350I VTAM DISPLAY - DOMAIN TYPE = CLUSTERS/PHYS UNITS
IST089I NCI472P     TYPE = PU_T4/5 MAJ NODE , ACTIV
IST089I DW3270      TYPE = PHYSICAL UNIT    , NEVAC
IST089I DW3275      TYPE = PHYSICAL UNIT    , NEVAC
IST314I END
```

DATE

The DATE CLIST displays the current time and date.

The format of the DATE CLIST is:

```
DATE
```

Usage Note

The format of the output is *mm/dd/yy*, where *mm* is the month, *dd* is the day, and *yy* is the year. The time is *hh:mm* where *hh* is the hour (00-24) and *mm* is the minutes (00-60).

DEFAULTS

The DEFAULTS command sets system-wide defaults for the logging and display of messages, and determines how the HOLD and BEEP actions are interpreted in the message automation table.

The format of the DEFAULTS command is:

```
DEFAULTS        [HOLD={ENABLE|DISABLE}]
                [BEEP={ENABLE|DISABLE}]
                [SYSLOG={YES|NO}]
                [NETLOG={YES|NO}]
                [HCYLOG={YES|NO}]
                [DISPLAY={YES|NO}]
```

where:

HOLD={ENABLE|DISABLE}	Defines whether or not the HOLD action is to be taken from the message automation table.
BEEP={ENABLE|DISABLE}	Defines whether or not the BEEP action is to be taken from the message automation table.
SYSLOG={YES|NO}	Defines whether or not all messages are written to the system log.
NETLOG={YES|NO}	Defines whether or not all messages are written to the network log.
HCYLOG={YES|NO}	Defines whether or not all messages are written to the hard-copy log if an operator has one active.
DISPLAY={YES|NO}	Defines whether or not all message are displayed on NetView terminals.

Usage Note

The DEFAULTS command can be overridden for a specific operator ID using the OVERRIDE command (see "OVERRIDE" on page 3-119).

Examples

The NetView provided actions (when you do not use DEFAULTS) are:

```
BEEP=ENABLE,SYSLOG=NO,NETLOG=YES,HCYLOG=YES,DISPLAY=YES
```

Note: DISPLAY=NO will suppress all messages unless they are identified in the message automation table with DISPLAY=YES.

Response

No messages are produced if this command runs correctly.

DELAY

The DELAY CLIST tells the system to wait for a specified amount of time and then, if a command is specified, send it to the system.

The format of the DELAY CLIST is:

```
DELAY        time
              [,command]
```

where:

time — is the time interval after which the command is run. If a command is specified, time must be the first operand and specified in hours:minutes form. The maximum time interval is 24:00 (every 24 hours) and the minimum interval is 00:01 (every minute). If a command is not specified, the time must be in seconds. If needed, leading zeros must be included.

command — The name of the command or CLIST that you will be sending to the system. The command or CLIST will run under the PPT if a command is specified.

Usage Note

The DELAY CLIST invokes the EVERY command, which assigns a timer ID to the operator ID that issued the DELAY CLIST. If more than one operator issues a DELAY CLIST, each operator could be assigned an identical timer ID. If this happens, the first operator to be assigned the timer ID will be scheduled, but the remaining one(s) will not be scheduled. Instead, a message will be issued saying that no command will be scheduled.

Examples

To wait for 3 hours and then start the system, enter:

```
DELAY 03:00,STARTCNM
```

To delay the next command that is entered for 5 seconds before sending it to the system, enter:

```
DELAY 05
```

DELAY2

The DELAY2 CLIST issues a command and purges the timer. DELAY2 can be used to undo an AT or EVERY command. DELAY2 is used when the timer was set with the PPT option.

The format of the DELAY2 CLIST is:

where:

timerid is the identifier that you specified on a timer command (AT or EVERY).

command is the name of the command or CLIST that the system is to run.

Example

If you already issued this AT command:

```
AT 15:00,PPT,ID=DISP,MAJNODES
```

You could prevent the command from being sent to the system at 15:00 and send it immediately to the system by entering:

```
DELAY2 DISP,MAJNODES
```

DIS

The DIS CLIST displays the status of system resources.

The format of the DIS COMMAND is:

```
DIS      [nodename]
```

where:

nodename specifies the name of the specific resource to be displayed.

Usage Note

For compatibility with the VTAM DISPLAY command, you can preface the following CLISTs with the DIS CLIST (see also "DIS" on page 6-13):

- APPLS - see page 3-10
- BFRUSE - see page 3-26
- CDRMS - see page 3-42
- CDRSCS - see page 3-43
- CLSTRS - see page 3-47
- DROUTE - see page 3-61
- LINES - see page 3-85
- MAJNODES - see page 3-104
- NCPSTOR - see page 3-114
- PATHS - see page 3-120
- PENDING - see page 3-121
- STATIONS - see page 3-152
- TERMS - see page 3-160
- TSOUSER - see page 3-166.

DIS TSOUSER runs under MVS only.

Example

To display the pending nodes, enter:

```
DIS PENDING
```

To display the status of node NCP21, use the following command:

```
DIS NCP21
```

DISCONID

The DISCONID command displays MVS console IDs used by NetView.

The format of the DISCONID command is:

```
DISCONID
```

Usage Note

If an asterisk is displayed next to the console ID, this implies that the console ID has been assigned to the AUTOTASK by the user.

DISG

The DISG CLIST displays resource status and connectivity information for LUs, PUs, lines, NCPs, and major nodes.

The format of the DISG CLIST is:

```
DISG        resourcename
              [ALL|ONLY]
```

where:

resourcename — specifies the resource for which status and connectivity information are to be displayed.

ALL — specifies that information is to be displayed for this resource and each higher resource. This is the default.

ONLY — specifies that information is to be displayed for this resource only.

Usage Note

The DISG CLIST cannot run under the PPT.

The DISG CLIST should not be used on line groups or on a token-ring. In line groups, DISG CLIST would only read the first line of the group. In a token-ring, DISG CLIST would recognize only the host and the NCP, but no lines under a token-ring.

CAUTION:
Incorrect results may occur when running the DISG CLIST while MSGMOD is on.

Example

To display resource status for A01A441 and higher resources, enter:

```
DISG A01A441
```

Response

A panel similar to the following is displayed:

```
CNMOLNL1       VTAM DISPLAY : LOCAL NON-SNA LOGICAL UNIT

+----------+                                              +----------+
|   HOST   |                                              |    LU    |
| ISTPUS   |-----------------441------------------------| A01A441  |
+----------+                                              +----------+
                                                             ACT/S

SIO= 00000225                                          DESIRED= ACTIV
I/O TRC= OFF              NETID= NETA                  I/O TRC= OFF
BUF TRC= OFF                                           BUF TRC= OFF
SUBAREA= 001                                           CNTLPLU=
IRN TRC= OFF                                           PLU= INHIBITED
                                                       SLU= ENABLED
                                                       DEVTYPE= LU01

NAME      STATUS     SESSION ID      SEND RECV VRN TP NETID     SESSIONS:
NCF01000 ACTIV-PRI 008000014970023D 0046 000A  0   0 NETA    LIM= 00000001
                                                             ACTIV=  00001
                                                             REQS=   00000

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

Figure 3-3. Resource Status and Connectivity Information

To return to line-mode, press PF2.

DISPCMD

The DISPCMD command displays a list of the outstanding NPS commands.

The format of the DISPCMD command is:

```
DISPCMD    [ALL|ID=name|OP=operid|PPT|SP=spname]
```

where:

ALL — displays all outstanding network product support (NPS) commands. ALL is the default.

ID=name — specifies the network name of a device. It displays all commands that are to be sent, or have been sent, to the specified device.

OP=operid — specifies an operator ID. This operand displays outstanding (NPS) commands for that operator. If OP='' is specified, the commands for the issuing operator are displayed.

PPT — displays all outstanding NPS commands under the PPT.

SP=spname — specifies the network name of a service point.

Usage Note

If you issue the DISPCMD command without any operands, the system displays all outstanding commands for the issuing operator.

Example

To display a list of all outstanding messages for device NY3710, type:

```
DISPCMD ID=NY3710
```

Response

When the command completes successfully, the system responds as follows:

```
DSI271I   COMMAND    OPERATOR   ID/SP    TAG
DSI272I    cmd1      operid1      node1    tag1
DSI272I    cmd2      operid2      node2    tag2
DSI273I    END OF OUTSTANDING COMMANDS DISPLAY
```

where *cmd* is the name of the command as entered by the operator, *operid* is the name of the operator who issued the command, *node* is the network name of the device to which the command has been sent (or will go), and *tag* is the numeric identifier for the command (this value can be used with the TAG operand on the CANCMD). NetView displays the commands in the order the operator enters them.

Note: The total number of commands displayed is limited by the number of solicited DSRBs available to the DSIGDS subtask. This value is set according to the DSRBO operand in DSICPINT (CNMS1006) initialization member.

DISPCNFG

The DISPCNFG command displays a 3710 configuration. You can display the complete configuration or a single element of the configuration.

The format of the DISPCNFG command is:

```
DISPCNFG        ID=name
                  [,ALL|,PRODUCT|,LINE=name|,ADAPTER=name|
                   ,STATION=name|,DISPLAY=name|,VERIFY]
                [,DUMP]
```

where:

ID=name	is the name of the 3710.
ALL	specifies the network names and device types for all elements in the specified 3710 configuration.
PRODUCT	specifies the network name and type of the 3710 specified in the ID operand. PRODUCT is the default.
LINE=name	specifies the network name and type of the specified line. You must specify the network name for LINE.
ADAPTER=name	specifies the 3710 name and type of adapter and configuration data specific to the named feature. You must specify the name for the 8 Port Line Adapter installed on a 3710.
STATION=name	specifies the network name and type of the specified station. You must specify the network name for STATION. This operand can also be used to display data about a PU attached to an 8 Port Line Adapter by using the adapter's network name.
DISPLAY=name	specifies the resource name and type of the specified BSC 3270 display. This operand can also be used to display data about an LU associated with an 8 Port Line Adapter by using the adapter's resource name.
VERIFY	can be used only in a CLIST. It is intended for use by SSPS Configuration Control Program (CCP) CLISTs that need to retrieve product data for use in performing dynamic reconfiguration application sequence verification.
DUMP	dumps the record for the selected product, line, station, or display element. The DUMP operand is ignored if the ALL operand is specified.

Example

To display the configuration for LINE2 on device NY3710, type:

```
DISPCNFG ID=NY3710,LINE=LINE2
```

DISPFK

The DISPFK CLIST displays the PF key settings for any component of NetView from which you entered this CLIST.

The format of the DISPFK CLIST is:

```
DISPFK
```

Usage Note

The DISPFK CLIST cannot run under the PPT.

Example

If you are in the command facility, enter:

```
DISPFK
```

to display your PF key settings for the command facility (NCCF) component.

Response

The following is an example of how the PF key settings are displayed:

```
 C CNM11    PF KEY SETTINGS FOR NCCF COMPONENT .......
 ' CNM11
DSI606I DISPLAY OF PF/PA KEY SETTINGS
DSI607I KEY   ----TYPE----   ----------COMMAND----------
DSI615I PA2   CANNOT BE SET  PREDEFINED FOR MOD = DSIHWP
DSI616I PA3   NOT SET YET
DSI608I PF1   IMMED,APPEND   PFHELP
DSI608I PF2   IMMED,IGNORE   PFEND
DSI608I PF3   IMMED,IGNORE   PFRETURN
DSI608I PF4   IMMED,IGNORE   PFTOP
DSI608I PF5   IMMED,IGNORE   PFBOTTOM
DSI608I PF6   IMMED,IGNORE   ROLL
DSI608I PF7   IMMED,IGNORE   PFBACK
DSI608I PF8   IMMED,IGNORE   PFFORW
DSI608I PF9   IMMED,IGNORE   PFCOPY
DSI608I PF10  IMMED,IGNORE   DISPFK
DSI608I PF11  IMMED,IGNORE   HOLD
DSI608I PF12  IMMED,IGNORE   RETRIEVE
                .
                .
                .
DSI609I END OF PF/PA KEY DISPLAY
```

Here's what the operands mean:

APPEND — tells the system to append the data in the input field to the end of the command text when you press the PF key.

DELAY — tells the system to write the command to the input area and place the cursor after the last character of the command. You can then modify the command before you press ENTER.

IGNORE tells the system to ignore data in the input area.

IMMED tells the system to process this command immediately.

The message CANNOT BE SET (under heading TYPE) indicates that the PF key cannot be set to another command by using the SET command.

You can customize this CLIST. See the *NetView Command Lists* for more information.

DRDS

The DRDS CLIST reconfigures an NCP dynamically.

The format of the DRDS CLIST is:

```
DRDS          name
```

where:

name is the name of a member in a data set or the name of a CMS file containing the dynamic reconfiguration (DR) statements.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  DRDS
```

Resources that are dynamically reconfigured will not be known to the status monitor. For more information on this command, see *VTAM Operation*.

Note: The use of this command is incompatible with use of the status monitor.

DROUTE

The DROUTE CLIST displays the status of explicit routes and virtual routes in a domain.

The format of the DROUTE command is:

```
DROUTE      subarea1
             [,COS=cosname|,ER=n|,ER=ALL|,VR=n]
             [,YES|NO]
             [,ORIGIN=subarea2]
             [,NET=netid]
```

where:

subarea1	is the subarea address of the destination subarea of the routes to be displayed.
COS=cosname	is the class of service name. If this operand is specified, all virtual routes to the specified destination subarea within this class of service are displayed.
ER=n	is an explicit route number (0-7). If this operand is specified, all the explicit routes identified by this explicit route number that are known to VTAM to the specified destination subarea are displayed.
ER=ALL	displays every explicit route to the specified destination subarea. This is the default.
VR=n	is a virtual route number (0-7). If this operand is specified, the virtual routes identified by this virtual route number to the specified destination subarea are displayed.
YES	specifies that an explicit route test is to be performed for each explicit route contained in the requested display.
NO	specifies that the requested route status is to be displayed, but that no explicit route test is to be performed. This is the default.
ORIGIN=subarea2	specifies the name of the subarea PU where the route starts.
NET=netid	specifies the network attached to the origin node that contains the routes.

Usage Note

This command generates the following VTAM command:

```
DISPLAY  ROUTE
```

For more information on this command, see *VTAM Operation*.

Example

To display the explicit route number 1 to subarea 20 without doing an explicit route test, use the following command:

```
DROUTE 20,ER=1,ORIGIN=NCP1
```

Response

If the DROUTE request is successful, you receive a response similar to:

```
IST535I ROUTE DISPLAY 3 FROM SA 10 TO SA 20
IST808I ORIGIN PU = NCP1 DEST PU = NCP2
IST536I VR TP     STATUS   ER       ADJSUB   STATUS
IST537I  5  0     INACT     1           20   INOP
IST537I  5  1     INACT     1           20   INOP
IST537I  5  2     INACT     1           20   INOP
IST314I END
```

In this example, VR is the virtual route number, and TP is the transmission priority, the status is inactive, ER is the explicit route number, ADJSUB is the adjacent subarea number with a status of inoperative.

DSISAPDR

The DSISAPDR CLIST changes the service adapter password for a 3710.

The format of the DSISAPDR CLIST is:

```
DSISAPDR        name
```

where:

name is the network name of the 3710 containing the PC element field to be changed.

Usage Note

You must enter the password into the CLIST using an editor. The password must be from six to eight alphanumeric characters. The first character of the password must be alphabetic or @, #, or $.

Example

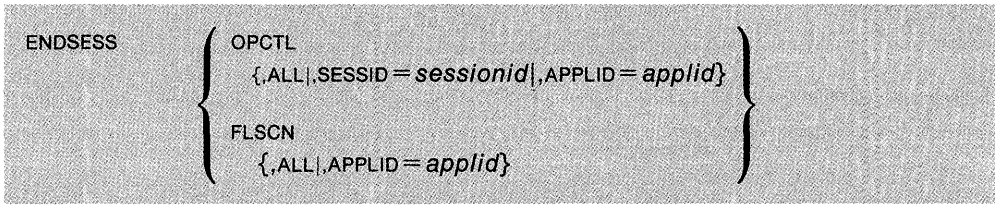
To change the password for NYC3710, edit the CLIST to change the password. Then issue the command:

```
DSISAPDR NYC3710
```

ENDSESS

The ENDSESS command ends specific subsystem sessions.

The format of the ENDSESS command is:



where:

OPCTL	ends the operator-control sessions.
FLSCN	ends the full-screen sessions.
ALL	specifies that all OPCTL or FLSCN sessions that you started are to end.
SESSID=sessionid	specifies the unique session identifier for operator-control sessions.
APPLID=applid	specifies the logical unit name of the destination subsystem with which an active session exists and is to end.

Usage Note

APPLID applies to all SESSIDS with this APPLID. If you need to stop only a single session for this APPLID, use the SESSID operand instead of APPLID.

Example

To end a TSO session for an application program named RALTSO, type:

```
ENDSESS FLSCN,APPLID=RALTSO
```

Response

After you enter ENDSESS, you should get this message:

```
DSI495I FLSCN SESSION(S) FOR APPLID=RALTSO ENDING
```

If the session ends successfully, you will get this message:

```
DSI496I  FLSCN SESSION BETWEEN APPLID=RALTSO
AND SRCLU=NCF11 ENDED
```

ERST

The ERST CLIST displays the meaning of the explicit route status code.

The format of the ERST CLIST is:

```
ERST          status
```

where:

status specifies the explicit route status code that you want explained.

Example

To display the meaning of the explicit route status INACT, type:

```
ERST INACT
```

Response

You will see the following panel displayed:

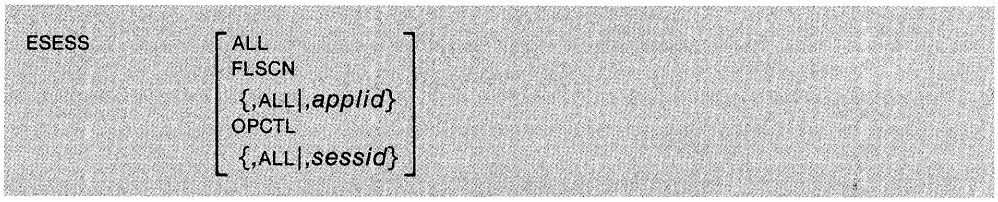
```
CNMOERIT              INACT STATUS CODE DESCRIPTION


The ER is defined to VTAM in a path definition set and:

   - Is physically available to the network

   - Has never been successfully activated. Activation will be
     attempted when the ER is needed for a session.
```

Figure 3-4. Example of Status Code Description

ESESS

The ESESS CLIST ends subsystem sessions.

The format of the ESESS CLIST is:



where:

ALL ends all subsystem sessions.

FLSCN ends one or all subsystem sessions in full-screen mode.

applid is the application identifier of a specific full-screen session to be ended.

OPCTL ends one or all subsystem sessions in operator control mode.

sessid specifies the specific operator control subsystem session to be ended.

Usage Note

This CLIST generates an ENDSESS command. See "ENDSESS" on page 3-64 for more information.

Example

To stop all subsystem sessions, type:

```
ESESS ALL
```

EVERY

The EVERY command schedules a command to be run repetitively at intervals.

The format of the EVERY command is:

```
EVERY        time
              [,PPT]
              [,id=name]
               ,command
```

where:

time — is the time interval after which the command is run. It must be the first operand and specified in hours:minutes form. The maximum time interval is 24:00 (every 24 hours) and the minimum interval is 00:01 (every minute).

PPT — specifies that the command or CLIST indicated by the *command* is to run under the PPT. If PPT is specified, the command will run whether or not you are logged on at the indicated time. If PPT is not coded, the command will run only if you are logged on at the indicated time. The following commands cannot be run under the PPT: AGAIN, AUTOWRAP, BGNSESS FLSCN, CANCEL, CLEAR, CLOSE, DISG, ENDSESS, GO, HALT, INPUT, LINKDATA, LINKTEST, LIST, MDMCNFG, MDMCNTL, MOVE, REPLY, RESET, RETRIEVE, RETURN, ROLL, ROUTE, RTRNSESS, SET, STACK, START, SWITCH, UNSTACK.

ID=name — is the unique one- to eight-character identifier that you defined for this timer request. The *name* cannot be ALL and cannot begin with the characters SYS. This operand is optional.

command — indicates the "regular" or "both" command or command list to run. You must specify *command* and it must be the last operand.

Usage Note

Commands defined as "regular" or "both" when NetView was installed may be used with EVERY. Commands defined as "immediate" cannot be used with EVERY.

The command runs at the indicated interval until the EVERY command is purged.

Be sure that scope-checking for the PPT operand is defined.

Note: To avoid overloading system resources, avoid excessive number of commands with short time intervals. To do so, you should keep commands to 25 or less.

Example

To list your operator ID every 3 minutes with a timer ID of OP21TMP, type:

```
EVERY 3, ID=OP21TMR LIST OP7
```

You can also list your operator ID every 3 minutes even if you are not logged on. To do this, use the following command:

```
EVERY 3, PPT LIST OP7
```

Response

You will see the following messages on your screen if the EVERY command runs successfully.

```
DSI034I     COMMAND SCHEDULED BY AT/EVERY COMMAND - LIST OP7
DSI201I     TIMER REQUEST SCHEDULED FOR EXECUTION ID=OP21TMP
```

EXCMD

The EXCMD command queues a NetView command or CLIST to another task to be executed.

The format of the EXCMD command is:

```
EXCMD          opid   cmd   operands
```

where:

opid	specifies any operator ID. This is a required field and can be scope-checked.
cmd	specifies any valid NetView command or CLIST. This is a keyword field and can be scope-checked.
operands	specifies optional operands.

Usage Note

The specified OPID and command will be scope-checked by the command processor.

Examples

The queue the MSG command to be executed on NETOP1 task, enter:

```
EXCMD NETOP1 MSG OPER1 Please monitor CN07
```

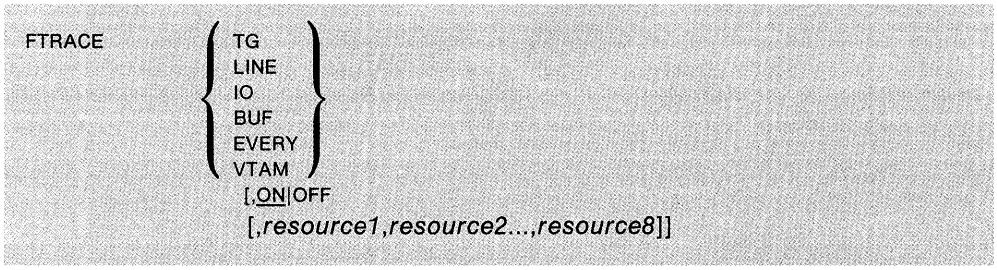
To queue the LIST command to be executed on the PPT task, enter:

```
EXCMD PPT LIST STATUS=TASK
```

FTRACE

The FTRACE CLIST starts, modifies, or stops VTAM traces.

The format of the FTRACE CLIST is:



where:

TG — specifies an NCP transmission group trace for the transmission groups containing the NCP lines specified.

LINE — specifies an NCP line trace for the lines specified.

IO — specifies tracing of input/output (I/O) activity associated with the nodes specified.

BUF — specifies the tracing of text that passes through VTAM buffers on the way to or from the nodes specified.

EVERY — specifies that I/O and BUF traces are to be done.

VTAM — specifies a VTAM internal trace for the API, PIU, SMS, and SSCP components.

ON — starts the specified trace or modifies parameters for online trace.

OFF — stops the specified trace.

resourcen — is the name of the resource for which tracing is to be done. At least one must be specified unless VTAM was specified.

Usage Note

This CLIST generates one of the following VTAM commands:

```
MODIFY TRACE
```

```
MODIFY NOTRACE
```

For more information on these commands, see *VTAM Operation*.

Example

To start a VTAM internal trace, use the following:

```
FTRACE VTAM
```

GENALERT

The GENALERT command is used to send an alert to the hardware monitor. The task DSICRTR must be active in order to route alerts. The GENALERT command is generally used in a CLIST that is driven by message BNJ146I. The text of this message contains the necessary operands for GENALERT as described below.

The format of the GENALERT command is:

```
GENALERT      G     ALID = alertid
                    PRID = product set ID
                    DESC = description
                    HIER = hname1,htype1 [,...[,hname5,htype5]]
                    PC = probable cause [,probable cause2]
                      [,probable cause3]
                    [TYPE = {PERM|TEMP|PERF|INTV|CUST|USER|AVAL|
                      NTFY|ENVR|INST|PROC|SCUR|DLRC|PAFF}]
                    [TEXT = 'product unique text']
                    ACTS = action [,action,...]
                    USER = cause [,cause,...] ;action[,action,...]
                    FAIL = cause [,cause,...] ;action[,action,...]
                    INST = cause [,cause,...] ;action[,action,...]

              N     HIER = hname1,htype1 [,...[,hname5,htype5]]
                    PRID = product set ID
                    MAJ = major cause
                    MIN = minor cause
                    ACT = action code
                    [TEXT = 'product unique text']
                    [TYPE = {PERM|TEMP|PERF|INTV|CUST|USER|AVAL|
                      NTFY|ENVR|INST|PROC|SCUR|DLRC|PAFF}]
                    [QUAL = qual1[,qual2][,qual3]]
```

where:

G	specifies the generic NMVT alert format
N	specifies the non-generic NMVT alert format
TYPE	specifies an alert type
PRID	specifies a product set ID
MAJ	specifies a major cause
MIN	specifies a minor cause
ACT	specifies an action code
QUAL	specifies product-unique qualifiers (maximum of 3)
HIER	specifies hierarchy names and types (maximum of 5)
ALID	specifies an alert ID
DESC	specifies an alert description
PC	specifies a probable cause (maximum of 3)

ACTS	specifies actions
USER	specifies user cause; action
INST	specifies install cause; action
FAIL	specifies failure cause; action

Usage Note

The format parameter (G or N) is the only positional parameter. It must follow the command name (GENALERT). Values cannot be enclosed in parenthesis. Multiple values must be separated by a comma and the last value specified must be followed by a blank. Product unique text must be enclosed in quotes.

(See *NetView Hardware Problem Determination Guide* for a discussion of alerts and how they are handled by the hardware monitor.)

Example

The following command will generate a non-generic NMVT to be logged to the hardware monitor data base.

```
GENALERT N TYPE=PERM PRID=USER1 MAJ=09 MIN=11 ACT=12
QUAL=QUAL1 TEXT='PRODUCT UNIQUE TEXT'
HIER RESNAME1,TYPE1,RESNAME2,TYPE2,RESNAME3,TYPE3
```

GO

The GO command allows you to resume running a CLIST that is in PAUSE status or WAIT status. You can also use the GO command to give values to a CLIST that is in PAUSE status.

The format of the GO command is:

```
GO                [operand...]
```

where:

operand is an operand or a group of operands that that you can pass to a suspended CLIST if the CLIST requested data.

Usage Note

The GO command is both a regular and an immediate command.

The operand field can be any character other than a comma or blank. A comma or blank means the end of an operand. Single quotation marks are not allowed within operands. Text within single quotation marks is treated as a single operand. Two commas in a row indicate a null operand. All operands are positional.

NetView rejects the GO command if a stack command has been entered. The CLIST with the &WAIT has been suspended. The W remains on the screen as a reminder that the waiting CLIST is still intercepting messages.

Example

If you have a P in the top right hand corner of your screen and you want to resume running a CLIST, enter:

```
GO
```

The CLIST resumes running.

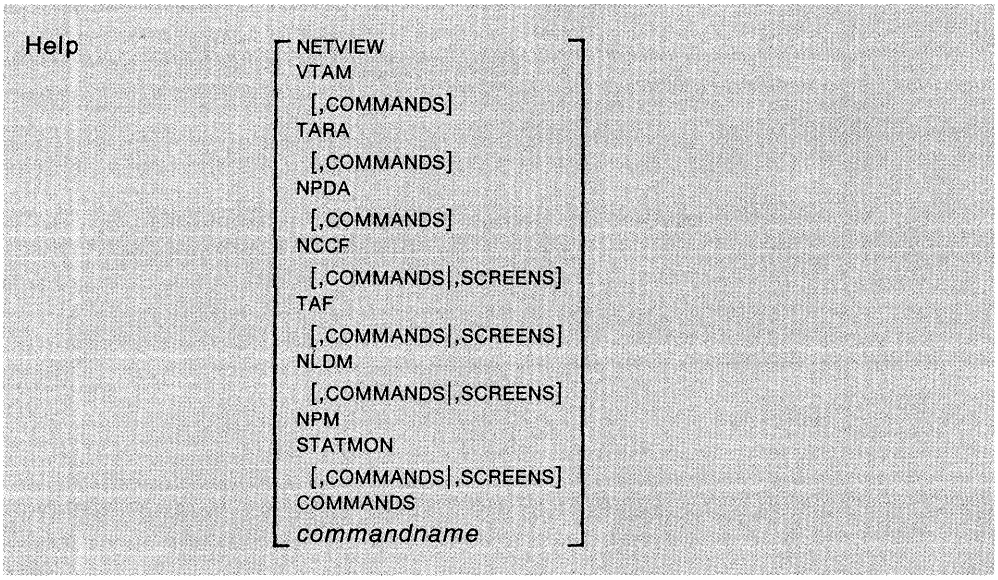
Response

If the GO command is successful, the P or W in the upper right corner of your screen disappears. The CLIST resumes running. No message appears.

HELP

The HELP CLIST displays help information for the NetView components and commands.

The format of the HELP CLIST is:



where:

NETVIEW	displays information on NetView.
VTAM	displays information on VTAM.
COMMANDS	displays a list of commands and CLISTs.
TARA	displays information on the 4700 support facility. This operand can be used in MVS and VSE.
NPDA	displays information on the hardware monitor.
SCREENS	displays information on component screens.
NCCF	displays information on the command facility.
TAF	displays information on the terminal access facility.
NLDM	displays information on the session monitor.
NPM	displays information on the Network Performance Monitor.
STATMON	displays information on the status monitor.
commandname	displays information on a specific command or CLIST.

Use a comma or a blank as a delimiter between operands.

Usage Note

If you enter Help from a component and specify no operand, help information for that component appears.

When you use this CLIST, the Help facility remains on the NetView component stack that is used with ROLL until the component is ended. However, if you enter the ERST, VRST, STATUS, OR RCFB CLISTs, you will return to the component from which you reached help.

Example

To receive help for the command facility (NCCF) commands, enter:

```
Help NCCF,COMMANDS
```

HELPDESK

The HELPDESK CLIST provides information to help you determine a user's problem. Techniques for problem determination are explained.

The format of the HELPDESK CLIST is:

```
HelpDesk
```

Usage Note

When you use this CLIST, the HELPDESK component remains on the NetView component stack that is used with ROLL until the component is ended.

HELPDESK can be abbreviated as HD.

Example

To access help desk information, enter:

```
HELPDESK
```

Response

The response is as follows:

```
CNMHDESK                NETVIEW HELP DESK

Select      To get information about

  1     A terminal not working

  2     A transaction or an application not working

  3     Slow response time

  4     Problems identified through network monitoring

  5     System message cross-reference

Type a number (1 through 5), then press ENTER.

      PF1 ---> Recommendations for the Setup and Use of the help desk.

                    HELP NETVIEW ---> NetView Help Menu

Action===>

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

Figure 3-5. Help Desk Panel

HEXDEC

The HEXDEC CLIST displays the decimal equivalent of a hexadecimal number. This CLIST can also be called from another CLIST either to execute a command with the hexadecimal equivalent of a decimal number as its operand or to return the hexadecimal value as a return code to the calling CLIST.

The format of the HEXDEC CLIST is:

```
HEXDEC          hexnumber
                 [,command|,EXIT]
```

where:

hexnumber	is the hexadecimal number to be converted, up to four characters long.
command	if specified, is a command with its operands (up to seven) that is to be issued. The decimal number is also passed to the CLIST or command after the last operand.
EXIT	if specified, causes the decimal value to be returned as a return code.

Example

To convert the hexadecimal number 44 to a decimal value, type:

```
HEXDEC 44
```

Response

The response is as follows:

```
C NCF01    CNM324I HEXDEC: X'0044' = 68
```

HOLD

The HOLD command prevents the screen from locking until you unlock it.

The format of the HOLD command is:

```
HOLD
```

Usage Note

Your system programmer can define a PF or PA key as HOLD. Initially, the HOLD key is PF11; check with your system programmer to make sure this is true for your location.

With a HOLD key you can keep the present screen, without having it unlock automatically, and still remain in AUTOWRAP mode.

The HOLD key freezes the screen. You can use it if you notice something that you need time to read before it is erased. You can also use it to freeze the screen while you mark messages for deletion or enter a command.

Example

To hold a screen, press PF11.

Response

The following message appears at the bottom of your screen:

```
DSI662I SCREEN HELD
```

To stop holding the screen, press the ENTER or CLEAR key.

IMR

The IMR CLIST starts or stops intensive mode recording for a link station or physical unit. This CLIST can assist in problem determination.

The format of the IMR CLIST is:

```
IMR          station
               [,ACT[,n|,10]|,INACT]
```

where:

station — specifies the name of the link station or physical unit.

ACT — specifies that intensive mode recording should be started for the named station.

INACT — specifies that IMR should be stopped for the named station.

n — specifies the maximum number of temporary errors that are to be recorded for the named station. The value can be from 1 to 65535. The default is 10. You cannot use this operand if you also specified the INACT operand.

Usage Note

This CLIST generates the following VTAM command:

```
MODIFY IMR
```

For more information on this command, see *VTAM Operation*.

Example

To turn on intensive mode recording for STATION1 and record the first 20 temporary errors, use the following command:

```
IMR STATION1,ACT,20
```

INACT

The INACT CLIST deactivates a VTAM resource.

The format of the INACT CLIST is:

```
INACT        id
              [,I|,F|,R]
              [,FINAL]
              [,ACT|,INACT]
              [,RMPO]
```

where:

id — specifies the name of the major or minor node to deactivate.

I — specifies that the resource and applicable subordinate resources are to be deactivated immediately.

F — specifies that the resource and applicable subordinate resources are to undergo forced deactivation.

R — specifies that the resource and applicable subordinate resources are to undergo forced deactivation and subsequent reactivation.

FINAL — specifies that the physical unit is no longer required and that there are no immediate plans to reactivate it.

ACT — specifies that active cross-domain links and link stations are to remain active after the NCP major node is deactivated.

INACT — specifies that cross-domain links and link stations are to be deactivated as part of the NCP deactivation.

RMPO — applies to an NCP major node only and specifies that the communication controller in which the NCP is running is to be powered off automatically at the completion of the deactivation.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  INACT
```

For more information on this command, see *VTAM Operation*.

Note: The FINAL and RMPO operands cannot be used together.

Example

To deactivate NCP1 but keep any active cross-domain links and link stations active, use the following command:

```
INACT NCP1
```

INACTF

The INACTF CLIST deactivates a VTAM resource with a forced deactivation. Status monitor will not monitor any nodes that you inactivate using the INACTF CLIST.

The format of the INACTF CLIST is:

```
INACTF      id
             [,FINAL]
             [,ACT|,INACT]
             [,RMPO]
```

where:

id — specifies the name of the major or minor node to deactivate.

FINAL — specifies that the physical unit is no longer required and that there are no immediate plans to reactivate it.

ACT — specifies that active cross-domain links and link stations are to remain active after the NCP major node is deactivated.

INACT — specifies that cross-domain links and link stations are to be deactivated as part of the NCP deactivation.

RMPO — applies to an NCP major node only and specifies that the communication controller in which the NCP is running is to be powered off automatically at the completion of the deactivation.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  INACT,FORCE
```

For more information on this command, see *VTAM Operation*.

Note: The FINAL and RMPO operands cannot be used together.

Example

To force deactivation of NCP1 but keep active cross-domain links and link stations, use the following command:

```
INACTF NCP1
```

INDEX

The INDEX CLIST displays subjects that are discussed in the HELP facility.

The format of the INDEX CLIST is:

```
INDEX          {A|B|...|Z}
```

Usage Note

Use PF7 and PF8 to move backward and forward through the index. If you find an item that you would like to reference, enter the option (found next to the item) in the Action field. You can enter only one option at a time, even if multiple options are given.

If you enter the index by using a particular letter, you cannot move to another letter without issuing the INDEX CLIST again. When you use this CLIST, the INDEX component remains on the NetView component stack that is used with ROLL until the component is ended.

Example

To display a list of subjects beginning with the letter S, enter:

```
INDEX S
```

Response

The following screen is an example of what is displayed:

```
CNMZZS01              INDEX OF NETVIEW HELP PANELS
                                ** S **                          Page 1 of 4
                                                          Select
 scheduling commands and CLISTs (AT, EVERY commands) . . . 1, 2
 scope of commands . . . . . . . . . . . . . . . . . . . . . 3
 session data  . . . . . . . . . . . . . . . . . . . . . . . 4
 session monitor
   See NLDM
 session trace data  . . . . . . . . . . . . . . . . . . . . 5
 span of control . . . . . . . . . . . . . . . . . . . . . . 6
 SPCS  . . . . . . . . . . . . . . . . . . . . . . . . . . . 7
 state code categories . . . . . . . . . . . . . . . . . . . 8
 states
    active . . . . . . . . . . . . . . . . . . . . . . . . . 9
    pending  . . . . . . . . . . . . . . . . . . . . . . . . 9
    used by status monitor . . . . . . . . . . . . . . . . . A
 statistics  . . . . . . . . . . . . . . . . . . . . . . . . B
 status
    analysis statistics  . . . . . . . . . . . . . . . . . . C
 status (cont.)


Action===>

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

Figure 3-6. Sample Index Panel

To see the help information on *setting up PF keys*, enter 1 in the Action field.

INPUT

The INPUT command modifies the length of the command entry area of the line mode panel. The command entry area is at the bottom of the command facility display area.

The format of the INPUT command is:

```
INPUT          [1|2|3]
```

Usage Note

The length of the input area is limited to 240 characters. The input area can be changed to one, two, or three continuous 80-character input lines. The default is one.

If the display area width is greater than 80 characters, the number of input lines is 240 divided by the display width. The result is rounded up. The end of the input area is indicated by three less than symbols (< < <). Only the command facility will be affected.

Commands retrieved to the hardware monitor or session monitor command line will be truncated to fit the command line.

Example

To change the command entry area to two lines, type:

```
INPUT 2
```

Response

NetView erases the screen and increases or decreases the input area as specified.

IOPD

The IOPD CLIST allows the operator to change the I/O problem determination time-out interval.

The format of the IOPD CLIST is:

```
IOPD          interval
```

where:

interval specifies the time-out interval in seconds for the input/output (I/O) problem determination function. The range must be from 0 through 5366000 seconds.

Usage Note

This CLIST generates the following VTAM command:

```
MODIFY IOPD
```

For more information on this command, see *VTAM Operation*.

Example

To change the I/O problem determination time-out interval to 5 minutes (300 seconds), use the following:

```
IOPD 300
```

LINES

The LINES CLIST displays the status of lines and channel links in the domain.

The format of the LINES CLIST is:

```
LINES    [ Act   ]
         [ ALL   ]
         [ Inact ]
```

where:

Act specifies that information is to be displayed about all active lines.

ALL specifies that information is to be displayed about all lines within each major node regardless of their status.

Inact specifies that information is to be displayed about all inactive lines.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  LINES
```

For more information on this command, see *VTAM Operation*.

Example

To display the status of all active lines, type the following:

```
LINES ACT
```

Response

You will receive a response similar to:

```
IST350I VTAM DISPLAY - DOMAIN TYPE = LINES
IST354I PU T4/5 MAJOR NODE = ISTPUS
IST170I LINES:
IST080I 09C-L   ACTIV----I 03F-L   ACTIV----I 08F-L   ACTIV----I
IST231I CA MAJOR NODE = H21C10
IST170I LINES:
IST080I H21CC94  ACTIV----E
```

LINESTAT

Use the LINESTAT command to control a 3710 line.

The format of the LINESTAT command is:

```
LINESTAT        ID=name
                  {,PORT=portnumber|,LINE=name}
                  {,HALF|,FULL|,SNBU|,NOSNBU|,SSL}
```

where:

ID=name	is the network name of the 3710 to which the line is attached.
PORT=portnumber	is the 3710 port number of the line for which you want to display or change line status. The valid port numbers are 1AA, 1BB, 1CC, 1DD, and so on, up to and including 16AA and 16BB.
LINE=name	is the network name of the line for which you want to change line status.
HALF	sets the line attached to the port to half speed.
FULL	sets the line attached to the port to full speed.
SNBU	specifies that the line or port is to be changed to a switched network backup line.
NOSNBU	specifies that the line or port is to be changed from a switched backup line to a normal line.
SSL	is used to notify a 3710 when you are reactivating a specific secondary line.

Usage Note

With the LINESTAT command, you ***cannot*** set lines using start-stop transmission or X.25 protocols to:

- Half speed
- Switched network backup mode.

For addresses 1 through 15, ports AA and DD are valid. For address 16, only ports AA and BB are valid.

Example

To change LINE1 on device NY3710 to full speed, type:

```
LINESTAT ID=NY3710,LINE=LINE1,FULL
```

LINKDATA

The LINKDATA command requests a service point to return device data for a given link or link segment.

The format of the LINKDATA command is:

```
LINKDATA    SP=service point name,
            APPL=application name,
            LINE=line name|RESOURCE=resource name
            [,UN=using node|,ENTRYLCC=entry LCC]
            [,RD=remote device (node)|,EXITLCC=exit LCC]
```

where:

SP	specifies the name of the service point to execute the command.
APPL	specifies the name of the link connection subsystem manager (LCSM) to execute the command.
LINE	identifies the linename of the link connection.
RESOURCE	identifies the name of link connection component within a link connection.
UN	identifies the name of the primary link station for an unbalanced mode link or either node that contains the link station of a balanced mode link.
ENTRYLCC	identifies the name of the first (entry) link connection component of a link connection.
RD	identifies the name of the secondary (adjacent) link station for an unbalanced mode link or the other node containing a link station of a balanced mode link.
EXITLCC	identifies the name of the last (exit) link connection component of a link connection.

Usage Notes

You can use the ENTRYLCC and EXITLCC operands to reduce the data received. This command can be issued from a CLIST to help automate problem determination and error recovery. If you issue the LINKDATA command from a CLIST, NetView returns the resulting data to the CLIST for its use. If LINKDATA is issued from a command line, the results are displayed on your terminal on one or more LINKDATA REPLY panels. (See *NetView Command Lists* for more information on how to use LINKPD in a CLIST.)

Four sample CLISTS (INITCFB, ADDLINE, SPLOOKUP, FINDNCP) are provided with NetView to simplify the specification of the parameters for this command. Another CLIST (TEST SP) shows an example of how to invoke this command and display the results. These five CLISTS are documented in the *NetView Installation* manual.

Example

To send a LINKDATA command to service point NMWS1 to retrieve data on line LIN3, enter:

```
LINKDATA SP=NMWS1 APPL=APPL07 LINE=LIN3
```

APPL07 is the link connection subsystem manager (LCSM) that will execute the command.

LINKPD

The LINKPD command requests a service point to do problem determination on a given link or link segment.

The format of the LINKPD command is:

```
LINKPD      SP=service point name,
            APPL=application name,
            LINE=line name|RESOURCE=resource name
            [,UN=using node|,ENTRYLCC=entry LCC]
            [,RD=remote device (node)|,EXITLCC=exit LCC]
```

where:

SP	specifies the name of the service point to execute the command.
APPL	specifies the name of the line connection subsystem manager (LCSM) to execute the command.
LINE	identifies the linename of the link connection.
RESOURCE	identifies the name of link connection component within a link connection.
UN	identifies the name of the primary link station for an unbalanced mode link or either node that contains the link station of a balanced mode link.
ENTRYLCC	identifies the name of the first (entry) link connection component of a link connection.
RD	identifies the name of the secondary (adjacent) link station for an unbalanced mode link or the other node containing a link station of a balanced mode link.
EXITLCC	identifies the name of the last (exit) link connection component of a link connection.

Usage Note

You can use the ENTRYLCC and EXITLCC operands to reduce the data received. This command can be issued from a CLIST to help automate problem determination and error recovery. If you issue the LINKPD command from a CLIST, NetView returns the resulting data to the CLIST and to your terminal as a message or messages. (See *NetView Command Lists* for more information on how to use LINKPD in a CLIST.)

Four sample CLISTs (INITCFB, ADDLINE, SPLOOKUP, FINDNCP) are provided with NetView to simplify the specification of the parameters for this command. Another CLIST (TEST SP) shows an example of how to invoke this command and display the results. These five CLISTs are documented in the *NetView Installation* manual.

Example

To send a LINKPD command to service point (SP) NMWS1 to do a problem analysis on line LIN3, enter:

```
LINKPD SP=NMWS1 APPL=APPL07 LINE=LIN3
```

APPL07 is the link connection subsystem manager that will execute the command.

LINKTEST

The LINKTEST command requests a service point to test a given link or link segment.

The format of the LINKTEST command is:

```
LINKTEST    SP=service point name,
            APPL=application name,
            LINE=line name|RESOURCE=resource name
            [,UN=using node|,ENTRYLCC=entry LCC]
            [,RD=remote device (node)|,EXITLCC=exit LCC]
            [,SELFCNT=number of repetitions]
```

where:

SP	specifies the name of the service point to execute the command.
APPL	specifies the name of the link connection subsystem manager (LCSM) to execute the command.
LINE	identifies the linename of the link connection.
RESOURCE	identifies the name of link connection component within a link connection.
UN	identifies the name of the primary link station for an unbalanced mode link or either node that contains the link station of a balanced mode link.
ENTRYLCC	identifies the name of the first (entry) link connection component of a link connection.
RD	identifies the name of the secondary (adjacent) link station for an unbalanced mode link or the other node containing a link station of a balanced mode link.
EXITLCC	identifies the name of the last (exit) link connection component of a link connection.
SELFCNT	specifies the number of self test repetitions to be executed. The range is 1-255, with default = 1.

Usage Note

You can use the ENTRYLCC and EXITLCC operands to reduce the data received. This command can be issued from a CLIST to help automate problem determination and error recovery. If you issue the LINKTEST command from a CLIST, NetView returns the resulting data to the CLIST for its use. If LINKTEST is issued from a command line, the results are displayed at your terminal on one or more LINKTEST REPLY panels. (See *NetView Command Lists* for more information on how to use LINKTEST in a CLIST.)

Four sample CLISTs (INITCFB, ADDLINE, SPLOOKUP, FINDNCP) are provided with NetView to simplify the specification of the parameters for this command. Another CLIST (TEST SP) shows an example of how to invoke this command and display the results. These five CLISTs are documented in the *NetView Installation* manual.

Example

To send a LINKTEST command to service point NMWS1 to perform a test on line LIN3, enter:

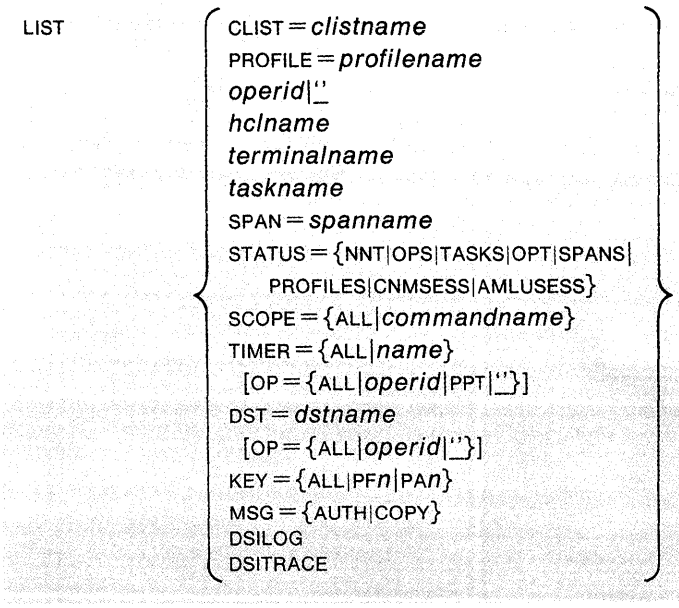
```
LINKTEST SP=NMWS1 APPL=APPL07 LINE=LIN3
```

APPL07 is the link connection subsystem manager that will execute the command.

LIST

The LIST command gives you information about your NetView session.

The format of the LIST command is:



where:

CLIST = clistname — is the name of the CLIST you want displayed.

PROFILE = profilename — is the name of the profile you want displayed.

operid — displays current information for the specified operator. This information includes the terminal name that the operator is using, the name of the hard-copy log being used, the profile name being used, the session status, the domain list, and the active span list.

' ' — two single apostrophes (' ') in place of the name indicate that you want your own status displayed. This information includes the terminal name that you are using, the name of your hard-copy log, your profile name, the status of your session, your domain list, and your active span list.

hclname — is the name of the hard-copy log device whose status you want displayed.

terminalname — is the name of the terminal whose status you want displayed.

taskname — is the name of the optional task whose status you want displayed. To find out the name of the task, use the LIST STATUS = OPT command.

SPAN = spanname — is the list of resources within your span list you want displayed.

STATUS=NNT	displays the status of all the NNT (NetView-NetView) sessions.
STATUS=OPS	displays the status of all the operator terminals known in this domain.
STATUS=TASKS	displays the status of all the tasks in your NetView.
STATUS=OPT	displays the status of all the active optional tasks.
STATUS=SPANS	displays the status of all the active span lists.
STATUS=PROFILES	is the list of profiles known in this domain.
STATUS=CNMSESS	displays all active communication network management (CNM) data sessions with your NetView and the status of these sessions.
STATUS=AMLUSESS	displays all VTAM-LU sessions.
SCOPE=ALL	lists the commands that you are authorized to use. All the commands are displayed if SCOPE has not been defined previously.
SCOPE=commandname	identifies the operands and values in your scope for a particular command.
TIMER=ALL	displays all the pending timer requests, depending on the OP operand. If you do not specify the OP operand, all pending non-PPT timer elements that you entered are displayed.
TIMER=name	displays the status of the named timer request. The *name* is the optional name specified on the ID operand of the AT and EVERY command or generated by the system.
DST=dstname	displays the outstanding DST requests. The identifier of the operator who made the request, the DST request number, the step sequence number, and an indicator for the last DST request are displayed.
OP=ALL	lists all operators having the DST or timer request specified.
OP=operid	lists only requests for the named operator and DST or timer request. You can specify *operid* even if the operator is not currently logged on.
OP=PPT	lists the PPT timer requests.
OP=' '	lists DST or timer requests for your own operator id. If you do not specify OP, '' is the default.
KEY=ALL	lists the PA and PF key definitions. A message is given for keys that cannot be set, or for those that have not yet been set.
KEY=PAn or PFn	gives you the individual PF or PA key settings. The *n* can be 1 to 24 for PF keys and 1 to 3 for PA keys.
MSG=AUTH	lists authorized message assignments.
MSG=COPY	lists messages that the ASSIGN command uses with the COPY operand.

DSILOG	displays the status of the network log.
DSITRACE	displays the status of the trace log.

Usage Note

If a status is listed IN RECOVERY, you may need to use the error recovery commands START, STOP, and MOVE to start processing. For hard-copy log printing, if a status of DEVICE DORMANT is given, this means that the task exists, but the hard-copy terminal is not connected.

Timer requests are displayed in the order they are scheduled to run.

If you are listing information about a domain list, an A indicates an active cross-domain session and an I indicates that no cross-domain session currently exists but you can start one.

Example

To display the status of the network log, enter:

```
LIST DSILOG
```

Response

Your response will be similar to:

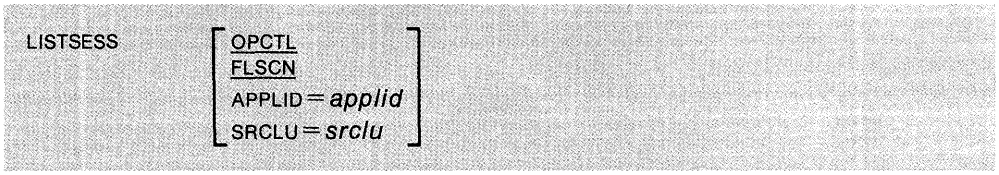
```
LIST DSILOG
TYPE: OPT TASKID: DSILOG   TASKNAME: DSILOG   STATUS: ACTIVE
PRIMARY:DSILOGP STATUS:ACTIVE SECONDARY:DSILOGS STATUS:INACTIVE
AUTOFLIP:   YES            RESUME:   NO
END OF STATUS DISPLAY
```

This means that the task name is DSILOG and it is active. The primary data set (DSILOGP) is active while the secondary data set (DSILOGS) is inactive.

LISTSESS

Use the LISTSESS command to display the status of your subsystem sessions.

The format of the LISTSESS command is:



where:

OPCTL	displays a listing of all the operator-control sessions.
FLSCN	displays a listing of all the full-screen sessions.
APPLID=applid	displays a listing of the status for all sessions with a particular application program.
SRCLU=srclu	displays a listing of status for all sessions with a particular logical unit.

Usage Note

If LISTSESS is entered with no operands, all sessions are listed.

Example

To list all the full-screen sessions that you have active, type:

```
LISTSESS FLSCN
```

Response

You will see information similar to the following:

If no sessions are active:

```
DSI447I    NO FLSCN SESSIONS ARE ACTIVE
```

If sessions are active:

```
SESSION STATUS DISPLAY BY FLSCN
  APPLID  SRCLU    SESSID   TYPE   DATA   DISCONNECT  NOTIFY  VIGIL  SDT
  TSO     TAFU2A   - - -    FLSCN  NO       PF7        NO     YES   YES
```

LISTVAR

The LISTVAR CLIST displays the values of the following variables: APPLID, DATE, HCOPY, LU, NCCFCNT, OPID, OPSYSTEM, TASK, and TIME.

The format of the LISTVAR CLIST is:

```
LISTVAR
```

Usage Note

See *NetView Command Lists* for an explanation of the variables.

Example

To display the settings of the variables, type:

```
LISTVAR
```

Response

You will see information similar to:

```
* CNM01           LISTVAR
C CNM01 CNM353I   APPLID   = CNM01008
C CNM01 CNM353I   HCOPY    =
C CNM01 CNM353I   LU       = H11L42C
C CNM01 CNM353I   NCCFCNT  = 18
C CNM01 CNM353I   OPID     = OPER1
C CNM01 CNM353I   TASK     = OST
C CNM01 CNM353I   DATE     = 07/19/85
C CNM01 CNM353I   TIME     = 14:44
C CNM01 CNM353I   OPSYSTEM = MVS/XA
```

LL2

The LL2 CLIST requests a link level 2 test for a non-switched SDLC link. It tests a communication line between:

- An NCP and one of its peripheral physical units
- Two NCPs.

The format of the LL2 CLIST is:

```
LL2          station
              [,CANCEL|,CONT|,ntrans|,10
              [,nframes|,1
              [,string|,ABCDEFGHIJKLMNOPQRSTUVWXYZ]]]
```

where:

station — specifies the name of a link station or physical unit to be tested.

CANCEL — specifies that the currently running test should be stopped.

CONT — specifies that the test being started should run continuously until canceled.

ntrans — specifies the number of test messages that are to be sent. This value can be a number from 1 through 65534. The default is 10.

nframes — specifies the number of test messages that are to be sent to the physical unit each time its station is selected. This can be a number from 1 through 65535. The default is 1.

string — specifies optional user data to be used as part of the test message. The default is A through Z.

Usage Note

This CLIST generates the following VTAM command:

```
MODIFY LL2
```

For more information on this command, see *VTAM Operation*.

If you omit a positional operand, you must indicate its absence by a comma.

Example

To start a link level 2 test for a link to an SDLC peripheral node containing physical unit DPU3274, use the following command:

```
LL2 DPU3274
```

LOGOFF

The LOGOFF command ends the session between your terminal and the system.

The format of the LOGOFF command is:

```
LOGOFF
```

Usage Note

Any messages that are to be sent to the operator are redirected to another authorized operator.

Response

If you have logged off successfully, you will see this message:

```
DSI081I OPERATOR operid, LOGOFF PROCEEDING:  TERMINAL=terminalname
```

LPDA

The link problem determination aid (LPDA) command changes or queries the LPDA status of a line or station attached to an NCP.

The format of the LPDA command is:

```
LPDA      ID=name
           {,STATION=name|,LINE=name}
           [,QUERY|,TYPE1|,TYPE2|,TYPE3|,NONE|,ALLOW|,BLOCK]
```

where:

ID=name	is the name of the NCP to which the line or link station is attached.
STATION=name	is the name of the link station whose LPDA status is being changed or queried. When STATION is specified, LPDA status is changed or queried for that station only.
LINE=name	is the network name of a line. LPDA status is changed or queried for the named line.
QUERY	displays LPDA status for the station or line indicated.
TYPE1	enables LPDA for the line specified with the LINE operand having 386X or 586X modem attributes.
TYPE2	enables LPDA for the line specified with the LINE operand with 3867 attributes.
TYPE3	enables LPDA for the line having 586X, Model 02, 03, 52, or 62 modem attributes.
NONE	specifies not to enable LPDA for the line specified with the LINE operand.
ALLOW	enables LPDA for the station specified with the STATION operand.
BLOCK	specifies not to enable LPDA for the station specified with the STATION operand.

Usage Note

You can use ALLOW and BLOCK with the STATION operand only.

The following matrix indicates where the LPDA command will work successfully and where it will fail with a sense code.

	Channelized Line	Non-Channelized Line	Stations Block and Allow
SDLC	NO	YES	YES
BSC	NO	YES	NO

Example

To query the LPDA status of LINE7 attached to NCP2, type:

```
LPDA ID=NCP2,LINE=LINE7
```

Response

You will receive a response similar to:

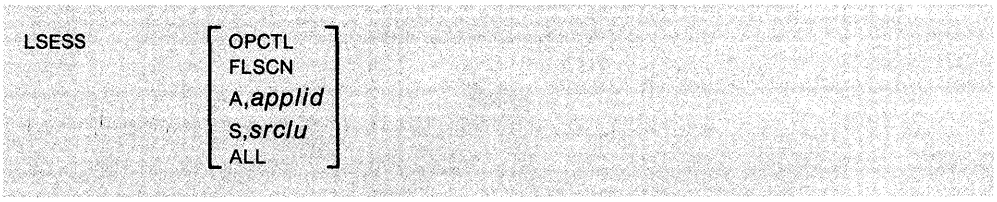
```
DSI268A LPDA COMPLETE
```

or a message with a sense code indicating LPDA cannot be set.

LSESS

The LSESS CLIST displays the status of your subsystem sessions.

The format of the LSESS CLIST is:



where:

ALL displays a list of all sessions.

OPCTL displays a list of all operator-control sessions.

FLSCN displays a list of all full-screen sessions.

A,applid displays a list of the status of all sessions with the named application program.

S,srclu displays a list of all sessions with the named *srclu*.

Usage Note

This CLIST generates a LISTSESS command; see "LISTSESS" on page 3-96 for more information.

Example

To list all operator control sessions, type:

```
LSESS OPCTL
```

MDMCNFG

The MDMCNFG command retrieves and updates the 586X modem configuration data.

The format of the MDMCNFG command is:

```
MDMCNFG     ID=node
              ,STATION=devicename
              [,LEVEL={1|2}]
              [,MODEM={LOCAL|REMOTE}]
              {,BROWSE={NOCHANGE|CONFIG|COUPLER}}
              {,CHANGE={CONFIG|COUPLER}          }
```

where:

ID = node	is the name (one- to eight-characters) of the node that will pass the command to the modem.
STATION = devicename	is the PU name (one- to eight-characters) of the data terminal equipment (DTE) at the end of the link with which the modem pair is associated.
LEVEL = 1	specifies to change the first pair of modems. This is the default.
LEVEL = 2	specifies to change the second pair of modems.
MODEM = LOCAL	specifies to change the modem closest to the using node that issues the command to the link station. This is the default.
MODEM = REMOTE	specifies to change the modem closest to the station.
BROWSE = NOCHANGE	specifies to display the non-changeable configuration operands screen.
BROWSE = CONFIG	specifies to display the configuration operands screen.
BROWSE = COUPLER	specifies to display the coupler operands and phone numbers screen.
CHANGE = CONFIG	specifies to display the changeable configuration operands screen. If you don't change any field on the screens, you receive a message that the modem configuration is not updated.
CHANGE = COUPLER	specifies to display the changeable coupler operands and phone numbers screen.

Usage Note

You must use either the BROWSE or CHANGE operand.

You can use this command during installation of the IBM 586X modems to configure both local and remote modems from your operator console. The local modems must be configured first.

You can use the MDMCNFG command in a CLIST.

If you would like to cancel a change to the configuration or cancel a change to the coupler screen, enter the CANCEL command on the command line and press ENTER.

The MDMCNFG command only runs under the operator station task (OST).

Example

To display the changeable configuration operands for the remote modem on the link connecting NCP1 and TERM4, use the following command:

```
MDMCNFG ID=NCP1,STATION=TERM4,MODEM=REMOTE,BROWSE=CONFIG
```

Response

The following screen appears:

```
NCCF        N E T V I E W          NCF01 OPER1     05/16/86 11:57:30

          * BROWSE CHANGEABLE 58XX CONFIGURATION PARAMETERS *
        ID = NCP1     STATION = TERM4    MODEM = REMOTE    LEVEL = 1

BASIC MODEM CONFIGURATION
  SPEED CONTROL MODE                M          (M=MODEM, D=DTE)
  TRAINING SEQUENCE                 L          (L=LONG, S=SHORT)
  CONFIGURATION                     P          (M=MULTI-POINT, P=POINT TO POINT)
  NETWORK FUNCTION                  C          (C=CONTROL/PRIMARY, S=SECONDARY)
  ANTISTREAMING                     N          (Y=YES, N=NO)
  TRANSMIT CLOCK OPTION             I          (I=INTERNAL, E=EXTERNAL, R=RECEIVE)
  COMPLEMENTARY RFS DELAY           0 MS       (0 TO 250 IN 10MS INCREMENTS)
  DEFAULT SPEED                     F          (F=FULL, B=BACKUP)
  LOCAL LOOP BACK WRAP              N          (Y=YES, N=NO)

CUSTOMER INFORMATION                           (10 CHARACTER LIMIT)

ALARM THRESHOLDS
  RECEIVE LEVEL THRESHOLD           -43 DBM    (-43 TO 0)
  IMPULSE HITS THRESHOLD            21         (0 TO 63)
  LINE QUALITY THRESHOLD            10         (0 TO 14)

HIT ENTER TO END COMMAND
```

Figure 3-7. Browse Changeable Configuration Operands

The fields are described in Appendix B, "List of Panel Fields" on page B-1.

Your system programmer can use the Change Modem Configuration Form to show how your operands should be set. See *NetView Administration Reference* for a copy of the Change Modem Configuration Form.

MAINMENU

The MAINMENU CLIST displays the NetView main menu panel.

The format of the MAINMENU CLIST is:

```
MAINMENU
```

Usage Note

The NetView main menu panel appears when you log on to NetView if you use LOGPROF1. To use this panel, enter a command listed on the panel on the CMD line. After entering a command from this panel, you can return to the NetView main menu panel by pressing PF6 (ROLL), PF2 (END), PF3 (RETURN), or by entering the MAINMENU CLIST.

When you use the MAINMENU CLIST, the NetView main menu remains on the NetView component stack that is used with ROLL until the component is ended.

To leave the NetView main menu panel, press PF2 or PF3.

MAJNODES

The MAJNODES CLIST displays all the active major nodes in the domain.

The format of the MAJNODES CLIST is:

```
MAJNODES
```

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  MAJNODES
```

For more information on this command, see *VTAM Operation*.

Example

To display the active major nodes in the domain, type:

```
MAJNODES
```

Response

You will receive a response similar to:

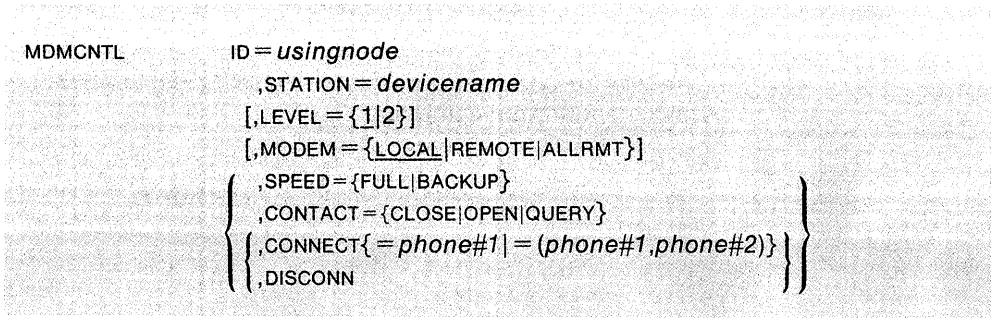
```
IST350I VTAM DISPLAY - DOMAIN TYPE = MAJOR NODES
IST089I VTAMSEG  TYPE = APPL SEGMENT     , ACTIV
IST089I ISTPUS   TYPE = PU_T4/5 MAJ NODE , ACTIV
IST089I M00      TYPE = CDRM SEGMENT     , ACTIV
IST089I ASYS8JES TYPE = APPL SEGMENT     , ACTIV
IST089I A21TSO   TYPE = APPL SEGMENT     , ACTIV
```

MDMCNTL

Use the MDMCNTL command to:

- Change line speed
- Close or open a contact (built-in relay) or detect current of a sensor
- Dial the station using the switched network backup (SNBU) line
- Disconnect the station and activate SNBU
- Sense current on a sensor relay of the modem.

The format of the MDMCNTL command is:



where:

ID=usingnode	is the name (one to eight characters) of the node that will issue the command to the station.
STATION=devicename	is the PU name (one to eight characters) of the data terminal equipment (DTE) at the end of the link with which the modem pair is associated.
LEVEL=1	specifies to change the first pair of modems. This is the default.
LEVEL=2	specifies to change the second pair of modems.
MODEM=LOCAL	specifies to change the modem closest to the using node that issues the command to the link station. This is the default.
MODEM=REMOTE	specifies to change the modem closest to the station.
MODEM=ALLRMT	requests the operation for all the remote modems attached to the local. It is valid with the speed operand only.
SPEED=FULL	changes the transmit speed of the modem to full. This operand can only be specified when LEVEL=1.
SPEED=BACKUP	changes the transmit speed of the modem to the backup speed. This operand can only be specified when LEVEL=1.
CONTACT=CLOSE	closes a contact.
CONTACT=OPEN	opens a contact.
CONTACT=QUERY	detects the state of the contact and the electrical current flowing through the sensor.

CONNECT=phone	dials out on a switched network backup line. This can only be used with MODEM=LOCAL.
DISCONN	disconnects a station on the switched network backup line. This can only be used with MODEM=LOCAL.

Usage Note

These functions apply to the 586X modems. You cannot specify LEVEL=2 and the SPEED operand together.

Example

The communications link between LANCP2 and NYSNA1 has problems and a request has been received to use the backup link until the problem is resolved. The phone numbers for the backup link are 1-800-555-6789 and 1-800-555-6790. To do this enter the following command:

```
MDMCNTL ID=LANCP2,STATION=NYSNA1,CONNECT=(18005556789,18005556790)
```

MOVE

The MOVE command shifts activity from one NetView terminal to another.

The format of the MOVE command is:

```
MOVE        FROM=terminalname,
              TO=terminalname
```

where:

FROM=terminalname	specifies the terminal from which you are moving work.
TO=terminalname	specifies the terminal to which you will be moving work. The *terminalname* must be the same device type as the FROM terminal name.

Usage Note

You cannot move your own terminal's work. The terminal for which work is being moved (FROM *terminalname*) must be in an error state. You cannot move a task in recovery status to a terminal (TO *terminalname*) that another application program is using.

In automated operations, you cannot move from or to an automated task.

Terminal names are network resource names of terminal devices of the same type. The MOVE command is restricted to devices defined with a POS or HARD-COPY statement.

Example

Suppose you are using terminal A. To move terminal B's work to terminal C, type:

```
MOVE FROM=B,TO=C
```

and press ENTER.

Response

When the move has completed, you will get this message:

```
DSI038I ACTIVITY FOR TASK MOVED FROM TERMINAL
        terminalname TO terminalname
```

MSG

The MSG command sends a message to an operator or to the network log.

The format of the MSG command is:

```
MSG          {PPT|LOG|ALL|SYSOP|operid}
               ,text
```

where:

PPT — indicates that the message text is to be sent to the PPT task. This message will be scanned under the PPT to determine if it is to be automated and cause a command or CLIST to be executed. If it is not suppressed, it is sent to the authorized message receiver.

LOG — means the message is written on the network log file, if active.

ALL — means the message is sent to all active terminals in this domain and to the system console.

SYSOP — means the message is sent to the system console operator.

operid — is the operator to whom you are sending the message.

text — is the message text.

Usage Note

A comma or blanks must come before the message text. All characters after the comma or blanks are considered part of the text. You can use blanks and commas in the text. Quotation marks (") or apostrophes (') are not required; if they are in the text, they are treated as part of the text.

You can use AUTHRCV as a synonym for the PPT operand.

Example

To send a messages to your users, type:

```
MSG ALL,SYSTEM SHUTDOWN IN 10 MINUTES
```

Response

Here is what the receiving operators will see:

```
DSI039I  MSG FROM NCF01 SYSTEM SHUTDOWN IN 10 MINUTES
```

Here is what you will see:

```
DSI001I MESSAGE SENT TO ALL
```

MVS

The MVS command is used to enter an MVS system operator command from NetView.

The format of the MVS command is:

```
MVS          {commandtext}
```

where:

commandtext — is an MVS command, a JES2/3 command or any other MVS subsystem command.

Usage Note

Commands in the master console (MC) only group may not be issued from NetView. Refer to *MVS Operator Library: Commands* for a discussion of command groups.

NCPDUMP

The NCPDUMP CLIST initiates a dump of an active NCP.

The format of the NCPDUMP CLIST is:

```
NCPDUMP     ncpname
              [,stationname
              [,RMPO|,DYNA]]
              [,PDS=name]
              [,CSP|,MOSS|,NCP]
```

where:

ncpname — is the name of the NCP to be dumped.

stationname — is the name of a link station in a node adjacent to the NCP to be dumped through which a static dump operation is to be performed.

RMPO — specifies that the communication controller should have the power turned off after the NCP is dumped statically.

DYNA — specifies that the communication controller should not have the power turned off, and that the NCP is to be dumped dynamically.

PDS=name — identifies the file that is to contain the dump.

CSP — specifies that a communication scanner processor dump contained on the MOSS disk in the 3725 communication controller is to be sent to the host and stored in a host data set.

MOSS — specifies that a maintenance operator subsystem dump contained on the MOSS disk in the 3725 communication controller is to be sent to the host and stored in a host data set.

NCP — specifies that the NCP in the communication controller's main storage is to be dumped and the resulting dump is to be sent to the host and stored in a host data set.

Usage Note

This CLIST generates the following VTAM command:

```
MODIFY DUMP
```

For more information on this command, see *VTAM Operation*.

If you omit a positional operand, you must indicate its absence by a comma.

If you specify DYNA, you cannot specify CSP or MOSS.

If you specify RMPO, you cannot specify CSP or MOSS.

If you specify *stationname*, you cannot specify DYNA, MOSS, or CSP.

Example

If you want to take a dynamic dump of NCP1 and put the results in a file defined by NCPDUMP, issue the following CLIST:

```
NCPDUMP NCP1,DYNA,PDS=NCPDUMP
```

NCPSTOR

The NCPSTOR CLIST displays the storage contents of a communication controller running an NCP. You can display up to 256 (decimal) bytes from any address within the communication controller.

The format of the NCPSTOR CLIST is:

```
NCPSTOR    ncpid
             ,addr
             [,length]
```

where:

ncpid — specifies the name of the NCP whose storage is to be displayed.

addr — specifies the address (in hexadecimal) of the first byte of data to be displayed.

length — specifies the number of bytes of NCP storage to be displayed. The value can be any decimal number from 1 through 256. The default is 32.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  NCPSTOR
```

For more information on this command, see *VTAM Operation*.

Example

To list the storage contents of NCP572P, beginning with address 260 for 32 bytes, type:

```
NCPSTOR NCP572P,260
```

Response

The response will be similar to:

```
IST097I NCPSTOR ACCEPTED
IST244I NCP STORAGE FOR ID = NCP572P
IST245I 000260 81C2282F 104828AE 415CF00F 991528B3
IST245I 000270 0108E1F0 80804154 A821D410 25B9F2A0
```

NETWORK

The NETWORK CLIST displays all networks defined to an NCP.

The format of the NETWORK CLIST is:

```
NETWORK          ncpid
```

where:

ncpid specifies the name of the NCP for which all defined networks are to be displayed.

Usage Note

A maximum of five networks can be displayed.

CAUTION:
Incorrect results may occur when running the NETWORK CLIST while MSGMOD is on.

Example

To display the networks defined to NCP21, enter:

```
NETWORK NCP21
```

NEWS

The NEWS CLIST displays messages from your network control center.

The format of the NEWS CLIST is:

```
NEWS
```

Usage Note

This messages are updated by your system programmer.

NODE

The NODE CLIST provides information about a particular major node or minor node. You can also receive information about the node's subordinate resources.

The format of the NODE CLIST is:

```
NODE          nodename
               [,Act|,Inact|,Only|,ALL]
               [,netid]
```

where:

nodename — is the name of the major node or minor node. The default is your terminal.

ACT — displays status information about the named resource (*nodename*) as well as the names and status of all its active subordinate resources.

INACT — displays status information about the named resource (*nodename*) as well as the names and status of all its inactive subordinate resources.

ONLY — displays status information about the named resource (*nodename*) only.

ALL — displays status information about the named resource (*nodename*) as well as the names and status of all its subordinate resources. This is the default.

netid — limits the scope of the display to a specific network for cross-domain resource major and minor nodes only.

Example

To display information about the channel-attached major node CTCA7F0 and its subordinate resources, use the following command:

```
NODE CTCA7F0,ALL
```

Response

You will receive a response similar to:

```
IST097I DISPLAY ACCEPTED
IST075I VTAM DISPLAY - NODE TYPE = CA MAJOR NODE
IST486I NAME= CTCA7F0, STATUS= ACTIV, DESIRED STATE= ACTIV
IST654I I/O TRACE = ON, BUFFER TRACE = N/A
IST170I LINES:
IST232I CTCL1     , ACTIV----E, CUA = 7F0
IST314I END
```

NOSTAT

The NOSTAT CLIST stops the recording of tuning statistics.

The format of the NOSTAT CLIST is:

```
NOSTAT
```

Usage Note

This CLIST generates the following VTAM command:

```
MODIFY NOTNSTAT
```

For more information on this command, see *VTAM Operation.*

OVERRIDE

The OVERRIDE command sets message processing options to be used instead of those selected by the message automation table for a particular operator. The OVERRIDE options take precedence over the options specified by the DEFAULTS command. These options apply to all messages that are to be displayed at the individual operator's terminal.

The format of the OVERRIDE command is:

```
OVERRIDE    [HOLD={ENABLE|DISABLE|DEFAULT}]
            [BEEP={ENABLE|DISABLE|DEFAULT}]
            [SYSLOG={YES|NO|DEFAULT}]
            [NETLOG={YES|NO|DEFAULT}]
            [HCYLOG={YES|NO|DEFAULT}]
            [DISPLAY={YES|NO|DEFAULT}]
```

where:

HOLD={ENABLE|DISABLE}	Defines whether or not the HOLD action is to be taken from the message automation table.
BEEP={ENABLE|DISABLE}	Defines whether or not the BEEP action is to be taken from the message automation table.
SYSLOG={YES|NO|DEFAULT}	Defines whether or not all messages are written to the system log.
NETLOG={YES|NO|DEFAULT}	Defines whether or not all messages are written to the network log.
HCYLOG={YES|NO|DEFAULT}	Defines whether or not all messages are written to the hard-copy log if an operator has one active.
DISPLAY={YES|NO|DEFAULT}	Defines whether or not all messages are displayed on NetView terminals.

Usage Note:

DEFAULT sets the processing back to using the DEFAULTS and message automation table processing.

The NetView-provided actions for your operator ID (when you do not use OVERRIDE) are determined from the DEFAULTS command and the message automation table.

Note: DISPLAY=NO allows all messages to be suppressed by an operator.

Response

No messages are produced if this command runs correctly.

PATHS

The PATHS CLIST displays dial-out path information about a switched physical unit.

The format of the PATHS CLIST is:

```
PATHS          name
```

where:

name specifies the name of a switched physical unit.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  PATHS
```

For more information on this command, see *VTAM Operation*.

Example

To display the dial-out path information for physical unit HD3790N1, use the following:

```
PATHS HD3790N1
```

Response

You will see a display similar to:

```
IST097I DISPLAY ACCEPTED
IST148I DIAL OUT PATH INFORMATION FOR PHYSICAL UNIT HD3790N1
IST149I LINE GRP   TELEPHONE NUMBER OR LINE NAME  PID GID CNT
IST168I EGROUP40              4094                001 001 005 AVA AUT
IST168I EGROUP50              4094                002 002 001 AVA MAN
IST314I END
```

PID is the path identifier, GID is the group identifier, and CNT is the retry count. AVA means the path is available, and AUT or MAN shows whether the dial-out is automatic or manual.

PENDING

The PENDING CLIST displays information about nodes in the domain in a pending state.

The format of the PENDING CLIST is:

```
PENDING
```

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  PENDING
```

For more information on this command, see *VTAM Operation*.

Example

To display nodes in a pending state, type:

```
PENDING
```

Response

You will see information similar to:

```
IST350I VTAM DISPLAY - DOMAIN TYPE = PENDING
IST159I THE FOLLOWING NODES ARE IN A PENDING STATE
IST080I M09      PACDR      M10      PACDR      H21CC94P PCTD1
IST080I P668B    PCTD1      P1402C   PCTD1      P45A2    PCTD1
IST080I P45A5CE  PCTD2      T45A5E00 INOP       T45A5E01 INOP
IST314I END
```

In this example, node MO9 is in the PACDR state. To display the meaning of PACDR, use the STATUS CLIST.

PFKDEF

The PFKDEF CLIST sets PF keys for an operator station task (OST) for the command facility, hardware monitor and 4700 support facility. It does not apply to any other NetView components.

The format of the PFKDEF CLIST is:

```
PFKDEF
```

Usage Note

The PFKDEF CLIST cannot run under the PPT.

This CLIST can be customized by your system programmer. If this CLIST is customized, the system programmer should update the PF key descriptions in Appendix F of this book.

VM PRINTLOG

The PRINTLOG CLIST prints the network logs or trace logs.

The format of the PRINTLOG CLIST is:

```
PRINTLOG        {L|T}  {P|S}
```

where:

L indicates network log.

T indicates trace log.

P prints primary log.

S prints secondary log.

Usage Note

This CLIST is available on VM only.

Example

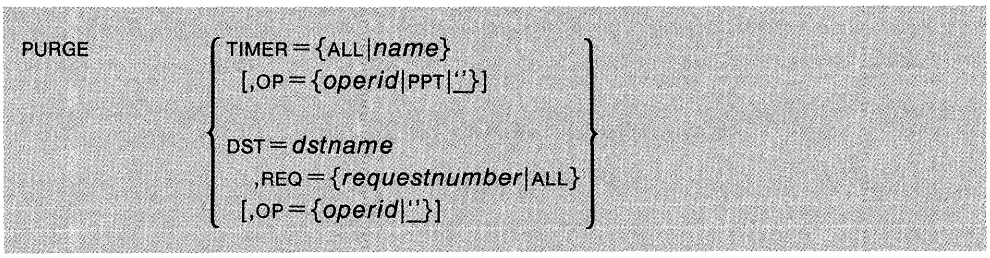
To print the primary trace logs only, enter:

```
PRINTLOG T P
```

PURGE

The PURGE command purges a timer request scheduled by the AT or EVERY command or purges a DST request with which there is a problem, such as a request unable to complete.

The format of the PURGE command is:



where:

TIMER=ALL — tells the system that all pending timer requests are to be purged, depending on the OP operand. If you do not specify the OP operand, all pending timer elements you entered without the PPT operand are purged.

TIMER=name — indicates that the named timer request sent under the operator or task specified on the OP operand is to be purged.

OP=operid — identifies the operator whose timer or DST requests are to be purged.

OP=PPT — specifies to purge PPT timer elements.

OP=' ' — specifies to purge non-PPT timer elements, or DST requests sent by you.

DST=dstname — is the task name of the DST that is processing the request. Scope checking is performed on this operand and its values.

REQ=requestnumber — is the DST request number you want purged. The DST numbers are obtained with the command LIST DST=dstname.

REQ=ALL — indicates that all DST requests for the operid specified on the OP operand are to be purged (maximum value is 999).

Example

To purge all outstanding non-PPT timer requests, type:

```
PURGE TIMER=ALL
```

To purge all outstanding DST requests for BNJDSERV that are from operator HELPDSK1, type:

```
PURGE DST=BNJDSERV, REQ=ALL, OP=HELPDSK1
```

Response

If the purge is successful, you will see:

```
DSI205I  nnn TIMER ELEMENTS PURGED  OP = operid
```

or

```
DSI510I  taskname:  rrr REQUESTS PURGED
```

In the example, *rrr* is the decimal number of requests purged.

QHCL

The QHCL CLIST displays information about the hard-copy log (printer), if one exists.

The format of the QHCL CLIST is:

```
QHCL
```

RCFB

The RCFB CLIST displays information describing the specified return code and feedback code. Only VTAM return codes and feedback codes are handled by this CLIST.

The format of the RCFB CLIST is:

```
RCFB          rtncd, fdbk2
```

where:

rtncd specifies the hexadecimal return code.

fdbk2 specifies the hexadecimal feedback code.

Usage Note

Leading zeros are not required for the return or feedback codes.

Example

To display the meaning of return code 8 and feedback code 0, type:

```
RCFB 8,0
```

Response

The following screen appears:

```
CNMR0800              RTNCD     FDBK2                        Page 1 of 2

                      (X'08')   (X'00')   Temporary storage shortage

          VTAM is temporarily unable to secure enough storage to
          process the request.  The request can usually be reissued
          (with EXECRPL, for example).  In certain cases, the macro
          instruction processing will not have gotten far enough to
          have done significant work, and the request can be
          reissued.  In other cases, the processing may have gone
          beyond some irreversible point before failing, in which
          case, the request cannot simply be reissued.

                          PF8===> More

Action===>

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

Figure 3-8. Return Code and Feedback Code Panel

RECYCLE

The RECYCLE CLIST deactivates, and then activates a network node.

The format of the RECYCLE CLIST is:

```
RECYCLE          resource
```

where:

resource specifies the name of a network node to be deactivated and then activated.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  INACT
```

If message IST105I indicates the device is inactive, the following command is also generated:

```
VARY  ACT
```

This CLIST sends the VARY ACT command to the system until message IST093I indicates that the resource is active. After 40 seconds, this CLIST ends.

The RECYCLE CLIST cannot run under the PPT.

Example

To deactivate and activate node HD3790N1, type:

```
RECYCLE HD3790N1
```

REDIAL

The REDIAL CLIST requests that VTAM search for an alternate path if a dial-out attempt is unsuccessful or end a session request without searching for an alternate path.

The format of the REDIAL CLIST is:

```
REDIAL        linename
              [,END]
```

where:

linename — specifies the resource name of a switched line.

END — specifies to end the session request without searching for an alternate path.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  INOP
```

For more information on this command, see *VTAM Operation.*

Example

To search for an alternate path for LINE27, use the following command:

```
REDIAL LINE27
```

REL

The REL CLIST releases a previously acquired NCP or releases a physical unit attached by a non-switched line to an NCP.

The format of the REL CLIST is:

```
REL          {ncpname|puname}
             [,ACT|,INACT]
             [,I]
```

where:

ncpname — specifies the name of the NCP to be released.

puname — specifies the name of the physical unit to be released.

ACT — for an NCP, specifies that active cross-domain links and link stations are to remain active after they are released. This is the default.

INACT — for an NCP, specifies that cross-domain links and link stations within the scope of the release are to be deactivated as part of the NCP release processing.

I — specifies immediate release. If not specified, normal release occurs.

Usage Note

This CLIST generates the following VTAM command:

```
VARY  REL
```

For more information on this command, see *VTAM Operation*.

Example

To release previously acquired NCP1, use the following command:

```
REL NCP1
```

RELCONID

The RELCONID command releases the MVS subsystem console ID that was obtained in a previously issued MVS command.

The format of the RELCONID command is:

Usage Note

A NetView operator ID obtains an MVS subsystem console ID when it issues an MVS command. For normal operation, the RELCONID command is not needed since an operator ID that is authorized to issue the MVS command will need to retain its subsystem console ID in order to receive command response messages and to issue more MVS commands. An operator ID's console ID is always released when the operator logs off without any need to issue RELCONID.

The RELCONID command should not be used in message automation CLISTs designed to run under an automation task that issues MVS commands because if a subsystem console ID is not available, the MVS command will fail and the intended automation action will not take place.

REPLY

The REPLY command responds to outstanding VTAM requests.

The format of the REPLY command is:

```
REPLY          {Pnn|Lnn},text
```

where:

Pnn or Lnn	is the reply number that appeared on a message.
text	is the information that you want to give to VTAM.

Usage Note

Note: VM users must use spaces instead of the comma in the command syntax.

When a VTAM message appears with the following format:

```
Pnn messagenumber messagetext
```

or

```
Lnn messagenumber messagetext
```

the message requests a network operator reply. The NetView reply command should be entered using the reply ID (Pnn or Lnn) from the message.

Example

If you have the following message on your NetView screen:

```
P45 IST272A NO INITIAL TEST FOR A08NV6 - REPLY 'U' TO BYPASS  - OR CANCEL
```

you can respond using the P45. For example:

```
REPLY P45, CANCEL
```

RESET

The RESET command ends the command or CLIST that is running.

The format of the RESET command is:

```
RESET        [NORMAL|IMMED|DUMP]
```

where:

NORMAL tells the system that a command should be stopped at its next breakpoint even if work remains to be done. RESET NORMAL may not work for a command processor that has no breakpoint. You may have to use RESET IMMED instead.

CAUTION:
Using RESET IMMED can be tried but it could interrupt the current process.

NORMAL is the default for RESET.

IMMED tells the system to end the command immediately. All processing stops and the results are lost. You may lose some messages already designated as output but not sent to the screen. Spans are not affected. Your cross-domain session is lost (if you had one). Terminal access facility sessions are lost also.

DUMP similar to RESET IMMED, but specifies that a dump is also taken.

Usage Note

The RESET command is an immediate command.

Do not enter the RESET IMMED or RESET DUMP command after a CLOSE command has run. If you do, you will be logged off and will not be able to log back on until NetView restarts. If you are in a cross-domain session and you send a RESET IMMED with the ROUTE command to a NetView in another domain, it has the same effect as stopping the cross-domain session.

Be careful when you use the RESET IMMED. Each time you use it, you increase the abnormal end count. When you go over the maximum count as defined by your system programmer, your terminal will be logged off.

RESET IMMED cleans up the storage associated with your OST. If you are using a function that runs partially under your OST and partially under a DST (for example, session monitor and hardware monitor), the associated DST is not affected by the RESET command. Data returned from the DST may be discarded or ignored since any correlation data kept under the OST has been lost. Since the OST part of the function has lost its storage, it may send duplicate requests to the DST and thus cause problems in the DST part of the function.

Response

Normal response to REPLY NORMAL:

You get the following message only if a command or CLIST is running; otherwise, you get no response.

```
DSI052I   command COMMAND SELF-TERMINATED BY OPERATOR REQUEST
```

The normal response to RESET IMMED or RESET DUMP is these messages:

```
DSI131I  COMMANDS ABENDED BY RESET COMMAND. STATION HAS BEEN RESET.
DSI172I  SUBTASK {luname/operatorid} ABENDED WITH CODE X'000101'
```

RETRIEVE

The RETRIEVE command places the last command you issued in the command input area. The keyboard will be unlocked. You can alter or erase the command. If you press ENTER, the command will run.

The format of the RETRIEVE command is:

Usage Notes

If, instead of processing the command displayed, you reissue the RETRIEVE command, the next to last command issued re-appears in the command input area. You can issue the RETRIEVE command repeatedly until you have retrieved the command you are looking for. The maximum number of commands that you can retrieve is 21.

If the command you are retrieving is the entire length of the input area, the last character is dropped and replaced with the cursor.

PF12 is set to the RETRIEVE command.

If you want to use the RETRIEVE command in the hardware monitor, you must have a programmed function (PF) key defined for this purpose. (Note: PF12 defaults to RETRIEVE.)

You cannot type the RETRIEVE command in the session monitor, the status monitor, or the browse facility. For the session monitor, you can use PF12, which is set to RETRIEVE.

You cannot retrieve commands issued by PF keys or suppressed commands. You cannot retrieve the RETRIEVE command.

RETURN

The RETURN command returns to the previous component or the last selection panel that you used.

The format of the RETURN command is:

```
RETURN
```

Usage Note

PF3 is set to the RETURN command if you use the PFKDEF CLIST. (Ask your lead operator if your default PF key settings are established.) This command should not be issued from a CLIST.

RETURN does not work in STATMON, BROWSE, the HELP facility, MAINMENU, or HELPDESK.

ROLL

The ROLL command returns to a previous component and panel that you used in that component.

The format of the ROLL command is:

```
ROLL
```

Usage Note

PF6 is set to the ROLL command if you use the PFKDEF CLIST. (Ask your lead operator if your default PF key settings are established.)

The system remembers the sequence in which you go from one component to another. When you use the ROLL command, the system moves the name of the current component at the beginning of the sequence of components, and re-enters the component at the end of the sequence, displaying the panel that was displayed when you last left the component.

Example

If you previously entered NLDM, followed by the HELP component, followed by NPDA, the sequence remembered is:

```
NLDM - HELP - NPDA
```

To re-enter the help facility where you left off, enter the command:

```
ROLL
```

ROUTE

The ROUTE command sends NetView and VTAM commands to other domains.

The format of the ROUTE command is:

```
ROUTE          domainid
                ,command
```

where:

domainid is the name of the NetView domain where the command is sent.

command is the command that is sent.

Usage Note

The ROUTE command sends NetView or VTAM commands to other domains. When you are connecting to other subsystems by means of TAF, only operator-control (OPCTL) commands can be routed. You can also use the ROUTE command to send logon information to other domains after these domains have started.

Any messages associated with the command being sent are returned to the sending terminal.

Do not use the ROUTE command to route commands that produce full-screen output such as HELP or HELPDESK.

If the suppression character defined by your system programmer is used as a prefix with the ROUTE command, neither the ROUTE command nor the command that is sent will be echoed to the screen or logged.

Example

If you want to display the status of a resource named LU2024A1 in domain D2, type:

```
ROUTE D2,DISPLAY NET,ID=LU2024A1
```

RSESS

The RSESS CLIST returns the operator to a previously disconnected full-screen terminal access facility session.

The format of the RSESS CLIST is:

```
RSESS        applid
              [,Y|,N
              [,PAn|,PFn|,CLR]]
```

where:

applid specifies the logical unit name of the subsystem you want to return to. This name must match the APPLID specified in a previous BGNSESS command.

Y means that you will hear the terminal alarm when information is sent to NetView. You will also hear this alarm when you press ENTER or a PA or PF key. The alarm will continue until you disconnect from the session. You may then return to your session and the alarm will not sound until another message (information) is received. If omitted, VIGIL defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

N means that you will not hear the terminal alarm when information is sent to NetView. You can display the messages (information) when you disconnect from the subsystem. If omitted, VIGIL defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

PAn specifies the PA (1-3) key you want to be the disconnect key during the full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

PFn specifies the PF (1-24) key you want to be the disconnect key during the full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

CLR specifies that CLEAR is to be the disconnect key during your full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

Usage Note

This command generates a RTRNSESS command, see "RTRNSESS" on page 3-140 for more information. If you omit a positional operand, you must indicate its absence by a comma.

Example

To return to a full-screen TSO1 session using PF12 as the disconnect key, type:

```
RSESS TSO1,N,PF12
```

Since N is specified, you will not be interrupted with messages.

RTRNSESS

The RTRNSESS command returns you to a previously disconnected full-screen session with any of the subsystems.

The format of the RTRNSESS command is:

```
RTRNSESS    APPLID=applid
            [,VIGIL={Y|N}]
            [,D={PAn|PFn|CLR}]
```

where:

APPLID=applid — specifies the logical unit name of the subsystem you want to return to. This name must match the APPLID specified in a previous BGNSESS command.

VIGIL=Y — means that you will hear the terminal alarm when information is sent to NetView. You will also hear this alarm when you press ENTER or a PA or PF key. The alarm will continue until you disconnect from the session. You may then return to your session and the alarm will not sound until another message (information) is received. If omitted, VIGIL defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

VIGIL=N — means that you will not hear the terminal alarm when information is sent to NetView. You can display the messages (information) when you disconnect from the subsystem. If omitted, VIGIL defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

D=PAn — specifies the PA (1-3) key you want to be the disconnect key during the full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

D=PFn — specifies the PF (1-24) key you want to be the disconnect key during the full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

D=CLR — specifies that the CLEAR is to be the disconnect key during your full-screen session. If omitted, D defaults to the selection made in the previous BGNSESS or RTRNSESS command for this session.

Usage Note

The VIGIL operand replaces the existing INT operand. For address 16, INT is still a valid operand but now functions the same way as VIGIL; the operator is no longer interrupted but only alerted by the terminal alarm of information coming to NetView.

If you have a session started to a destination system that does not automatically send an initial output screen (for example, the CICS "good morning" message screen), you must enter RTRNSESS before you can use the session.

If you are using the color, graphics, or larger screen sizes, there may be data missing when you return to the application. If this happens, use the REFRESH key to cause the information to be redisplayed on your screen.

Example

To return to a full-screen CICS1 session using PF12 as the disconnect key, enter:

```
RTRNSESS APPLID=CICS1,D=PF12
```

RUNCMD

The RUNCMD command allows service point application commands to be sent to a service point and executed by a given service point application.

The format of the RUNCMD command is:

```
RUNCMD      SP=service point name,
            APPL=application name,
            command_string
```

where:

SP	specifies the name of the service point to execute the command.
APPL	specifies the name of the link connection subsystem manager (LCSM) to execute the command.
command_string	is the command to be executed.

Note: The limit on the length of the RUNCMD is 240 characters.

Usage Note

The operands on the RUNCMD are positional. The given command (command string) must be the last operand and may be any format.

Example:

```
RUNCMD SP=SP01, APPL=APPL02, DISPLAY LINES
```

Response:

The normal response to RUNCMD command will either be message(s) from the service point application or message DSI268I RUNCMD COMPLETE when no messages are returned from the service point application. The messages returned may be command facility or service point application messages.

RUNDIAG

The RUNDIAG command performs online diagnostics in a 3710. A operand on the command specifies the diagnostic test to be run.

The format of the RUNDIAG command is:

```
RUNDIAG      ID=name
               ,PORT=portnumber|,LINE=name
               ,TEST=testid
```

where:

ID=name	is the network name of the 3710 to which the device being tested attaches.
PORT=portnumber	is the number of the port to be tested. The valid port numbers are 1AA, 1BB, 1CC, 1DD, and so on, up to and including 16AA, 16BB, 16CC, and 16DD.
LINE=name	is the network name of the line to be tested.
TEST=testid	is the ID of the specific diagnostic test to be run. The valid test IDs are: 1 – To test a communication adapter 2 – To test a cable 3 – To test the service modem.

Usage Note

For addresses 1 through 15, ports AA, BB, CC, and DD are valid. For address 16, only ports AA and BB are valid.

For detailed information on how to run the diagnostic tests, see *3710 Network Controller Host Guide*.

SENDSESS

The SENDSESS command sends a command to CICS/VS (MVS only), IMS/VS (MVS only), HCF (MVS only), or another NetView session. A session must already exist with the subsystem before commands are sent using the SENDSESS command.

The format of the SENDSESS command is:

```
SENDSESS        sessionid
                  {,text|,*}
```

where:

sessionid — is the session identifier (SESSID) you previously specified in the BGNSESS OPCTL command for this session. If SESSID was not specified, the APPLID value is used as the session identifier.

text — is the command, message, or other text you want sent. It should be in the format required for CICS/VS, IMS/VS, or HCF.

* — specifies that you request permission to send again.

When you use *, you send an attention to the subsystem. It simulates the attention key.

Usage Note

Any messages associated with the text will be received by whoever sent the SENDSESS command.

A semicolon (;) in the text is used as a logical carriage return. You can enter several commands or "logical lines" to CICS/VS, IMS/VS, or HCF using a semicolon to indicate the end of each logical line. To send a single semicolon to a subsystem you should use two semicolons in a row (;;).

SET

The SET command defines PA and PF keys for the command facility and the hardware monitor. These settings remain valid only until you log off.

The format of the SET command is:

```
SET          {PFn|PAn}
              [,IMMED|,DELAY]
              [,APPEND|,IGNORE]
               ,text
```

where:

PFn or PAn — specifies which key you want set, either a PF (program function) key or a PA (program attention) key. You cannot set PF keys that are set to a command module statement. You can specify 1 to 24 for PF keys and 1 to 3 for PA keys. (Your keyboard may not have that many PF or PA keys. Some keyboards have only 12 PF and 2 PA keys.) When you type the key number, do not leave a space between the PF or the PA and the number.

IMMED — tells the system that this command should run immediately when you press the key. Use this for commands you want to enter the same way each time.

DELAY — tells the system to write the command in the input area of the screen and place the cursor after the last character. The command will run when you press the ENTER key. This lets you modify the command before it is started.

APPEND — tells the system to append the data in the input area to the end of the command text from the SET command when you press the PF key.

PA keys do not send data, therefore do not use the PA key and the APPEND operand together.

IGNORE — tells the system to ignore the input area for this key. You must type IGNORE after the PF or PA key and before the command text.

text — is the command or command list you want specified for the PF or PA key. A comma or blanks must come before the message text. All characters after the comma or blanks are considered part of the text. You are allowed to use blanks and commas in the text. Quotation marks (") or apostrophes (') are not required; if they are in the text, they are treated as part of the text.

Usage Note

Although the command facility SET command can be used to SET 4700 support facility PF keys, it must be done in command facility or prefixed by NCCF.

If the SET command is attempted on an NNT or the PPT, a warning message is issued and no action is taken. This is because the NNT and PPT tasks do not have terminals, and therefore do not have PF or PA keys to set.

If an operator starts a cross-domain session and specifies a profile that has an initial command or CLIST, a SET command might unintentionally be attempted. An initial CLIST should check the task before attempting SET.

The SET command should not be included in the CLIST used on the NCCFIC initialization card in DSIDMN. The NCCFIC command or CLIST is run under the PPT.

This CLIST can be customized by your system programmer. If this CLIST is customized, the system programmer should update the PF key descriptions in this book in Appendix F.

Example

To set the PF12 key to retrieve your last command, enter:

```
SET PF12,IMMED,RETRIEVE
```

Response

To use the PF, press PF12. Notice that the SET PF12 command is placed in the command area.

SETCGLOB

The SETCGLOB CLIST sends a message to the NetView PPT task to request that a specified common global variable should be set to a specified value. The variable's value is updated by adding a number to its present value as long as the result does not exceed a specified maximum value (maximum value is 999).

The format of the SETCGLOB CLIST is:

```
SETCGLOB      varname  TO  value
```

where:

varname — specifies the common global variable whose value is to be updated. The name of the variable is given here without using the initial ampersand (&).

value — specifies the new value that is to be assigned to the specified common global variable.

Usage Note

Only those operators whose operator IDs have been authorized may use SETCGLOB CLIST. The list of authorized operator IDs is set up in the NetView initial CLIST by setting the common global variables CGAUTHID1, CGAUTHID2, and so on, to the desired operator IDs.

SETCGLOB CLIST depends on using a message automation member to invoke the PPTSETCB CLIST based on the message that is sent to the PPT by this CLIST.

Example

The following example sets the variable "&TASKCOUNT" to a value of 1.

```
SETCGLOB TASKCOUNT TO 1
```

Response

A return code is set upon completion of SETCGLOB CLIST. If invoked from another CLIST, this return code can be accessed in the variable "&RETCODE" and may have one of the following values:

0 — The common global variable was set as requested.

8 — The operator that issued the CLIST is authorized to use SETCGLOB.

12 — No operators are authorized to use SETCGLOB.

16 — PPT did not respond to the request.

20 — No variable name was specified or no value was specified.

24 — The GO command interrupted the wait for PPT to respond.

STACK

The STACK command suspends a CLIST while it is in PAUSE or WAIT status so that commands or CLISTS can be entered. This command also causes commands and CLISTS that were stacked because of the original CLIST to execute immediately and in the order entered.

The format of the STACK command is:

```
STACK
```

Usage Note

The effect of a STACK command during a CLIST WAIT is slightly different from its effect during a CLIST PAUSE. When a CLIST WAIT is followed by a STACK command, messages are still intercepted by the WAIT processing. This means that messages resulting from commands entered after STACK may be intercepted by the suspended CLIST and processed by the CLIST after an UNSTACK command is entered. In other words, during CLIST WAIT the processing of stacked messages is deferred until the CLIST is reinstated by the UNSTACK command. Any GO command will be rejected.

Example

To begin a STACK command, type:

```
STACK
```

Response

If the STACK command is successful, the following message will be issued:

```
DSI230I STACK STARTED
```

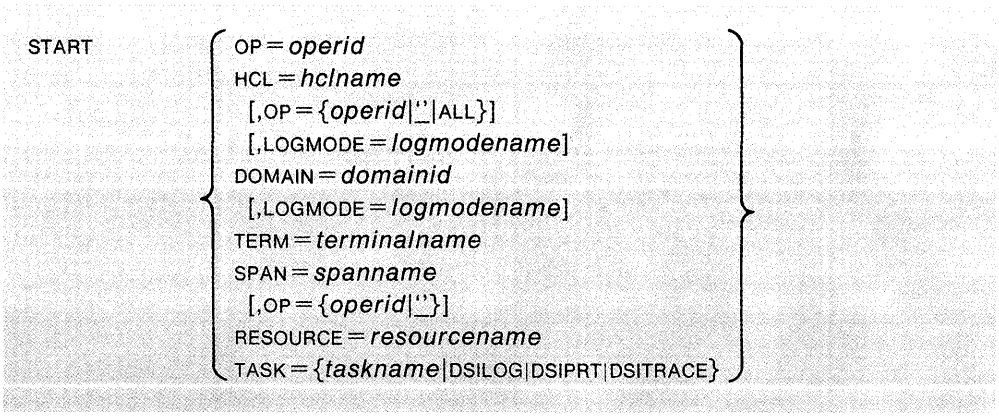
The stack command will not work in session monitor or hardware monitor. It will only work on command facility.

START

With the START command you can start:

- a hard-copy log
- a terminal in recovery status
- a session between the entering operator and another domain
- an optional task
- a span (add it to an operator's span of control)
- a resource within a span.

The format of the START command is:



where:

OP=operid — tells the system to re-establish a terminal in recovery status. You can use OP=operid if you know the operator ID and not the terminal name.

HCL=hclname — tells the system to start a hard-copy log for the specified operator or operators.

DOMAIN=domainid — tells the system to start a session between the entering operator and the named domain.

TERM=terminalname — tells the system to restart the session in recovery status between the named terminal and the associated operator. You use TERM=terminalname if you know the terminal name and not the operator ID.

SPAN=spanname — tells the system that the named span is to become part of an operator's span of control.

OP=operid — optionally tells the system which operator's span or hard-copy log is to be started.

OP=' ' — if omitted or entered as two single apostrophes (''), starts your own span. This is the default.

OP=ALL — starts hard-copy logging for all operators.

LOGMODE=logmodename — tells the system the logmode entry indicating the desired session bind operands. If not specified, the logmode name will default to the logmode name on the DLOGMOD entry coded on the APPL

	statement. If used with the hard-copy log, this is the printer logmode.
RESOURCE = resourcename	tells the system to make the named resource available to this NetView (such as a terminal). When NetView is first started, all defined resources are available to NetView. Span of control is checked.
TASK = taskname	tells the system to activate the named optional task. The TASK operand and its values are scope checked.
TASK = DSILOG	tells the system to activate the network log task.
TASK = DSITRACE	tells the system to activate the trace log task.
TASK = DSIPRT	tells the system to activate the network log or trace log print task.

Usage Note

You can use the START RESOURCE command to start a resource within a span. Since all resources in a span are started when the system is started, use START RESOURCE only if you had to use STOP RESOURCE first.

When a resource is started, the system will not implicitly route a command to another domain, even if the resource was also assigned to another domain during installation. You can use the START RESOURCE command to change implicit routing to your own domain after a STOP RESOURCE has changed the implicit routing to another domain.

Example

To restart terminal NRN14210, enter:

```
START TERM=NRN14210
```

Response

You will see a message similar to:

```
DSI040I NRN14210 SESSION RESTARTING FOR OP1.
```

STARTCNM

The STARTCNM CLIST starts the following tasks:

- Hardware monitor — BNJDSERV and BNJMNPDA
- Session monitor — AAUTSKLP, DSIAMLUT, AAUTCNMI, and the first five characters of the host identifier concatenated with the characters LUC
- Status monitor — the first five characters of the host identifier concatenated with the characters VMT, and the first five characters of the host identifier concatenated with the characters BRW
- 4700 support facility — BNJDSE36 (MVS and VSE)
- Network log task - DSILOG
- Trace log task - DSITRACE
- CNM router task - DSICRTR.

The format of the STARTCNM CLIST is:

where:

ALL	starts the browse, hardware monitor, session monitor, status monitor, 4700 support facility, network log, trace log, and CNM router tasks.
NLDM	starts the session monitor tasks.
NPDA	starts the hardware monitor tasks.
STATMON	starts the status monitor and log browse facility tasks.
TARA	starts the 4700 support facility tasks (MVS and VSE).
NETLOG	starts the network log task.
TRACELOG	starts the trace log task.

Usage Note

The STARTCNM CLIST cannot run under the PPT.

Example

If the browse facility, hardware monitor, session monitor, status monitor, 4700 support facility, network log, and trace log tasks have not already been started, you could use the following command to start these tasks:

```
STARTCNM ALL
```

STATIONS

The STATIONS CLIST displays the status of all cross-subarea link stations within each node or for a specific node.

The format of the STATIONS CLIST is:

```
STATIONS        [node]
                   [,Act|,ALL|,Inact]
```

where:

node specifies the name of a node. If this operand is omitted, information is displayed about all link stations in every active node.

Act displays information about all active cross-subarea link stations within each node or a specific node.

ALL displays information about all cross-subarea link stations within each node or a specific node. This is the default.

Inact displays information about all inactive cross-subarea link stations within each node or a specific node.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  STATIONS
```

For more information on this command, see *VTAM Operation*.

Example

To display all the link stations, use the following:

```
STATIONS
```

Response

You will see a display similar to:

```
IST097I DISPLAY ACCEPTED
IST350I VTAM DISPLAY - DOMAIN TYPE = STATIONS
IST393I PU T4/5 MAJOR NODE ISTPUS, SUBAREA=1
IST396I LNKSTA    STATUS     CTG GTG   ADJNODE   ADJSA    NETID
IST397I 0CF-S     ACTIV----I   1   1   NCPLOC1      107
IST610I                     LINE 0CF-L      - STATUS ACTIV----I
IST314I END
```

The name of the physical unit is ISTPUS, the subarea address is 1, the link station name is 0CF-S, the status is ACTIV----I, the current transmission group (CTG) number is 1, and the defined transmission group number (GTG) is 1.

STATUS

The STATUS CLIST displays information on VTAM status codes and status modifiers.

The format of the STATUS CLIST is:

```
STATUS          code
```

where:

code is the status code, or, optionally, the status modifier.

Example

To receive an explanation for the status code ACTIV----Y, enter:

```
STATUS ACTIV
```

Response

You will see information similar to the following:

```
CNMAACIV                          ACTIV

          State    Category   Resource State Name and Explanation

          ACTIV    Final      The resource and session are in the
                              active state.  Active terminals with
                              no active or pending-active sessions
                              will have ACT-NOSESS status in
                              response to DISPLAY TERMS.




                    PF1 ---> Help on Status Modifiers

Action===>

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

Figure 3-9. Status Codes and Modifiers Panel

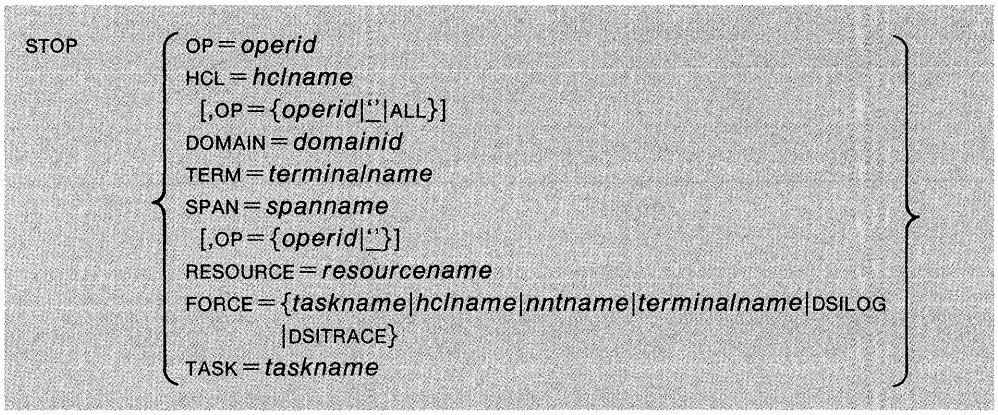
Press PF1 for an explanation of the status modifier ----Y.

STOP

With the stop command you can stop:

- a hard-copy log
- a terminal in recovery status
- a session between the entering operator and another domain
- an optional task
- a span (delete it from an operator's span of control)
- a resource within a span.

The format of the STOP command is:



where:

OP=operid — tells the system to end the session between the specified operator and the associated terminal. The task must be in recovery status. The operator must log on again to re-establish the session.

HCL=hclname — is the current name of the hard-copy log task you want to end.

DOMAIN=domainid — tells the system to end the cross-domain session between the specified domain and the local domain.

TERM=terminalname — tells the system to end the session between the specified terminal and the associated operator. The task must be in recovery status. You must log on again to re-establish the session.

SPAN=spanname — tells the system to take the span list (spanname) out of an operator's control.

OP=operid — tells the system which operator's span is to be stopped or to end a session with the hard-copy log and an operator.

OP='' — If omitted or entered as two apostrophes (''), stops your own span or ends your hard-copy log sessions. This is the default.

OP=ALL — ends all connections with the named hard-copy log.

RESOURCE = resourcename	tells the system to make the named resource unavailable to this NetView (such as a terminal). Span of control is checked.
FORCE = taskname	indicates which task is to be deactivated. If you use the PPT task identifier, the system will end with a user abend code of 8.
FORCE = hclname	indicates which hard-copy log is to be deactivated.
FORCE = nntname	indicates which NNT is to be deactivated.
FORCE = terminalname	indicates which terminal session with NetView is to be deactivated.
FORCE = DSILOG	specifies to deactivate the network log task. You should not use this command if the network log has an active data set. Use SWITCH DSILOG,T first and then wait for message DSI545I before entering the STOP FORCE command.
FORCE = DSITRACE	specifies to deactivate the trace log task. You should not use this command if the trace log has an active data set. Use SWITCH DSITRACE,T first and then wait for message DSI545I before entering the STOP FORCE command.
TASK = TASKNAME	indicates which DST or optional task is to be deactivated. STOP TASK will not force an abend but will attempt to terminate the task in a normal manner.

Usage Note

Use the STOP FORCE command to force a task to be ended in cases of extreme necessity. The STOP FORCE command should not be issued immediately after the STARTCNM command, that is, before initialization has completed. The tasks can then be recovered with the START TASK command if the task was a data services task or optional task. The operator can log on again if the task was an operator task. Hard-copy tasks can be restarted using START.

If you are a VM user, the ABEND13E resulting from a stop force is normal.

The STOP FORCE command should not be used to stop VSAM DST tasks (AAUTSKLP, BNJDSERV, BNJDSE36, DSILOG, or DSITRACE). If this command is used on this type of task, an unusable VSAM file may result, which would then require the data base to be redefined, and NetView to be restarted. It is recommended that the STOPCNM CLIST be used to stop any of these tasks.

If you issue the STOP FORCE command for DSILOG or DSITRACE, and logging is in process, it may take a few minutes before the task is ended, even after you receive the following message:

```
DSI531I taskname: description IS TERMINATING
```

Example

To stop your hard-copy logging sessions, enter:

```
STOP HCL=NRN1520A
```

Response

You will see a message similar to:

```
DSI056I NRN1520A SESSION STOPPING FOR OPER1.
```

STOPCNM

The STOPCNM CLIST stops the following tasks:

- Hardware monitor — BNJDSERV and BNJMNPDA
- Session monitor — AAUTSKLP, DSIAMLUT, AAUTCNMI, and the first five characters of the application identifier concatenated with the characters LUC
- Status monitor — the first five characters of the application identifier concatenated with the characters VMT, and the first five characters of the application identifier concatenated with the characters BRW
- 4700 support facility — BNJDSE36 (MVS and VSE)
- Network log task - DSILOG
- Trace log task - DSITRACE.

The format of the STOPCNM CLIST is:

where:

ALL	stops the browse, hardware monitor, session monitor, status monitor, 4700 support facility, network log, and trace log tasks.
NLDM	stops the session monitor tasks.
NPDA	stops the hardware monitor tasks.
STATMON	stops the status monitor and log browse tasks.
TARA	stops the 4700 support facility tasks (MVS and VSE only).
NETLOG	stops the Network log task.
TRACELOG	stops the trace log task.

Usage Note

Check with your system programmer before using this CLIST. It is recommended that this CLIST be scope-checked.

It is recommended to use the STOPCNM CLIST when terminating a VSAM DST (NETLOG or TRACELOG.)

The CNM router task (DSICRTR) is not affected by STOPCNM.

This CLIST should not be executed until the 'DST IS READY' message has been received.

The STOPCNM CLIST cannot run under the PPT.

Example

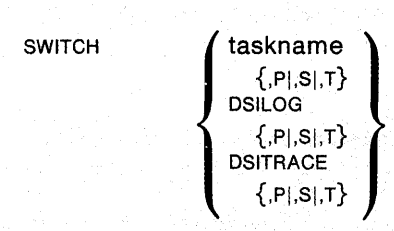
Use the following command to stop browse facility, hardware monitor, session monitor, status monitor, 4700 support facility, network log, and trace log tasks.

```
STOPCNM ALL
```

SWITCH

The SWITCH command allows you to specify or control access to either the primary or the secondary network log or trace log, or switch control of the DST tasks.

The format of the SWITCH command is:



where:

taskname — is the one- to eight- character name of the data services task (DST). You can get this name by using the LIST command.

DSILOG — the name of the network log task.

DSITRACE — the name of the trace log task.

P — means you want the primary VSAM file made active. Access to the secondary network/trace log ends.

S — means you want the secondary VSAM file made active. Access to the primary file ends. When switching files, active requests are completed. New requests are sent to the secondary file.

T — means that access to the currently active VSAM file, primary or secondary, should end after the current requests are complete. New requests are rejected.

Usage Note

Use this command to make the primary or secondary file the active network/trace log. You should use this command when errors prevent your access to the primary file and may permit continued operation on the secondary file. When you switch network/trace log files, active requests are completed.

For the data base associated with the hardware monitor, use the task name of BNJDSERV.

For the data base associated with the session monitor, use the task name of AAUTSKLP.

Note: The switching to T is not recommended for hardware monitor and session monitor data bases.

Example

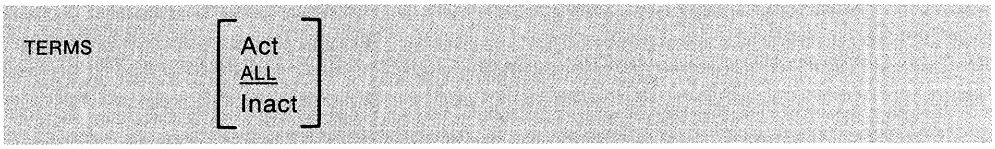
To switch to the primary network log, enter:

```
SWITCH DSILOG, P
```

TERMS

The TERMS CLIST displays the status of all device-type logical units (terminals) in active major nodes.

The format of the TERMS CLIST is:



where:

Act displays information about all active terminals in active major nodes.

ALL displays information about all terminals in active major nodes. This is the default.

Inact displays information about all inactive terminals in active major nodes.

Usage Note

In a domain that has many terminals, this CLIST may result in an undesirably long display, especially if the ALL operand, which is the default, is used.

This CLIST generates the following VTAM command:

```
DISPLAY  TERMS
```

For more information on this command, see *VTAM Operation*.

Example

To display all the inactive terminals, use the following command:

```
TERMS INACT
```

Response

You will see information similar to the following:

```
IST350I VTAM DISPLAY - DOMAIN TYPE = LOGICAL UNITS/TERMS
IST354I PU T4/5 MAJOR NODE = ISTPUS
IST351I LOCAL 3270 MAJOR NODE = H21L
IST089I H21L420  TYPE = LOGICAL UNIT     , NEVAC      ,CUA=420
IST089I H21L42B  TYPE = LOGICAL UNIT     , NEVAC      ,CUA=42B
IST352I LOCAL SNA MAJOR NODE = H21S
```

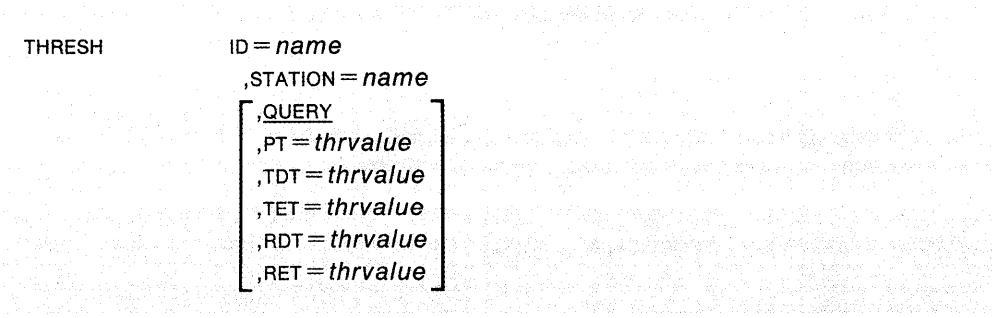
For each major node with terminals, you may see the following:

- The major node name (for example, ISTPUS, H21L, H21S)
- The line name and status (if the terminal is attached over a line)
- The name and status of the associated physical unit
- The name and status of the logical unit (for example, H21L420).

THRESH

The THRESH command displays or changes the current threshold value for stations attached to 3710s and NCPs.

The format of the THRESH command is:



where:

ID=name — is the network name of the node to which the station attaches.

STATION=name — is the network name of the station attached to the node identified by the value of the ID operand.

QUERY — displays all thresholds for the specified station. This is the default.

Use the following operands to specify a new threshold value for stations attached to an NCP.

TDT=thrvalue — when the station is an SNA device attached to an NCP, this number means "total transmissions" threshold.

For BSC devices attached to an NCP, the number represents the "traffic count" threshold. The value of this operand must be a decimal number in the range from 1 to 65535.

TET=thrvalue — for SNA stations attached to an NCP, this number reflects a "total retries" threshold, and the value of this operand must be a decimal number in the range of 1 to 65535.

If the station is a BSC device attached to an NCP, this threshold value represents an "error count" threshold, and the value of this operand must be a decimal number in the range of 1 to 255.

For the 3710, the specified threshold value must be a decimal integer from 0 to 65535. If you specify a threshold value of 0, the 3710 stops counting and sending traffic statistics for the kind of threshold indicated. Use the following operands to specify a new threshold value for stations attached to a 3710:

PT=thrvalue — specifies a new poll threshold for a station. Poll threshold applies only to SNA devices off the 3710.

TDT=thrvalue — specifies a new transmit data threshold for a station.

TET=thrvalue — specifies a new transmit error threshold for a station.

RDT=thrvalue — applies to 3710s only and specifies a new receive data threshold for a station.

RET=thrvalue applies to 3710s only and specifies a new receive error threshold for a station.

Usage Note

You can change only one threshold value at a time.

When you specify the ID name as an NCP name with a particular station name, you are setting or displaying the threshold values kept by the NCP for the station. When you specify the ID name as a 3710 name with a particular station name, you are setting or displaying the threshold values kept by the 3710 for the station.

Example

To display the threshold values for NYC3710 attached to NCP1, use the following command:

```
THRESH ID=NCP1,STATION=NYC3710,QUERY
```

Response

You will see information similar to:

```
DSI332I THRESHOLD DISPLAY FOR ID=NCP1 AND STATION=NYC3710
DSI334I   PT=number  TDT=number  TET=number  RDT=number
DSI334I   RET=number
DSI333I END OF THRESHOLD DISPLAY
```

The *number* is a decimal integer giving the threshold value. For all non-SNA devices, the PT value will be displayed as an asterisk (*), since there is no poll threshold value for them.

TNSTAT

The TNSTAT CLIST changes, restarts, or stops the recording of tuning statistics. Tuning statistics can be used to gather data for adjusting VTAM and NCP variables to improve performance.

The format of the TNSTAT CLIST is:

```
TNSTAT          [OFF]|[NO|YES[time|10]]
```

where:

OFF stops the recording of tuning statistics.

NO sends the tuning statistics to the SMF network log (MVS) or to an external CMS file (VM). This is the default.

YES sends the tuning statistics to the system console as well as to the SMF data set (MVS) or to an external CMS file (VM).

time specifies the number of minutes between tuning statistics recording events. This number can be a value from 1 through 1440. If not specified, the default is 10.

Usage Note

Before you can use the tuning statistics facility, the TNSTAT start option must have been specified when VTAM was started. This CLIST generates one of the following VTAM commands:

```
MODIFY NOTNSTAT

MODIFY TNSTAT
```

For more information on these commands, see *VTAM Operation*.

If you omit a positional operand, you must indicate its absence by a comma. If you do not specify any operands, the default is TNSTAT NO.

Example

To start the recording of tuning statistics, use the following:

```
TNSTAT
```

Then to stop the recording of the tuning statistics, use the following:

```
TNSTAT OFF
```

TRACE

The TRACE command initiates a sequence trace that records, either in virtual storage or on DSITRACE, a sequence of NetView processing steps. This can help you solve problems you may encounter using NetView.

The format of the TRACE command is:

```
TRACE      {ON|OFF|END}
            [,OPTion={ALL|opt|(opt1,opt2)}]
            [,MODE={INT|EXT}]
            [,SIZE={nnn|2}]
```

where:

ON — turns the indicated options on. ON is the only correct choice if the NetView trace is inactive.

OFF — turns the indicated options off.

END — indicates that all tracing is to stop and internal trace storage is to be freed. No other operands can be specified with the END operand. If other operands are specified, the command will be rejected with an error message.

OPTION — indicates which trace options will be traced. Each option identifies an internal event type that is to be traced.

The OPTION operand is optional. If it is not specified on the initial trace activation command (the NetView internal trace is not active before you issue this command), the options QUE, PSS, DISP, and STOR will be traced.

If OPTION is not specified on later TRACE commands, the previous active options will be used as the options values. This enables you to turn off and on all trace options. TRACE OFF without an OPTION operand will turn off all options currently being traced, because the previously active TRACE options are assumed. Then, by issuing TRACE ON without the OPTION operand, those same options will be reactivated.

The options are as follows:

- ALL—indicates all options
- QUE—indicates inter-task queueing of buffers using DSIMQS
- PSS—indicates presentation services, which involves input from and output to the terminal screen using DSIPSS
- DISP—indicates dispatching of tasks including waiting (DSIWAT), post (DSIPOS), and dispatch from a wait (resumption of processing from DSIWAT)
- STOR—indicates getting and freeing of storage.
- UEXIT—indicates user exit calls for DSIEX01 through DSIEX15, plus CNM Interface INPUT EXIT, CNM Interface OUTPUT EXIT, DST INIT EXIT, VSAM INIT EXIT, VSAM INPUT EXIT, VSAM OUTPUT EXIT

- MOD—indicates module entry and exit trace of a subset of the command facility modules.

MODE=INT indicates to log the trace data in the internal table.

MODE=EXT indicates to log the trace data on the trace log. MODE=EXT will be rejected if the DSITRACE task is not active or if there are no VSAM clusters active when the trace command is processed.

SIZE= indicates how many pages of storage to allocate for in-storage trace table. This operand is optional. If MODE=INT, the default size is 2 pages.

Usage Note

The TRACE command may be scope-checked, but the operands are not scope-checked.

Both VTAM and NCP are notified when an operator issues the trace explicit command. If the trace to VTAM is successful but the trace to NCP is rejected, the trace display will indicate that the resource is being traced, however, it will have incomplete trace data.

Only specify the MODE operand on the initial trace activation command. If specified at other times, either a warning or error message will be issued. This operand is not optional. The default value is EXT unless the SIZE operand is specified. If size is specified but MODE is not, then MODE=INT is implied. MODE=EXT and SIZE are mutually exclusive options. SIZE will be ignored if MODE=EXT is specified.

MVS TSOUSER

The TSOUSER CLIST displays the status of a TSO user ID.

The format of the TSOUSER CLIST is:

```
TSOUSER          id
```

where:

id is the TSO user ID about which information is to be displayed.

Usage Note

This CLIST generates the following VTAM command:

```
DISPLAY  TSOUSER
```

For more information on this command, see *VTAM Operation*.

Example

To find out the status of TSO user TSO21, use the following command:

```
TSOUSER TSO21
```

Response

You will see information similar to the following:

```
IST097I DISPLAY ACCEPTED
IST075I VTAM DISPLAY - NODE TYPE = TSO USERID
IST486I NAME= TSO21, STATUS= DSCNT, DESIRED STATE=N/A
IST576I TSO TRACE=OFF
IST262I APPLNAME = TSO0001, STATUS = ACTIV
IST262I LUNAME = L3E0, STATUS= ACT/S
IST314I END
```

This example shows the TSO user ID as TSO21 with a status of DSCNT, the TSO trace is not active, the application name associated with the TSO user space is TSO0001, and the logical unit being used is L3E0.

TUTOR

The TUTOR CLIST displays the panels that the system programmer has entered into the CNMPNL1 library (MVS) or the file with filetype NCCFLST (VM).

The format of the TUTOR CLIST is:

```
TUTOR                    panelname
```

where:

panelname specifies the panel to be displayed.

Usage Note

If you receive a nonzero return code, an error message will be displayed.

This CLIST is usually called from another CLIST to display online help panels.

Note: If you get to a help panel by using TUTOR, the PF keys on that panel indicated as active (by their colors or highlighting) may not be accurate.

Example

To look at screen CNMKNEE0 that the system programmer has written and placed in the CNMPNL1 library, use the following command:

```
TUTOR CNMKNEE0
```

The screen appears.

UNSTACK

The UNSTACK command causes a CLIST suspended by STACK to continue processing in the WAIT or PAUSE state.

The format of the UNSTACK command is:

```
UNSTACK
```

Usage Note

When the STACK command is used for a CLIST in a timed wait, the timed wait continues. However, the CLIST cannot recognize a time out and resume processing until the UNSTACK command is issued. If UNSTACK is issued *before* a timed wait expires, the timed wait continues as if it had never been interrupted. If UNSTACK is issued *after* a timed wait expires, the CLIST will resume processing as if the time out had occurred at the time the UNSTACK command was issued.

Example

To begin the UNSTACK command, type:

```
UNSTACK
```

If the UNSTACK command is successful, the following message will be issued:

```
DSI586I CLIST clistname IS RESUMED
```

If an UNSTACK command is entered without having first entered a STACK command, or if the UNSTACK command is entered at a different linkage level from the corresponding STACK command, one of the following error messages will be issued:

```
DSI231I NO STACK IS ACTIVE
DSI233I STACK IS NOT ACTIVE AT THIS LEVEL
```

For example, suppose you have entered a STACK command. Then you enter a compound command processor or another CLIST. Before you can successfully enter an UNSTACK command you might have to end the compound command processor or CLIST. If you are unsure what level you are at, enter UNSTACK anyway. If you are at the right level it will work. If not, you will get the error message and you can end the current compound command processor or CLIST and try again.

Note: UNSTACK works from all NetView-supplied compound command processors.

UPDCGLOB

The UPDCGLOB CLIST sends a message to the NetView PPT task to request that a specified common global variable should be updated. The variable's value is updated by adding a number to its present value as long as the result does not exceed a specified maximum value (maximum value is 999).

The format of the UPDCGLOB CLIST is:

```
UPDCGLOB    varname  BY  increment  MAX  maxvalue
```

where:

varname — specifies the common global variable whose value is to be updated. The name of the variable is given here without using the initial ampersand (&).

increment — specifies a number to be added to the variable's current value in order to determine a new value for the variable.

maxvalue — specifies the maximum value you want to allow the variable to take.

Usage Note

Only those operators whose operator IDs have been authorized may use UPDCGLOB CLIST. The list of authorized operator IDs is set up in the NetView initial CLIST by setting the common global variables CGAUTHID1, CGAUTHID2, and so on, to the derived operator IDs.

UPDCGLOB CLIST depends on using a message automation member to invoke the PPTSETCB CLIST based on the message that is sent to the PPT by this CLIST.

Example

The following example requests the PPT to update the common global variable "&TASKCOUNT" by 1. If &TASKCOUNT was formerly set to 20, it will be changed to 21.

```
UPDCGLOB TASKCOUNT BY 1 MAX 55
```

Response

A return code is set upon completion of UPDCGLOB CLIST. If invoked from another CLIST, this return code can be accessed in the variable "&RETCODE" and may have one of the following values:

0 — The common global variable was set as requested.

4 — The updated value would have exceeded the specified maximum.

8 — The operator that issued the CLIST is authorized to use UPDCGLOB.

12 — No operators are authorized to use UPDCGLOB.

16 — PPT did not respond to the request.

20 — No variable name was specified or no value was specified.

24 — The GO command interrupted the wait for PPT to respond.

VRST

The VRST CLIST displays the meaning of the virtual route status.

The format of the VRST CLIST is:

```
VRST              status
```

where:

status is the virtual route status code.

Example

To display the meaning of virtual route status BLOCK, type:

```
VRST BLOCK
```

Response

The following screen appears:

```
CNMOVRBK                VR BLOCKED STATUS DESCRIPTION


    BLOCKED : the VR is in hold waiting for pacing response.









Action===>

          PF1= Help   PF2= End   PF3= Return
          PF6= Roll   PF7= Backward              PF11= Main Menu
```

Figure 3-10. Virtual Route Status

WHO

The WHO CLIST lists the status of all operator terminals, NetView-NetView task sessions requested by other NetViews, and information about your session.

The format of the WHO CLIST is:

```
WHO
```

Response

After entering the WHO CLIST, you will see information similar to:

```
* NCF01   WHO
C NCF01   LIST STATUS=OPS
          OPERATOR: OPER1     TERM: A01A441     STATUS: ACTIVE
          END OF STATUS DISPLAY
C NCF01   LIST STATUS=NNT
- NCF01   MAX SESS: 00000005
          NO ACTIVE NCCF TO NCCF SESSIONS FOUND
C NCF01   LIST "
- NCF01   STATION: OPER1    TERM: A01A441
          HCOPY: NOT ACTIVE   PROFILE: PROFSEC
          STATUS: ACTIVE
          DOMAIN LIST: NCF01 (I)  NCF11 (I)  NCF12 (I)
                       NCF13 (I)  NCF14 (I)  NCF15 (I)
          ACTIVE SPAN LIST: NONE
          END OF STATUS DISPLAY
```

WRAP

The WRAP CLIST changes the setting of AUTOWRAP. If AUTOWRAP is on, this CLIST turns it off. If AUTOWRAP is off, this CLIST turns it on.

The format of the WRAP CLIST is:

```
WRAP
```

Usage Note

If you use the WRAP CLIST more than once, it will alternate between setting AUTOWRAP 0 and turning AUTOWRAP off. Results will be unpredictable if you use the WRAP CLIST together with the AUTOWRAP command.

Part 2. Hardware Monitor

Chapter 4. Getting Acquainted with the Hardware Monitor

Many hardware resources in a network send information and error records to the host system. The hardware monitor (also known as NPDA) collects this information and arranges and displays the data to help you with problem determination. You can use the hardware monitor to display the most recent events and statistics recorded about a network resource. The hardware monitor will analyze error data for probable causes and recommend actions to correct the problem. You can use filters to keep extraneous information from complicating your problem-solving efforts. An alert function informs you quickly of high-priority problems. You can also record problems directly into the Information/Management system (see page E-1) from the hardware monitor.

Data Collection

The hardware monitor collects data from many different sources in various formats and gives a common structure to this information. This data can be classified as solicited or unsolicited data.

Solicited Data

Solicited data is received as the result of a specific request for information or as the result of an action that you have taken. Certain SNA control units keep counters of different types of communication errors they detect and transmit the counters to the host only as solicited data.

Unsolicited Data

Unsolicited data is received without any action on your part. Unsolicited data may be received as the result of an error being detected in the network, or whenever error or traffic counters are exceeded and the network control program (NCP) sends collected data to the hardware monitor. Unsolicited data may be recorded as either an event or a statistic. Statistics are records of traffic volumes and temporary errors. Events can be records of permanent errors or of other unusual occurrences and may also come from statistics that qualify for event status because of a high ratio of temporary errors to traffic.

When the hardware monitor receives unsolicited data it creates a record containing information about the data and stores it as an event or statistical record or both in the data base. If the data qualifies as an alert, an alert record will also be created.

See Figure 4-1 on page 4-2 for more information on the hardware monitor data collection.

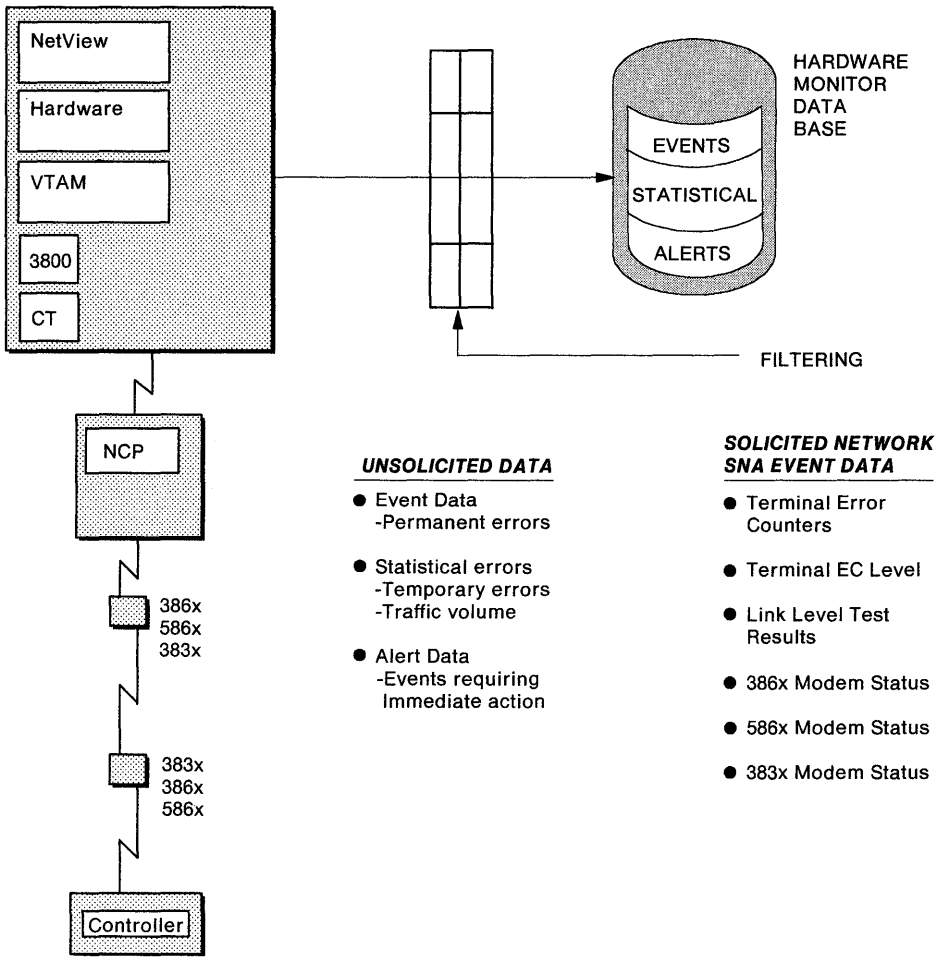


Figure 4-1. Data Collected by the Hardware Monitor

Record Types

The hardware monitor creates a data base made up of several record types: statistics, events, and alerts.

Statistics are records of traffic and recoverable error counts that have been collected at certain resources and reported to the host system. Statistical data generated by resources is sent to the host, and the hardware monitor stores these records in its data base. For certain resources, the hardware monitor analyzes each statistical record to determine whether to create a performance event record, which may become an alert.

A statistic can become an event when it exceeds the limits that you have set as a threshold. A threshold is a ratio of temporary errors compared to the traffic associated with the resource and is expressed as a percentage. It is meant to indicate the least acceptable percentage of temporary errors. If the threshold is exceeded, the hardware monitor creates an event record to record this condition; the original record is also recorded as a statistic.

Events are unexpected occurrences in network operation. An event may be recorded when the attempted activation of a resource fails. This failure may be due to a physical error in the network. Event data detected and generated by resources is sent to the host system for the hardware monitor both to store in its data base and to determine whether to issue and record an alert. An event can become an alert depending on what recording filters you have set. ***Alerts*** are events that you have decided require immediate attention. As soon as an event record is created, the hardware monitor checks the current state of its recording filters to see if this event qualifies for alert status. If it does, two things occur:

- An alert record about the event is written to the hardware monitor data base.
- A line item is created for presentation to the hardware monitor users on the Alerts-Dynamic panel if their viewing filters are set to pass an event of this type from this resource. These users' screens are automatically updated to reflect the occurrence of this special event. They may then take immediate action as called for by the nature of the event and any pertinent local procedures.

An alert appears on your screen as a one-line summary of the event that shows the error description and probable cause. The hardware monitor may also issue a numbered message about the alert to an authorized operator if filters are set up to provide this function.

Events are classified by type. Following is a list of event types and their corresponding abbreviations and codes.

Availability	AVAL 09
Customer application generated	CUST 05
Delayed recovery	DLRC 0F
Environment	ENV 0B
Held alert flag	HELD --
Impending problem	IMPD 11
Intensive Mode Recording	IMR 08
Installation	INST 0C
Intervention required	INTV 04
Notification of status change	NTFY 0A
Performance	PERF 03
Permanently affected resource	PAFF 10
Permanent error	PERM 01
Operational/procedure	PROC 0D
Security	SCUR 0E
SNA summary	SNA 07
Temporary or recoverable error	TEMP 02
End user generated	USER 06
Unknown	UNKN 12

Event types can be used in filter-setting commands to control what types of data are recorded in the hardware monitor's data base or are viewed by a NetView operator. See SRFILTER and SVFILTER for more information on filter setting.

Terminology

To make the best possible use of the hardware monitor, you should know your system configuration. That is, you must know how the different components in your system or network are connected to each other and to the host controller. You should also understand how the hardware monitor sees your configuration, because the probable cause terminology used by the hardware monitor may be unfamiliar to you.

Figure 4-2 gives you more information on how the hardware monitor's physical components and levels are related to each other in one typical configuration.

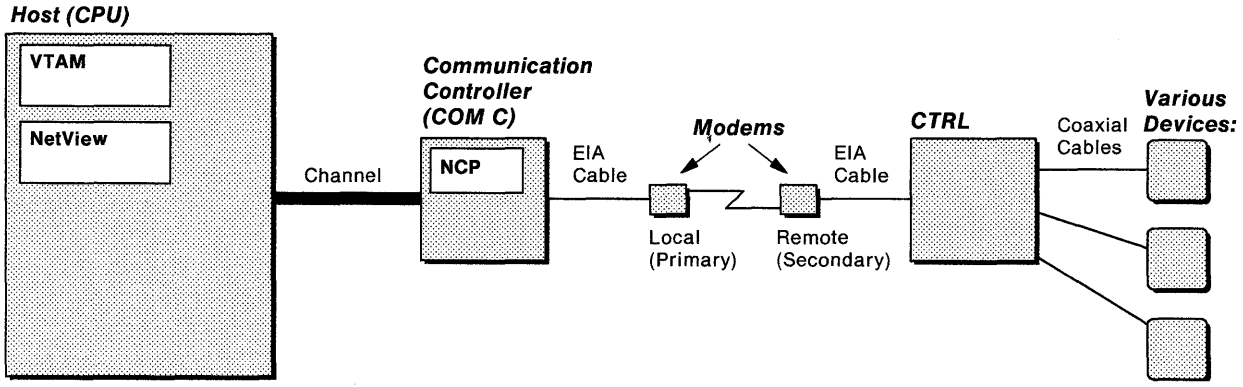


Figure 4-2. The Hardware Monitor Physical Components and Levels

Some of the abbreviations that the hardware monitor uses are explained in the following:

COMC	Communication controller—such as 3704, 3705, or 3725.
CPU	Central processing unit—the host computer.
LINE	The communication path between the local and remote modems.
CTRL	The cluster controller on the remote end of the line-such as a 3274, 3276, 8100, or 3777.
DEV	The terminal connected to the cluster controller-such as a 3278, or 8775.
CHAN	Channel-the path between the host processor and a channel-attached device.
LCTL	A cluster controller attached to the CPU by the channel.
LDEV	A device attached to a channel-attached cluster controller.

Starting the Hardware Monitor

The hardware monitor usually starts when the NetView program is started. However, if your installation chooses to start them separately, NetView must be started first. You can then start the hardware monitor by entering:

```
STARTCNM NPDA
```

Using the Hardware Monitor

Before you can use the hardware monitor, NETVIEW must be active. You can then use the hardware monitor by entering the following command:

```
NPDA
```

The first panel you see is the Menu panel. From this panel you can enter a number 1 through 7 next to the CMD = = > field. If you would rather not enter one of these selection numbers, you can enter an explicit hardware monitor command instead.

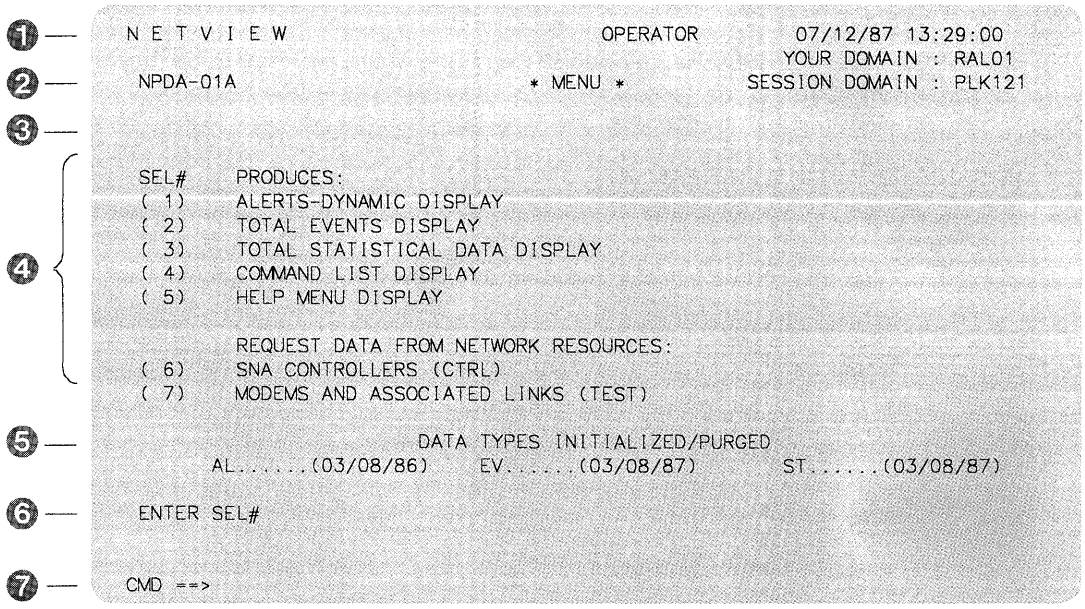


Figure 4-3. Hardware Monitor Menu Panel

Entering Commands

You can enter commands in several different ways. The fourth line from the bottom of the display contains a subset of operating instructions (or prompts) for each display. These prompts tell you how to get to the next set of panels or indicate the functions you are allowed to perform at this stage of problem determination.

Panel Layout

The panel has seven sections:

- Operator, Date, and Time-Section ❶
- Display Number, and Title-Section ❷
- Hierarchy and Requested Information-Section ❸
- Operating Instructions-Section ❹
- Operational Information-Section ❺
- Message Area-Section ❻
- Command Entry Area-Section ❼

Refer to the screen above as you read about each section.

Operator, Date, and Time

Section ❶ contains the operator identifier, date and time. The date and time shown are those of the last display update.

Display Number and Title

Section ❷ contains the display number and title of the display. Each display has a number and title.

Hierarchy and Requested Information

Section ❸ contains the pictorial hierarchy and the information you requested. The hierarchy (or configuration data) shows the domain name and resource names and types: *Note*: Hierarchy is not present on all displays.

Domain is the name of the domain where the data being viewed was collected.

TYPE1 is the highest level in the hierarchy that is being reported to the hardware monitor. For instance, this information could be CPU (for VTAM or MVS), COMC (for an NCP), or 8100 (for 8100/DPPX system).

TYPE2 through TYPE5 show the connectivity for the failing device. For instance, this information could be LINE, CTRL (for a PU), DEV (for a disk or tape).

RESNAME1 through RESNAME5 are the symbolic resource names assigned by your installation. If a resource is attached through a complex link (example: 3710), some of the hierarchy may not appear on the display. This kind of connection is indicated by an * preceding RESNAME1. There will also be a message at the bottom of the screen indicating that some of the hierarchy is not present.

Operating Instructions

Section ❹ contains the operating instructions. These instructions (prompts) tell you what you can enter from your current display or how to get to the next series of displays.

Operational Information

Section ❺ contains the operational information. This area will display any informational or error messages.

Message Area

Section ❻ contains the message area. This area contains any immediate message or other data generated by NetView.

Command Entry Area

Section ❼ contains the command entry area. This line is where you enter your hardware monitor request in the form of a selection number or a command.

Moving through the Hierarchy

The following section is a collection of many of the panel types that you will see while using the hardware monitor. From any panel display you may issue the HELP command for an explanation of data fields and the use of the panel.

Many hardware monitor panels have several formats depending on what type of data is relevant for the particular resource or event.

The diagram below shows the general relationship of many of the hardware monitor panels. You can usually arrive at a specific panel in several ways. You may move down the hierarchy of panels, or you may use an explicit hardware monitor (NPDA) command, as shown in the left column in Figure 4-4 on page 4-8 to go directly to the desired information.

See Figure 4-4 on page 4-8 for more information on panel flow.

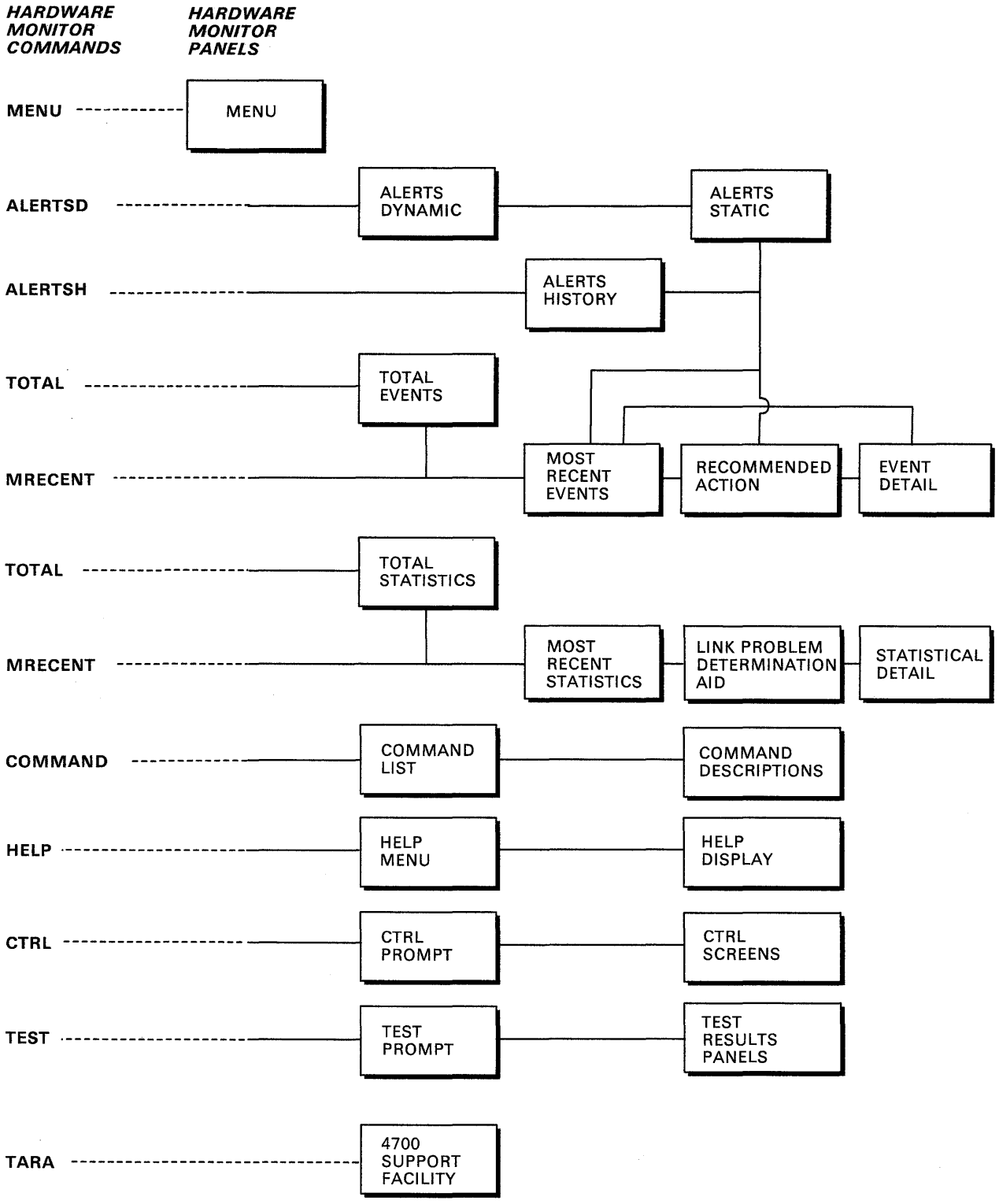


Figure 4-4. The Hardware Monitor Panel Hierarchy

Menu Display

Provides a selection of different hardware monitor functions. Shows data base initialization dates. It also lets you know which domain you are in session with and the domain to which you are attached.

Alerts-Dynamic Display

Provides a continuously updated single page of alerts retrieved from the data base, presented in reverse chronological order.

Alerts-Static Display

Identical to the dynamic display, but can hold alerts (take a "snapshot" of the Alerts Dynamic panel) so you can continue to work on problems. From this panel, you can also enter a problem in the Information/Management system. See page E-1 for more information. This is a one-page display.

Alerts-History Display

Displays all alerts on the data base. This can be a multipage display. From this panel, you can also enter a problem in the Information/Management system.

The Information/Management system does not support the printing of Kanji characters. Unexpected results may occur.

Total Events Display

Provides summary totals of events about specific resources.

Most Recent Events Display

Provides a reverse chronological listing of the events on the data base for a specified resource. From this panel, you can also enter a problem in the Information/Management system.

Information/Management does not support the printing of Kanji characters. Unexpected results may occur.

Recommended Action Display

Suggests actions you may take either to bypass or to resolve the event. This can be a multipage display.

Event Detail

Provides a selection of different detail information displays.

Note: Event Detail menu is available for NMVT record types only.

Total Statistics Display

Displays summary of statistical data about specific resources.

Most Recent Statistics Display

Provides a reverse chronological listing of the statistics on the data base for the specific resource.

Link Problem Determination Aid

Tests initiated by the NCP that provide modem status, attached device status, and the overall quality of a communications link.

Statistical Detail Display

Provides a list of temporary error counter values recorded for physical and virtual links.

Command List Display

Provides details and examples of how to use hardware monitor (NPDA) commands. Can also be accessed from the hardware monitor HELP menu.

Help Menu
: Provides access to help in the use of the hardware monitor.

Help Display
: Provides help for terms and prompts seen on the panels. It also provides general information on how to use the panels and the hardware monitor.

CTRL Prompt Display
: Describes the CTRL command and prompts you for a resource name.

CTRL Screen
: Provides link test counts, summary error counts, and release level information from the SNA controller retrieved as a result of the CTRL command.

TEST Prompt Display
: Describes the use of the TEST command and prompts for resource names.

TEST Results Panels
: Display the status of the modems or line or both. Also displays the current and transition states of the Electronic Industries Association (EIA) leads for a selected remote station. For the line, analog and digital parameters are listed. For the Modem and Line Status panel and the Link Status and Test Results panel, see page D-1 for acceptable receive signal levels.

4700 Support Facility Panels
: Provide specific information for problem determination with the 3600 and 4700 Finance Communications Systems. See Figure 4-5 on page 4-11 for the hierarchy of panels.

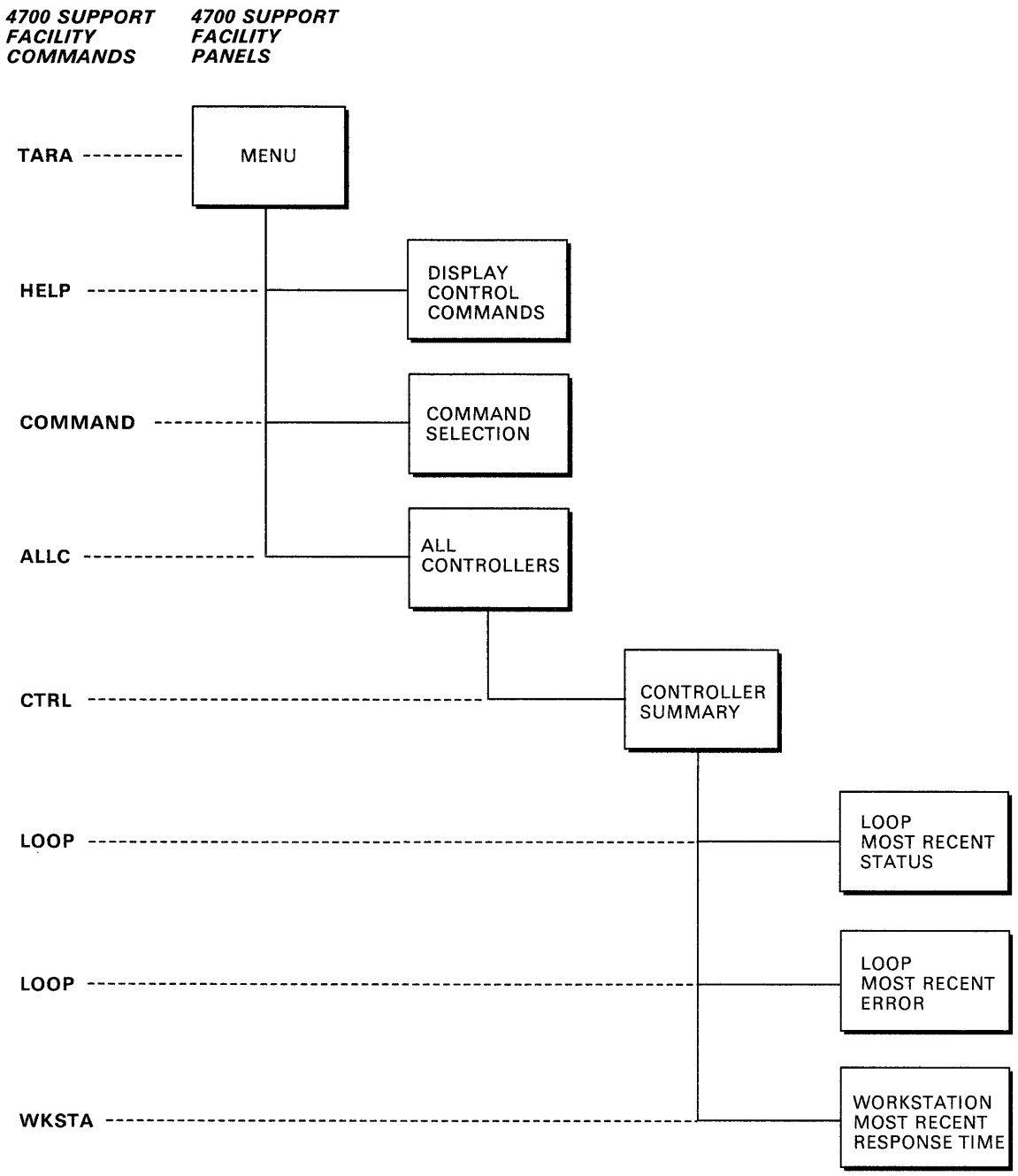


Figure 4-5. 4700 Support Facility Panel Hierarchy

The following is a collection of the panel types that you will see while using the information provided on the 4700 support facility. The 4700 support facility includes support for the 3600 and 4700 Finance Communications Systems.

Refer to Figure 4-5 for more information on panel flow.

Menu Display
: Provides entry into the display sequence by direct selection.

Display Control Commands
: Gives a brief description of all the 3600 and 4700 display commands.

Command Selection
: Gives a brief description of the commands not described in the HELP display.

All Controllers
: Provides a list of all 3600 and 4700 controllers.

Controller Summary
: Provides information about a specific controller and its attached loops and workstations.

Loop Most Recent Status
: Provides a list of the most recent status changes for the selected controller and loop.

Loop Most Recent Error
: Provides the most recent loop error data for the selected controller and loop.

Workstation Most Recent Response Time
: Provides the most recent response-time measurements for the selected controller and workstation.

For explanations of the fields shown on the panels, see Appendix B, "List of Panel Fields" on page B-1.

Program Function Keys

The DISPFK command allows you to display the current hardware monitor PF key settings. (Ask your lead operator whether your default PF key settings are established.)

Defaults for the hardware monitor and 4700 support facility keys are as follows:

PF1 HELP	Presents online help information for the hardware monitor or 4700 support facility.
PF2 END	Pressing this key causes the system to return to the previous component that the operator used. If there was no previous component, a message is sent to the operator.
PF3 RETURN	Pressing this key causes the system to return to the point where this panel was requested. If the point where this panel was requested is another component, and no previous hardware monitor screen data will be lost, then this key functions in the same way as the END key (PF2).
PF4 TOP	For a multipage panel, this displays the first page of the panel.
PF5 BOTTOM	For a multipage panel, this displays the last page of the panel. This PF key is not supported by the 4700 support facility.

PF6 ROLL	The system remembers the sequence in which you went from one component to another. When you use the ROLL PF key, the system saves the name of the current component at the beginning of this sequence, and re-enters the component at the end of the sequence, displaying the panel that was displayed when you last left the component. For example, if you enter NPDA, followed by NLDM, followed by TARA, the sequence remembered is:
	`NPDA - NLDM - TARA`
	Pressing the ROLL PF key changes the remembered sequence to:
	`TARA - NPDA - NLDM`
	and displays the help panel that was displayed when you left the session monitor (NLDM) component.
	Pressing the ROLL PF key again changes the remembered sequence to:
	`NLDM - TARA - NPDA`
	and displays the panel that was displayed when you left the hardware monitor (NPDA) component.

PF7 BACK	For a multipage panel, this displays the previous page of the panel.
PF8 FORWARD	For a multipage panel, this displays the next page of the panel.
PF9 COPY	Prints a copy of the page being displayed.
PF10 DISPFK	Displays the current PF key settings.
PF12 RETRIEVE	Places the previous command (except session monitor commands) in the command area.

Online Help Information

To get online help for the hardware monitor, enter:

```
HELP NPDA
```

To get additional online help for working with the 4700 support facility, enter:

```
HELP TARA
```

Note: To get online help from within 4700 support facility. Within 4700 support facility, you must do either:

```
HELP
```

or

```
NCCF HELP TARA
```

Chapter 5. Using Hardware Monitor Commands

The purpose of this chapter is to show you some of the things you can do with the hardware monitor (NPDA). For specific command syntax or for more information, see "NPDA" on page 6-24. You can receive online help for the 4700 support facility by entering help commands. You can also receive online help information on the hardware monitor (NPDA) commands by entering the following commands:

```
HELP COMMANDS

HELP NPDA COMMANDS

HELP TARA COMMANDS
```

Getting to the Hardware Monitor

If the hardware monitor is not already started, use the *STARTCNM* CLIST to start the task. To get to the hardware monitor (NPDA), use the NPDA command.

The hardware monitor provides additional support for the 3600/4700 Communication Systems. In this publication, the term 4700 support facility will refer to this additional support. To get to the 4700 support facility (for MVS and VSE only) use the TARA command.

Panel Commands

Use the following panel control commands to move from page to page in a multiple-page display or to a different level within the hardware monitor hierarchy.

- *BACK* (page 6-6)

  Displays a previous page of the same display level. If you are on the first page, that page is re-displayed.

- *FORWARD* (page 6-19)

  Displays a following page in a multiple-page display. If you are on the last page, it will wrap to display the first page.

- *TOP* (page 6-49)

  Displays the first page in a multiple-page display.

- *END* (page 6-17)

  Stops the hardware monitor.

- *RESUME* (page 6-32)

  Entered on a panel of another NetView component, takes you back to the hardware monitor panel you were viewing before you went to the other component.

- *RETURN* (page 6-33)

  Presents the last page viewed at the previous display level.

- *BOTTOM* (page 6-7)

  Displays the last page in a multiple-page display.

- *COPY* (page 6-9)

  Prints a copy of the panel you are viewing on your hard-copy log or in your network log.

HELP Commands

Use the following commands to view instructions on how to use the hardware monitor to view error or statistical data:

- *COMMAND* (page 6-8)

  Lists all the commands that retrieve and control data in the data base.

- *HELP* (page 6-20)

  Provides the following:

  - Terms for the last hardware monitor panel displayed
  - Explanation of the hardware monitor prompts
  - Listing of the hardware monitor display control commands
  - Information common to all displays
  - Complete set and format of the hardware monitor display commands
  - Overview
  - CLISTS
  - Action CLIST.

- *MENU* (page 6-21)

  Displays the hardware monitor menu panel.

- *? (QUESTION MARK)* (page 6-51)

  Gives the definition of a term or phrase used as a heading on a hardware monitor data display.

Using Filters

The informational and error messages sent by the network hardware can be controlled in part by using filters. Recording filters control what information is recorded into the hardware monitor's data base. Once the data has been recorded, another set of filters can be set for each network operator. These viewing filters determine which records will appear on an individual's terminal.

You can use the PDFILTER CLIST to set both recording and viewing filters after your system programmer has customized the PDFILTER CLIST.

Recording Filters

Recording filters can be set to pass or block information, and so control what information the hardware monitor stores on its data base for all users. Recording filters are also used to determine which events are to be treated as alerts. The setting of recording filters may be limited on your system to certain operators; check with your system operator if this is the case.

Use the following commands to control your recording filters:

- *DFILTER* (page 6-12)

  Displays the recording filters that are in use.

- *SRFILTER* (page 6-37)

  Controls which records are recorded.

Viewing Filters

Viewing filters control what information is either passed or blocked to individual users. You may use the viewing filter to limit those alerts that you see, based on type of event, or specific resource. You can also specify that only those events that occurred within a specified time be displayed. This allows you to concentrate on the most recent problems. You do not need special authorization to change your viewing filters.

Use the following commands to control your viewing filters.

- *DFILTER* (page 6-12)

  Displays the viewing filters that are in effect.

- *SVFILTER* (page 6-42)

  Controls which records you will see at your terminal.

Using Statistical Information

Use the following commands to display or manage statistical information.

- *MRECENT* (page 6-22) or *STATS* (page 6-41)

  Displays a date and time listing of the most recent statistics for a specified resource.

- *PURGE* (page 6-27) or *PRGATT* (page 6-26)

  Removes statistical data for resources specified.

- *PURGEDB* (page 6-29)

  Purges hardware monitor and session monitor data.

- *TOTAL* (page 6-50)

  Displays all statistical counts for specific resources.

- *REQMS* (page 6-31)

  Requests SNA summary error counters.

Using Event Information

Use the following commands to display or manage event information.

- *MRECENT* (page 6-22) or *EVENTS* (page 6-18)

  Displays a date and time listing of the most recent events for a specified resource.

- *PURGE* (page 6-27) or *PRGATT* (page 6-26)

  Removes event data for resources specified.

- *PURGEDB* (page 6-29)

  Purges hardware monitor and session monitor data.

- *TOTAL* (page 6-50)

  Displays all event records for a specified resource.

Using Alert Information

Alerts are stored in the hardware monitor data base and are displayed in reverse-chronological order. There are several different ways to control the generation of alerts:

- *SRATIO* (page 6-35)

  Sets the error-to-traffic ratio threshold. When this threshold is exceeded, an event is created. If the event qualifies as an alert, an alert recording is also created.

- *SRFILTER* (page 6-37)

  Specifies conditions under which data is to be recorded into the data base.

To view alerts, use the following commands:

- *ALERTSD* (page 6-4)

  Displays recent alerts.

- *ALERTSH* (page 6-5)

  Displays history of alerts.

Using Control Unit Information

The *CTRL* command (page 6-10) displays data solicited from a specified control unit and solicits data if it can.

Obtaining Specific Resource Information

Use the following commands to obtain specific resource information.

- *DDOMAIN* (page 6-11)

  Displays the identification of the domain that you are in or the domain in which a specified resource is active.

- *DWRAP* (page 6-16)

  Displays the maximum number of records that will be kept for a specified resource.

Using Modem Information

The *TEST* command (page 6-47) conducts a test of the modems and communications lines through which a specific resource is attached. It also displays the results.

Using Error-to-Traffic Information

The *DRATIO* command (page 6-15) displays current ratio in effect for the error-to-traffic threshold for a specific resource.

Using Cross-Domain Commands

Use the following commands to get information from another domain:

- *SDOMAIN* (page 6-34)

  Changes the domain from which data will be retrieved.

- *DDOMAIN* (page 6-11)

  Displays the identification of the domain that you are in or the domain in which a specified resource is active.

Logging Information to SMF or an External Log.

You can use the *REPORTS* command (page 6-30) to control the logging of hardware monitor data to SMF (MVS and VSE only) or an external log.

MVS VSE Using 4700 Support Facility Commands

The hardware monitor provides support for the 3600/4700 Finance Communications Systems. To access this support (called the 4700 support facility), use the *TARA* command (page 6-71). There are several commands that you can use once you have requested this additional support. These commands can be categorized as follows:

- Panel commands
- Help commands
- Controller commands.

Using Panel Commands

Use the following commands to move from page to page in a multipage display or to a different level within the 4700 support facility hierarchy.

- *BACK* (page 6-54)

  Displays a previous page of the same display level.

- *END* (page 6-60)

  Stops the 4700 support facility.

- *FORWARD* (page 6-61)

  Displays the next sequential page of a multipage panel.

- *RESUME* (page 6-65)

  Entered on a panel of another NetView component, takes you back to the 4700 support facility panel you were viewing before you went to the other component.

- *RETURN* (page 6-66)

  Displays a previous page of another display level.

- *TOP* (page 6-74)

  Displays the first page in a multiple page display.

Using Help Commands

Use the following commands to display the menu and give assistance with commands.

- *COMMAND* (page 6-55)

  Displays commands not explained by help commands.

- *HELP* (page 6-62)

  Gives explanation of display control commands.

- *MENU* (page 6-64)

  Displays the 4700 support facility menu.

Using Controller Commands

Use the following commands and CLISTs for information on controllers being used with the 4700 support facility.

- *ALLC* (page 6-53)

  Displays a summary of the 3600 or 4700 controllers.

- *CTRL* (page 6-57) or *TCTRL* (page 6-72)

  Display summary of the data and status of a specified controller and its resources.

- *DISPLAY* (page 6-58), *TTERR* (page 6-76), *TTRESP* (page 6-77), *TWERR* (page 6-78), *TWRESP* (page 6-80), or *TWSTAT* (page 6-81)

  Display the 4700 support facility operational parameters associated with a specified controller.

- *LOOP* (page 6-63), *TERR* (page 6-73), or *TSTAT* (page 6-75)

  Display Loop Most Recent Status and Loop Most Recent Error displays.

- *SET* (page 6-67)

  Allows you to adjust the operational parameters of the 4700 support facility.

- *WKSTA* (page 6-82) or *TWKSTA* (page 6-79)

  Provide the Workstation Most Recent Response Time display.

- *SYSMON* (page 6-70)

  Provides access to the System Monitor in a 3600 or 4700 controller.

- *SOLICIT* (page 6-69)

  Requests data and status from a 3600 or 4700 controller.

Chapter 6. Hardware Monitor Command Descriptions

This section describes the formats and operands of the hardware monitor (NPDA) commands and CLISTs followed by a list of the 4700 support facility commands and CLISTs. The hardware monitor commands can be entered from any component.

The commands are listed in alphabetical order for easy reference. Each command description includes the format and description of operands and, where applicable, usage notes, responses, and examples.

The syntax and notation conventions used for the commands and CLISTs are as follows:

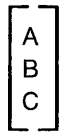
- Items shown in braces { } represent alternatives. You must choose one. For example,

  or {A|B|C}

  indicates that you must specify one item only: A, B, or C.

- Items shown in brackets [ ] are optional. You may choose one or none. For example,

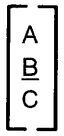
  

  or [A|B|C]

  indicates that you may enter A, B, or C, or you may omit the operand.

- A series of three periods (...) indicates that a variable number of items may be included in the list.

- An underscored item shows the alternative the system will choose if you do not specify an item. For example,

  If no operand is specified, B is assumed.

- Lowercase italicized items are variable; substitute your own value for them. Uppercase items must be entered exactly as shown.

- Parentheses must be entered as shown.

- Where keywords can be abbreviated, the abbreviations are shown in capital letters. For example,

  All

  can be entered as A or ALL.

- Where brackets ([ ]) are nested, you must include commas to denote the absence of the required positional operands. For example,

  ```
  Act     A
          [,B
          [,C]]
  ```

  To specify C only, enter ACT A,,C.

For online help on the hardware monitor commands, enter one of the following:

```
HELP NPDA COMMANDS
HELP TARA COMMANDS
```

For help on a specific command, enter the following:

```
NPDA HELP command
```

where *command* is the name of the command.

In the format of the commands, wherever N precedes *resname*, you can have up to five resource names to fully qualify the resource you are requesting information on. Wherever T precedes type, you can have up to five resource types.

ACTION

The ACTION CLIST provides a description of a specified recommended action.

The format of the ACTION CLIST is:

```
ACTION          Dnnn
```

where:

Dnnn specifies the number of the recommended action.

Usage Note

Use this CLIST to get additional information on a recommended action. Actions shown on Recommended Action panels are those you can take to bypass or resolve the event and are presented in the order most likely to be successful.

The only recommended actions that will work when the NetView program is installed are the D*nnn* descriptions. E*nnn* and I*nnn* numbers will be used for the generic alert code points. The I*nnn* numbers will be used for the IBM-defined code points and the E*nnn* numbers will be used for the user-defined code points. For further information, refer to *NetView Customization*.

Example

To see a description of recommended action D023, enter:

```
ACTION D023
```

ALERTSD

The ALERTSD command presents you with the Alerts-Dynamic display.

The format of the ALERTSD command is:

```
ALertsD
```

Usage Note

The abbreviation for this command is ALD.

The Alerts-Dynamic display shows alerts as they are received. As each new alert arrives, it appears at the top of the display pushing the oldest alert off the bottom of the display.

ALERTSH

The ALERTSH command presents you with the Alerts-History display.

The format of the ALERTSH command is:

```
ALertsH
```

Usage Note

The abbreviation for this command is ALH.

The Alerts-History display shows all alerts from the hardware monitor data base. An operator can log records to Information/Management from this display. This can be a multiple-page display. Information/Management will not support the printing of Kanji characters. Unexpected results may occur. The number of alerts shown on the Alerts-History display is determined by the alerts wrap count. See "DWRAP" on page 6-16 and "SWRAP" on page 6-45 for syntax.

BACK

The BACK command displays the previous page of a multipage display.

The format of the BACK command is:

```
Back    [n]
```

where:

n specifies the number of pages to back up. Range of n is 0 to 999. The default is 1.

Usage Note

The abbreviation for this command is B.

You cannot go backward past the first page. PF7 is set to the BACK command if you use the PFKDEF CLIST. (Ask your lead operator whether your default PF key settings are established.)

Example

To look at a page that is three pages back, type:

```
B 3
```

BOTTOM

The BOTTOM command displays the last page of a multipage display.

The format of the BOTTOM command is:

BOTtom

Usage Note

The abbreviation for this command is BOT.

PF5 is set to the BOTTOM command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

Example

To get to the last page of a multiple-page display, enter:

```
BOTTOM
```

COMMAND

The COMMAND command displays a menu of all commands that you can use in the hardware monitor. A command description display can then be selected for any specific command.

The format of the COMMAND command is:

```
command
```

COPY

The COPY command sends a copy of the current display to the network log or to a hard-copy terminal if one is connected.

The format of the COPY command is:

```
COPY
```

Usage Note

Messages displayed at the operator's terminal indicate the success or failure of the COPY operation.

Example

To make a copy of the current screen, enter:

```
COPY
```

A copy of the screen will be recorded on the network log or printed on the hard-copy log if one is connected.

CTRL

The CTRL command solicits and displays controller link test data, hardware or microcode levels, or error data from a specific resource.

The format of the CTRL command is:

```
CTRL    resname  {LINK|LVL|SEC}
```

where:

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

LINK — displays controller link test results and resets link test counters.

LVL — displays release levels of hardware and microcode in hexadecimal.

SEC — displays the most recent errors for the specified control unit.

Usage Note

This command solicits link test counts, summary error counters, and release level information from SNA controllers. If you enter an incomplete CTRL command, the hardware monitor prompts you for missing operands. If LINK, LVL, SEC, or the resource name is omitted, the hardware monitor prompts you for it. For resource names, anything other than a hardware monitor explicit command or the command facility command will be taken as a resource name.

For the CTRL command with the option LVL, the hexadecimal part is the contents of a RECFMS05. A description of a RECFMS05 is in Appendix B of the *NetView Diagnosis* manual.

Example

To view the release level for SNA Controller P51E40, enter:

```
CTRL P51E40 LVL
```

DDOMAIN

The DDOMAIN command displays the identification of the domain in session or the current domain in which the specified resource resides.

The format of the DDOMAIN command is:

```
DDomain        [resname]
```

where:

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

Usage Note

If no name is specified, the hardware monitor presents the name of the domain in which you are currently operating as a result of the SET DOMAIN command (CURRENT DOMAIN) and the name of the domain that you are actually logged on to (HOST DOMAIN).

To use DDOMAIN resname, an RRD statement for the resource must be included in DSIDMN. See the *NetView Administration Reference* for further information on the RRD statement.

Example

To display the current domain identification, enter:

```
DDomain P51E40
```

Response

If you specified a resource name, the response is:

```
BNJ232I RESOURCE RESIDES IN DOMAIN NETVIEW1
```

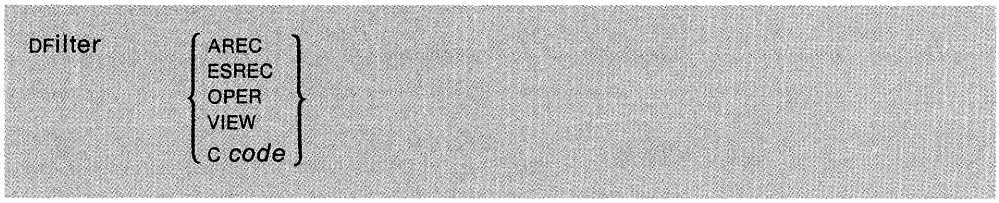
If you did not specify a resource name, the response is:

```
BNJ914I CURRENT DOMAIN IS NETVIEW2, HOST DOMAIN IS NETVIEW1
```

DFILTER

The DFILTER command displays the recording or viewing filters that are currently in effect.

The format of the DFILTER command is:



where:

AREC — specifies the alert recording filters in use.

ESREC — specifies the event or statistics recording filters in use.

OPER — specifies the authorized operator filters in use.

VIEW — specifies the viewing filters in use.

C code — lists the description of the alert specified code. These codes are used in defining hardware monitor use filters.

Usage Note

This command may not be executed from a hardware monitor alerts display.

Example

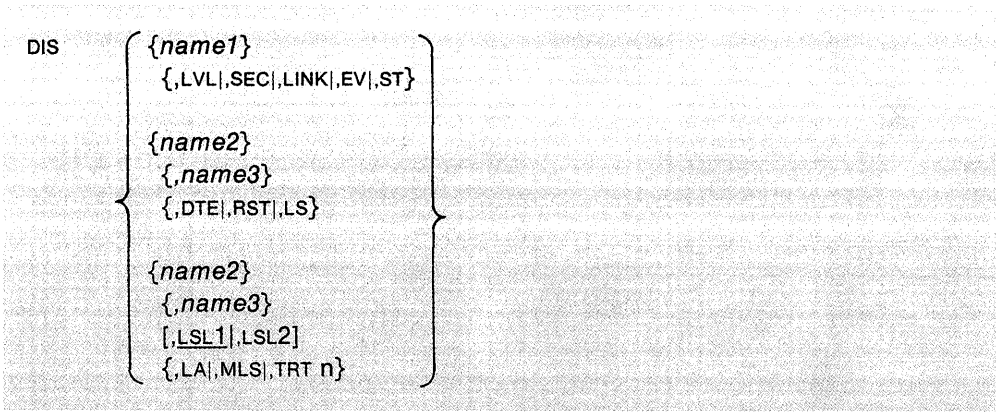
To display the viewing filters that are currently in effect for your operator identification, enter:

```
DFILTER VIEW
```

DIS

The DIS CLIST displays the results of modem or controller tests.

The format of the DIS CLIST is:



where:

name1	specifies the cluster controller.
name2	specifies the communications or network controller.
name3	specifies the device at remote end of line.
LVL	displays levels of hardware and microcode.
SEC	displays the most recent events for name1.
LINK	displays link test results and resets link test counters.
EV	displays the most recent events for the specified resource.
ST	displays the most recent statistics for the specified resource.
DTE	displays the current and transition states of the EIA leads.
RST	conducts a remote self test.
LS	conducts and displays the results of a link status test.
LSL1	conducts a test on link segment level one. LSL1 is the default.
LSL2	conducts a test on link segment level two.
LA	conducts a line analysis test.
MLS	conducts a modem and line status test.
TRT	conducts a transmit/receive test.
n	the number of text sequences the modems should exchange. Valid only with the TRT operand.

(See also "DIS" on page 3-52.)

Usage Note

The operands DTE, LS, and RST work with the 386X modems or the 586X modems with the line specified as LPDA-1.

The operands LSL1, LSL2, MLS, LA, and TRT work with the 586X modems only with the line specified as LPDA-2.

This CLIST generates the following hardware monitor commands:

CTRL (page 6-10)
MRECENT (page 6-22)
TEST (page 6-47).

DRATIO

The DRATIO command displays the current ratio established for the error-to-traffic alerting threshold for a specified resource.

The format of the DRATIO command is:

where:

N — specifies that the next operand is a resource name.

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

Usage Note

The resource names which can be used with this command must have resource types of CTRL, DEV, LDEV, or LCTL.

Whenever statistics are reported to the hardware monitor, the error counters and traffic counters are compared to determine the current error-to-traffic ratio. If this ratio exceeds the threshold set by your system programmer, the statistic will become an alert unless blocked by an alert recording filter.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

This command may not be executed from a multiple entries display.

Example

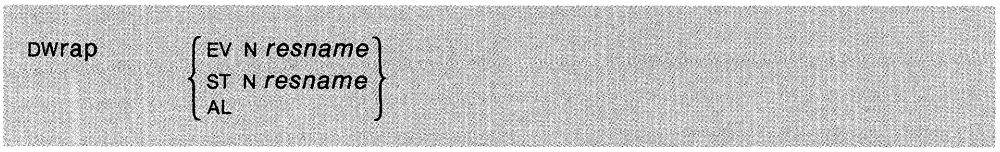
To display the status and threshold value of the error-to-traffic ratio for PU08, enter:

```
DR N PU08
```

DWRAP

The DWRAP command displays the current wrap count. The wrap count is the number of records to be retained in the data base for a specified resource.

The format of the DWRAP command is:



where:

EV — displays the wrap count for event data.

ST — displays the wrap count for statistical data.

AL — displays the wrap count for alert data.

N — identifies the following operand as a resource name.

resname — specifies the symbolic name of the resource (for event and statistical data only). You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

Usage Note

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

Example

To display the statistical data wrap count for PU08, enter:

```
DW ST N PU08
```

END

The END command stops the hardware monitor panel sequence and returns to the component from which the hardware monitor was invoked.

The format of the END command is:

```
End
```

Usage Note

The abbreviation for this command is E.

You can run this command in a CLIST that runs under the PPT. PF2 is set to the END command.

Example

To return to the component from which you entered the hardware monitor, enter:

```
END
```

EVENTS

The EVENTS CLIST displays a reverse chronological list of the most recent events from a specified resource.

The format of the EVENTS CLIST is:

```
EVENTS          resource
```

where:

resource specifies the symbolic name of the resource.

Usage Note

This CLIST generates a MRECENT command.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant. See "MRECENT" on page 6-22 for more information.

Example

To view the most recent events for controller RAL01, enter:

```
EVENTS RAL01
```

FORWARD

The FORWARD command displays the next sequential page of a multiple-page panel.

The format of the FORWARD command is:

```
Forward    [n]
```

where:

n specifies the number of pages to move forward. Range of n is 0 to 999. The default is 1.

Usage Note

If you enter F or F 1 on the last page of a multiple page display, you will go to page 1 of the display.

If you enter F *nnn* where *nnn* is greater than the remaining number of pages, you will go to the last page of the display.

If you enter F *nnn* from the last page, you will go to the first page of the display.

This command can be abbreviated as F or FORW. PF8 is set to the FORWARD command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

Example

To move ahead five pages, enter:

```
FORWARD 5
```

If there are five more pages in the current display, you see the fifth page forward from the current page.

HELP

The HELP CLIST provides you with directions for moving from panel to panel in a multiple-page panel, or for moving through the hierarchy of the hardware monitor panels. It provides information on how to use the hardware monitor commands. HELP also provides access to the NetView online help facility, and to the hardware monitor glossary for the current display.

The format of the HELP CLIST is:

```
Help          [cmdname]
```

where:

cmdname specifies the command name.

Usage Note

When you enter HELP from a help screen or a command description screen, NetView will present the Screen Control/Help Display. When you enter HELP from any other screens, NetView will present a help menu for the current display. To get help for a specific command, enter HELP *cmd*, where ***cmd*** is the command about which you need more information.

Example

To display the syntax for the DFILTER command, enter:

```
HELP DF
```

MENU

The MENU command displays the hardware monitor main menu panel.

The format of the MENU command is:

```
menu
```

MRECENT

The MRECENT command displays in reverse chronological order a list of the most recent events or statistics for the specified resource.

The format of the MRECENT command is:

```
MRecent   { EV } N  resname(s) }
          { ST }
          { EV } A  adaptadr   }
```

where:

EV — specifies the data type as event.

ST — specifies the data type as statistical.

N — identifies the operand that follows as a resource name.

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

A — identifies that the operand that follows is an adapter address.

adaptadr — specifies the 12 hexadecimal digit adapter address.

Usage Note

The list of most recent events includes SNA controller event types, intensive mode recording (IMR), and permanently affected (PAFF) records. This command only displays information from the data base.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

Example

To view the most recent statistics for controller RAL01, enter:

```
MR ST N RAL01
```

NCCF

The NCCF command is used to enter the command facility (NCCF).

The format of the NCCF command is:

```
NCCF        [command [operands]]
```

where:

command — is a command facility command. If a command is not specified, the command facility is invoked. Command facility immediate commands are not accepted.

operands — are one or more operands that are passed to the command facility along with command.

Usage Note

If you enter NCCF without any operands, you see the command facility screen. Then you can enter a command facility command. If you enter a command, you must view the resulting messages and then return to the original screen (see "RETURN" on page 6-33) before entering more commands.

When a command is sent to the command facility from another component, the command is processed by the command facility as if it had been entered directly from the command facility.

When you use this command from another component, the command facility remains on the NetView component stack that is used with ROLL until the component is ended.

NPDA

The NPDA command enters the hardware monitor, or is used to process a single hardware monitor command from another NetView component.

The format of the command is:

```
NPDA
```

Usage Note

Generally when you use this command, the hardware monitor will remain on the NetView component stack that is used with ROLL until the component is ended. The exceptions are when one of the following commands is issued: REPORTS, SRFILTER, SVFILTER, SWRAP, SRATIO, or END. These commands can be executed from other NetView components without changing the state of the NetView component stack.

PDFILTER

The PDFILTER CLIST defines the filters that you will be using during your hardware monitor session.

The format of the PDFILTER CLIST is:

```
PDFILTER
```

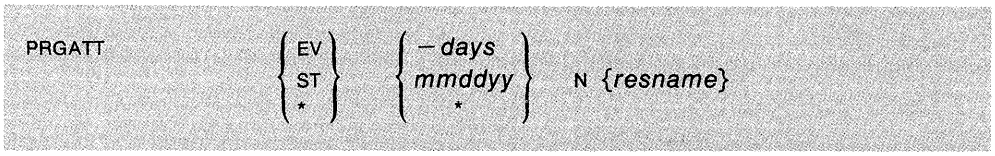
Usage Note

Before using this CLIST, check with your system programmer. Your system programmer must update this CLIST before you can use it.

PRGATT

The PRGATT command removes event or statistical data for the specified resource and all the resources that are attached to it and known to the hardware monitor.

The format of the PRGATT command is:



where:

EV	specifies event data.
ST	specifies statistical data.
*	specifies both event and statistical data.
-days	deletes data that is older than the specified number of days (0-365).
mmddyy	deletes all data recorded before this month-day-year.
*	deletes data regardless of age.
N	specifies that the operand that follows is a resource name.
resname	specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

Usage Note

This command can be useful if you rename your NCP. When generating a new NCP, a new set of hardware monitor data base records is recorded for each resource attached to the NCP. With this command all data base records for the specified resource and all attached resources will be purged. Multiple PRGATT or PURGE commands cannot be executed concurrently.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

You must be authorized to issue this command; check with your system programmer.

Example

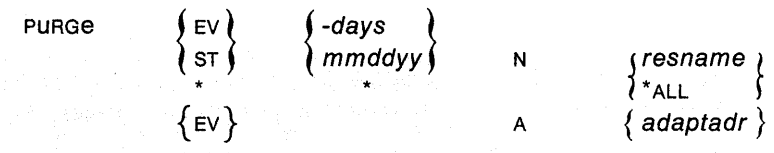
To erase all statistical data for NCP001 and all resources attached to it, enter:

```
PRGATT ST * N NCP001
```

PURGE

The PURGE command removes event or statistical data for a specified resource or for all resources from the data base. In addition, it can purge all information based on the adapter address.

The format of the PURGE command is:



where:

EV	specifies event data.
ST	specifies statistical data.
*	specifies both event and statistical data.
−days	deletes data that is older than the specified number of days (0-365).
mmddyy	deletes all the data before this month-day-year.
*	deletes data regardless of age.
N	identifies that the operand that follows is a resource name.
resname	specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.
*ALL	deletes data for the date previously noted for all resources.
A	identifies that the operand that follows is an adapter address.
adaptadr	specifies the 12 hexadecimal digit adapter address.

Usage Note

The abbreviation for this command is PRG.

This command does not purge records for attached resources.

The recording function is suspended when a purge of the entire data base is in progress and incoming data may be lost. Multiple PURGE or PRGATT commands cannot be executed concurrently.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

You must be authorized to issue this command; check with your system programmer.

Example

To erase all records on an event data base that were recorded before March 1, 1985, enter:

```
PURGE EV 030185 N *ALL
```

PURGEDB

The PURGEDB command purges hardware monitor and session monitor data.

The format of the PURGEDB command is:

```
PURGEDB  { [ROUTE|RT]                                          BEFORE date [time] }
         { [SESSION|SESS]   res1   res2                        BEFORE date [time] }
         { RT/SESS                                             BEFORE date [time] }
         { [EVENT|EV]       [ATTACHED|ATT] {res|*ALL|addr}     BEFORE date        }
         { [STAT|ST]        [ATTACHED|ATT]{res|*ALL}           BEFORE date        }
         { EV/ST            [ATTACHED|ATT] {res|*ALL}          BEFORE date        }
```

where:

ROUTE|RT	specifies session monitor ROUTE data.
SESSION|SESS	specifies session monitor SESSION data.
RT/SESS	specifies session monitor ROUTE and SESSION data.
EVENT|EV	specifies hardware monitor EVENT data.
STAT|ST	specifies hardware monitor STAT data.
EV/ST	specifies hardware monitor EVENT and STAT data.
res1|res2	specifies the name of the resource for which purging is to be done.
ATTACHED	specifies if resource is attached.
*ALL	deletes data for all resources.
addr	specifies a 12 hexadecimal digit address.
date	acceptable formats for date are: • MM/DD/YY - leading zeros are not required • MMDDYY - leading zeros are required • -NNN - number (from 0-365) • * - current date (and current time unless time also specified).
time	acceptable formats for time are: • HH:MM:SS - Leading zeros are not required • HH:MM - leading zeros are not required • * - current time.

Example

To purge hardware monitor data, enter:

```
PURGEDB EV/ST *ALL BEFORE *
```

All event and stat data before the current system date and time is purged.

REPORTS

The REPORTS command controls the logging of report records.

The format of the REPORTS command is:

```
REPORTS      [ON|OFF]
```

where:

ON starts report logging.

OFF stops report logging.

Usage Note

REPORTS causes report records to be written to SMF (MVS only) or an external file. (See the *NetView Hardware Problem Determination Reference* for the format of this record.)

You must be authorized to use this command; check with your system programmer.

For NetView Release 2 Kanji, you need to have the Kanji release of SLR to run Service Level Recorder (SLR) against SMF logs.

REQMS

The REQMS command requests SNA summary error counts from a physical unit and stores the data on the hardware monitor data base.

The format of the REQMS command is:

```
REQMS        puname     [Y|N]
```

where:

puname — specifies the physical unit name.

Y — specifies that you will be notified of positive and negative responses.

N — specifies that you will only be notified of a negative response to the request. This is the default.

Usage Note

You can also use the REQMS command in a CLIST. However, this command should not be used in a CLIST before you start the hardware monitor.

Example

To request error data and statistics from PU04, enter:

```
REQMS PU04
```

RESUME

The RESUME command returns to the hardware monitor panel from which you issued a command that took you to another NetView component.

The format of the RESUME command is:

```
RESUME
```

Usage Note

The RESUME operation can also be done simply by entering the NPDA command while in another component.

RETURN

The RETURN command presents the last panel that you viewed at the previous level in the panel hierarchy of the hardware monitor.

The format of the RETURN command is:

```
Return
```

Usage Note

The hardware monitor maintains a table (called the hierarchy table) to keep track of the sequence of displays you have viewed. When you issue an explicit hardware monitor command, this table is reset and the display sequence is lost. Therefore, if you enter RETURN from a display that is presented as the result of an explicit hardware monitor command, NetView takes you back to the hardware monitor main menu, not to the display you were viewing before you issued the explicit command. If you issued the RETURN command from the Help panel, you are returned to the panel from which you requested help.

PF3 is set to the RETURN command.

SDOMAIN

The SDOMAIN command allows you to view data stored in another domain.

The format of the SDOMAIN command is:

```
SDomain    domainid
```

where:

domainid specifies the name of the NetView domain where you want to view data

Usage Note

Before using the SDOMAIN command, a session must exist between the hosts in the two domains. (See "STARTCNM" on page 3-151.)

This command may not be executed from a multiple entries display.

Example

To view data in the NCCF2 domain, enter:

```
SDOMAIN NCCF2
```

Response

The normal response will be:

```
BNJ911I CURRENT DOMAIN NOW NCCF2, WAS NCCF1
```

SRATIO

The SRATIO command allows you to:

- Enable or disable the creation of a performance event for a specified resource when an E/T threshold is exceeded.
- Change the threshold value that generates an alert for a specified resource.

The format of the SRATIO command is:

```
SRatio        [ON|OFF|nnn]        N resname
```

where:

ON — specifies that the forwarding of performance events about the resource is to be enabled. This status is implied if a threshold value is entered.

OFF — specifies that the forwarding of performance events about the resource is to be disabled.

nnn — specifies the new threshold value. The value can have a range of from 000 to 250 that is interpreted as 00.0 to 25.0 percent. The leading zeros are required.

N — identifies that the operand that follows is a resource name.

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed. You can specify up to five resource names.

Usage Note

You must be authorized to issue this command. Check with your system programmer.

A default operand of ON is set for each threshold resource when it initially records data in the data base. At the same time, if no threshold value for the resource was established during installation, the hardware monitor assigns default E/T ratios as follows:

Link-attached communications device, 3.0%

Channel-attached communications device, 1.0%.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

No performance events will be generated if the statistical record is the result of a permanent error or deactivation of a resource.

This command may not be executed from a multiple entries display.

Example

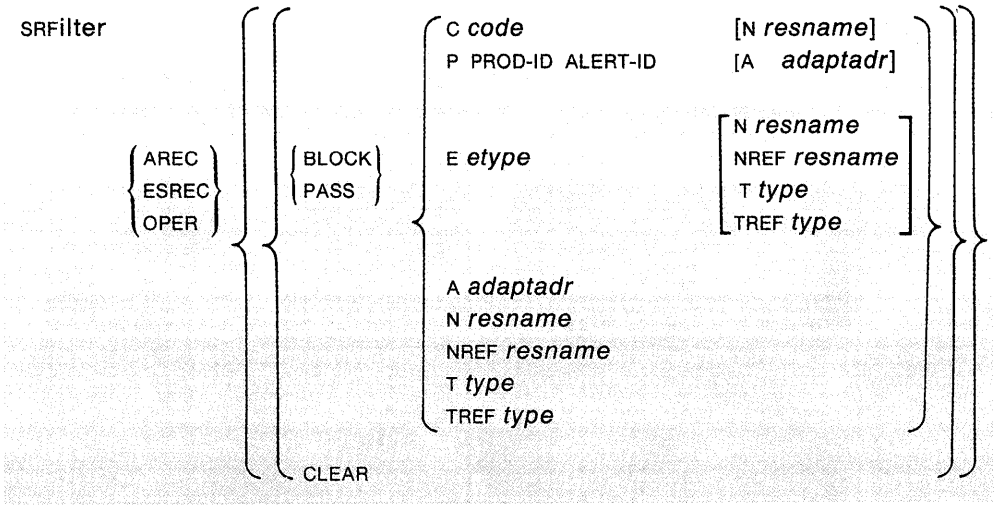
To enable error-to-traffic event generation for PU08, enter:

```
SR ON N PU08
```

SRFILTER

The SRFILTER command allows you to establish the conditions governing the recording of data in the hardware monitor data base and also controls the forwarding of alert data to the NetView operator.

The format of the SRFILTER command is:



where:

AREC sets a filter which controls whether alerts are to be sent to the network operator.

ESREC sets a filter which controls whether events and statistics are to be sent to the network controller.

OPER sets filters for transmission of alert to an authorized operator.

CLEAR specifies that all filter elements are to be removed and that the default conditions for the filters are to be applied to all data. No other operands, except the filter type, are to be specified when the CLEAR operand is used. Defaults are initially provided by the hardware monitor and become effective when specified filter elements fail to select a data record. These defaults are shown below.

ESREC filter for event and statistical recording filters, PASS passes all records to the event data base.

AREC filter for alert recording filters, the following conditions are tested in the following order until a condition is satisfied:

BLOCK E HELD TREF CTRL
blocks any HELD event type records received from any resource of type CTRL or from any resource attached to a resource of type CTRL.

BLOCK E HELD TREF LCTL
blocks any HELD event type records received from any resource of type LCTL or from any resource attached to a resource of type LCTL.

PASS E PERM TREF CTRL
passes any PERM event type records received from any resource of type CTRL or from any resource attached to a resource of type CTRL.

PASS E PERM TREF LCTL
passes any PERM event type records received from any resource of type LCTL or from any resource attached to a resource of type LCTL.

PASS E PERF TREF CTRL
passes any PERF event type records received from any resource of type CTRL or from any resource attached to a resource of type CTRL.

PASS E PERF TREF LCTL
passes any PERF event type records received from any resource of type LCTL or from any resource attached to a resource of type LCTL.

BLOCK TREF CPU
blocks any records received from any resource of type CPU or from any resource attached to a resource of type CPU.

BLOCK E HELD
blocks any HELD event type records.

PASS E INST
passes any INST event type records.

PASS E NTFY
passes any NTFY event type records.

PASS E PERF
passes any PERF event type records.

PASS E PERM
passes any PERM event type records.

PASS E SCUR
passes any SCUR event type records.

PASS E UNKN
passes any UNKN event type records.

PASS E USER
passes any USER event type records.

BLOCK
blocks all records not satisfying any of the conditions above.

OPER filter

for operator alert filters, BLOCK blocks all alert records from being transmitted to the authorized operator.

BLOCK specifies that the data matching the conditions expressed in this filter element are to be blocked from the hardware monitor data base or from the network operator.

PASS	specifies that the data matching the conditions expressed in this filter element are to be allowed through to the hardware monitor data base or to the network operator.
C	identifies that the operand that follows is an event (alert) probable cause descriptor identifying code.
code	specifies the code that identifies a particular event or alert description or probable cause descriptor. This code can be determined by entering the appropriate SEL number (NN) plus the character 'C' on the command line of the Alerts-History, Alerts-Static, or Most Recent Events displays and appears as CCCCC in the message.
P	specifies the product identifier or alert identifier pair.
PROD-ID	specifies the variable product identifier (hardware or software) of the alert or event sender.
ALERT-ID	specifies the variable alert ID number representing a specific alert or event description.
A	specifies the adapter address.
adaptadr	specifies the variable adapter address (1 address of 21 hexadecimal digits).
E	identifies that the operand that follows is an event type.
etype	specifies the event type on which the filter item is based. Event types are AVAL, CUST, DLRC, ENV, HELD, IMPD, IMR, INST, INTV, NTFY, PAFF, PERF, PERM, PROC, SCUR, SNA, TEMP, UNKN, and USER.
N	identifies that the operand that follows is a resource name.
resname	specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.
NREF	records received from the named resource or from any resource attached to it are affected. The use of asterisks in specifying resource names following the NREF keyword is not permitted.
T	identifies that the operand that follows is a resource type.
type	specifies the resource type. Resource types include CPU, CHAN, LCTRL, and COMC.
TREF	records received from any resource of the specified type or from any resource attached to a resource of this type are affected.

Usage Note

A record must pass both the ESREC and AREC recording filters to be recorded as an alert. It must also pass the OPER filter to cause immediate Authorized Operator notification. Filter elements must be specified in the order shown in the box on 6-37. You must be authorized to issue this command. See your lead operator or system programmer.

The following conditions are tested in the order given to determine whether a data record matches the filter:

1. An event (alert) probable cause descriptor code (keyword P or C) and a resource name (keyword N)
2. An event (alert) description or probable cause code (keyword P or C)
3. An event type (keyword E) and a resource name (keyword N)
4. A resource name (keyword N)
5. An event type (keyword E) and a higher level resource name reference (keyword NREF)
6. A higher level resource name reference (keyword NREF)
7. An event type (keyword E) and a resource type (keyword T)
8. A resource type (keyword T)
9. An event type (keyword E) and a higher level resource type reference (keyword TREF)
10. A higher level resource type reference (keyword TREF)
11. An event type (keyword E).

If any of these matches occurs, the matching filter element action (PASS or BLOCK) is processed and further testing is suspended.

If the record fails to match any of the above conditions, the default for the record type is processed.

Example

To block information for PU3 with an event and statistical filter, enter:

```
SRFILTER ESREC BLOCK N PU3
```

Response

The normal response to this command is:

```
BNJ1341I SRF/SRFILTER COMMAND ACCEPTED
```

STATS

The STATS CLIST displays a list of the most recent statistics for the specified resource.

The format of the STATS CLIST is:

```
STATS        resource
```

where:

resource specifies the symbolic name of the resource.

Usage Note

The CLIST generates the NPDA MR ST command. See page 6-22 for more information.

Example

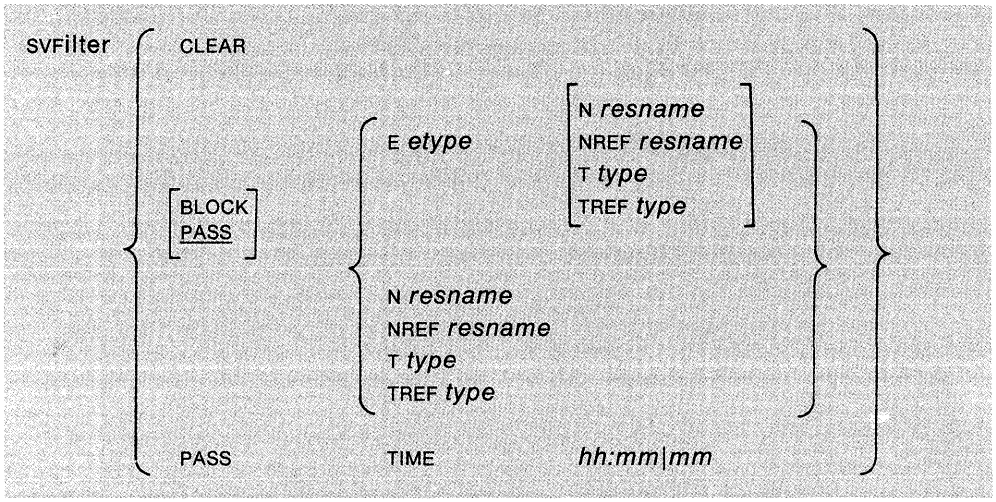
To generate the Most Recent display for PU08, enter:

```
STATS PU08
```

SVFILTER

The SVFILTER command allows you to control which records will be displayed at your terminal.

The format of the SVFILTER command is:



where:

CLEAR — specifies that all the current filter elements are to be removed and that the default condition for viewing filters (PASS) is to be applied to all data. No other operands are to be specified when the CLEAR operand is used.

BLOCK — specifies that the data matching the conditions expressed in this filter element are to be blocked from view.

PASS — specifies that the data matching the conditions expressed in this filter element are to be allowed through for viewing.

E — identifies that the operand that follows is an event type.

etype — specifies the event type on which the filter item is based. Event types are AVAL, CUST, DLRC, ENV, HELD, IMPD, IMR, INST, INTV, NTFY, PAFF, PERF, PERM, PROC, SCUR, SNA, TEMP, UNKN, and USER. When this is the only SVFILTER specification, it is effective only while you are viewing the Most Recent Events or the alert displays.

N — identifies that the operand that follows is a resource name.

resname — specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

NREF — records received from the named resource or from any resource attached to it are affected. The use of asterisks in specifying resource names following the NREF keyword is not permitted.

T — identifies operand that follows as a resource type.

TIME — specifies that only resources for which data was recorded during the indicated time period before the data request are to be displayed.

hh:mm — specifies the elapsed time in hours and minutes to be used with the TIME operand. The maximum values allowed are 99 for *hh* and 59 for *mm*.

mm — specifies the elapsed time in minutes to be used with the TIME operand. The maximum value allowed is 99 for *mm*.

TREF — records received from any resource of the specified type or from any resource attached to a resource of this type are affected.

type — specifies the resource type. Resource types include CPU, CHAN, LCTRL, and COMC.

Usage Note

Filter elements must be specified in the order shown above. Each operator must specify his own viewing filters.

You can use the SVFILTER command in a CLIST.

With the exception of time, all viewing filters apply only to the Alerts Display except as noted in *etype*.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

Example

To set a filter so only total events less than 3 hours old are viewed, enter:

```
SVF PASS TIME 3:00
```

Response

The normal response to this command is:

```
BNJ1355I SVF/SVFILTER COMMAND ACCEPTED
```

SWPD

The SWPD CLIST switches the primary and secondary data bases associated with hardware monitor's BNJDSERV task. The files are used to record hardware monitor data.

The format of the SWPD CLIST is:

```
SWPD          {P|S}
```

where:

P specifies primary data base.

S specifies secondary data base.

Usage Note

Use this CLIST to make the primary or secondary data base active.

This command may not be executed from a multiple entries display.

Example

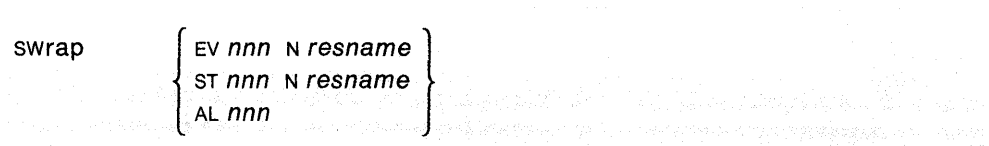
To switch to the primary data base, enter:

```
SWPD P
```

SWRAP

The SWRAP command establishes the number of event or statistical records to be retained for a specified resource or the total number of alert records to be retained on the hardware monitor data base.

The format of the SWRAP command is:



where:

EV specifies event data.

ST specifies statistical data.

AL specifies alert data.

nnn specifies the wrap count value, 0-999.

N specifies that the operand that follows is a resource name.

resname specifies the symbolic name of the resource (for event and statistical data only). You can specify up to five resource names to fully qualify the resource for which data is to be displayed.

Usage Note

You must be authorized to issue this command. See your system programmer.

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

A SWRAP command can only be issued for resources against which data has been logged on the hardware monitor data base.

When a reduction in the wrap count value is requested by this command, the oldest records are deleted immediately. If the wrap count is very low, it may appear that the oldest record is not being wrapped off, because the new record will fit on the screen without deleting the old record from the screen. Actually, the oldest record is wrapped off the permanent data base and is maintained on a temporary data base until you return to the hardware monitor menu or enter an explicit hardware monitor command. The default wrap counts are:

Event records per resource	25
Statistical records per resource	25
Alert records	100
SNA-unique data (RECFMS 01, 05) per resource (cannot be modified)	2
Local area network resources	100

Use this command very carefully, because you may inadvertently destroy error data.

This command may not be executed from a multiple entries display.

Example

To set the event wrap count equal to 100 for the resource UNIT1, enter:

```
SW EV 100 N UNIT1
```

Response

The normal response to this command is:

```
BNJ239I WRAP COUNT FOR RESOURCE UNIT1 IS NOW 100
```

TEST

The TEST command causes a test to be conducted of the modems and communication facilities to a specified resource.

The format of the TEST command is:

```
TEST    name1 name2 {DTE|LS|RST}
                    {LSL1|LSL2} {MLS|LA|TRT n }
```

where:

name1 — specifies the name of the communication or network controller from which the command is to originate.

name2 — specifies the name of the remote PU or link station on the link.

DTE — displays the current and transition states of the EIA leads for *name2*.

LS — conducts and displays the results of a link status test.

RST — conducts a remote modem self test.

LSL1 — conducts the test on link segment level 1. This is the default.

LSL2 — conducts the test on link segment level 2.

MLS — conducts the modem and line status test.

LA — displays the analog operands of a line.

TRT — causes a modem pair to exchange one or more sequences of predefined bit patterns over the line.

n — the number of test sequences the modem should exchange. Only valid with the TRT operand.

Usage Note

The operands DTE, LS, and RST work with the 386X family of modems or the 586X family of modems with the line specified as LPDA-1.

The operands LSL1, LSL2, MLS, LA, and TRT work with the 586X family of modems only with the line generated as LPDA-2.

The results of the test are not recorded in the hardware monitor data base.

If you enter an incomplete TEST command, you will be prompted for missing operands. For resource names, any non-hardware-monitor command (except NCCF) will be taken as a resource name.

When issuing a TEST command to display the state of the EIA leads, the current state of the DTR, CTS, RD, or RLSD lead cannot be detected if it is tied to signal ground. This is due to isolation circuitry in the modem hardware.

Several error situations are possible if you enter more than the information for which you are being prompted and if there is a mismatch between the line generation and the type of LPDA option you are entering:

- If you entered a valid LPDA-1 option (DTE, RST, or LS) in addition to the requested resource names, and the line is generated for LPDA-2, a SNA negative response results and the command display NPDA-10AA is presented.
- If you entered a valid LPDA-2 option (LA, TRT, or MLS) in addition to the requested resource names, and the line is generated for LPDA-1, the TEST prompting panel is redisplayed with error message BNJ1610I.

Example

If the line specified is LPDA−2 and you enter TEST NMOD90 P08008A, the hardware monitor prompts you for MLS, LA, or TRT.

To run a link status test on the link from the communication or network controller CTRL1 to the PU named RAL01, enter:

```
TEST CTRL1 RAL01 LS
```

TOP

The TOP command displays the first page of a multiple-page display.

The format of the TOP command is:

```
Top
```

Usage Note

If you enter this command for a single-page display, no change occurs.

PF4 is set to the TOP command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

Example

To display the first page, enter:

```
TOP
```

TOTAL

The TOTAL command displays the count of event or statistical records for a specified resource or resource type. If no resource name or type is specified, a summary is displayed.

The format of the TOTAL command is:

```
TOTal  {EV|ST}  T  type
                N  resname
                A  adaptadr
```

where:

EV	specifies event records.
ST	specifies statistical records.
T	specifies that the operand that follows is a resource type.
type	specifies resource type.
N	specifies that the operand that follows is a resource name.
resname	specifies the symbolic name of the resource. You can specify up to five resource names to fully qualify the resource for which data is to be displayed.
A	identifies that the operand that follows is an adapter address.
adaptadr	specifies the 12 hexadecimal digit adapter address.

Usage Note

If the name of the resource is not associated with a unique resource configuration on the data base, then a selection panel will be displayed on which the user can choose which configuration is relevant.

Example

To display the total statistical records for UNIT1 enter:

```
TOT ST N UNIT1
```

?

The ? (question mark) command displays the definition of any term or phrase used as a heading on a hardware monitor display.

The format of the ? command is:

```
? phrase
```

where:

phrase specifies the term or phrase.

Usage Note

The term or phrase may be truncated as desired. The search is performed on the same number of characters that you enter.

The ? command must be entered on a hardware monitor display that uses the phrase.

MVS VSE 4700 Support Facility Command Descriptions

The commands that follow can be used with the IBM 3600/4700 Finance Communications Systems. They can be run under MVS and VSE.

MVS VSE ALLC

The ALLC command displays a list of the 3600 and 4700 controllers in the network.

The format of the ALLC command is:

```
ALLC
```

MVS VSE BACK

The BACK command displays the previous page of a multipage panel.

The format of the BACK command is:

```
BACK
```

Usage Note

You cannot go backward past the first page. PF7 is set to the BACK command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.) You can only go back one page at a time.

MVS VSE COMMAND

The COMMAND command displays a list of all commands that you can use in the 4700 support facility.

The format of the COMMAND command is:

```
command
```

MVS VSE COPY

The COPY command prints a copy of the panel on your screen to your printer if it is active, or to your network log if it is active.

The format of the COPY command is:

```
COPY
```

Usage Note

Messages are displayed at the operator's terminal to indicate success or failure of the COPY operation.

Example

To make a copy of the panel you are displaying, enter:

```
COPY
```

MVS VSE CTRL

The CTRL command displays a summary of the data and status associated with a specified 3600 or 4700 controller and its resources.

The format of the CTRL command is:

```
CTRL          ctrlname
```

where:

ctrlname the physical unit (PU) name of the controller.

Example

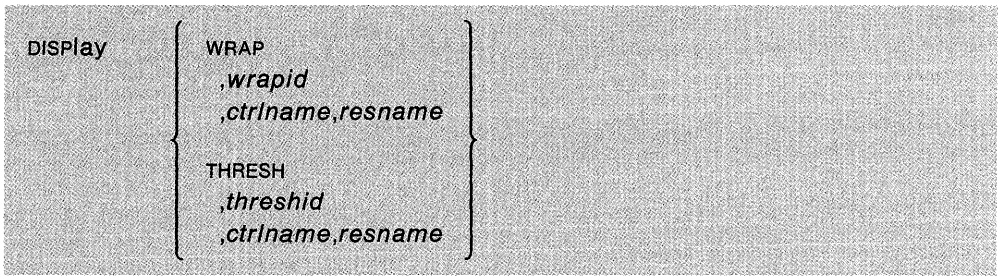
To view the summary display for controller CTRL01, enter:

```
CTRL CTRL01
```

MVS VSE DISPLAY

The DISPLAY command displays the current 4700 support facility operational operands associated with the specified controller.

The format of the DISPLAY command is:



where:

WRAP — specifies a current wrap count.

wrapid — indicates the type of wrap count to be displayed. Valid *wrapids* are:

- ERROR—displays error wrap count
- RESP—displays response time wrap count
- STATUS—displays status wrap count.

ctrlname — identifies the specific controller about which data are to be displayed.

resname — identifies the specific resource or group of resources attached to the *ctrlname* about which data are to be displayed. Valid resources are:

- loopname
- wsname
- ALL (all loops or workstations)

If both *ctrlname* and *resname* are included, they must be separated by a comma.

THRESH — specifies a current threshold value.

threshid — indicates the type of threshold value to be displayed. Valid *threshids* are:

- ERROR—displays Loop Basic Counter 2 and extended counter threshold values
- RESP—displays response time threshold values.

Usage Note

Together, *ctrlname* and *resname* identify the specific resources for which data is to be displayed.

Example

To display the threshold values for controller CTRL01 and resource LP02, enter:

```
DISPLAY THRESH,ERROR,CTRL01,LP02
```

MVS VSE END

The END command is used to leave the 4700 support facility.

The format of the END command is:

```
End          [ALL]
```

where:

all	terminates the 3600 feature, hardware monitor and all other hardware monitor features running in this session with command facility.

Usage Note

The abbreviation for this command is E. PF2 is set to the END command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

MVS VSE FORWARD

The FORWARD command displays the next sequential page of a multipage display.

The format of the FORWARD command is:

```
Forward
```

Usage Note

If you enter F on the last page of a multiple page display, you will go to page 1 of the display.

This command can be abbreviated as F or FORW. PF8 is set to the FORWARD command if the PFKDEF CLIST has been invoked. (Ask your lead operator whether your default PF key settings are established.)

Example

To move ahead one page, enter:

```
FORWARD
```

If there are more pages in the current display, you will see displayed the next page after the current page.

MVS VSE HELP

The HELP command provides you with directions for moving from panel to panel in a multipage display, or for moving through the hierarchy of the 4700 support facility panels.

The format of the HELP command is:

```
Help
```

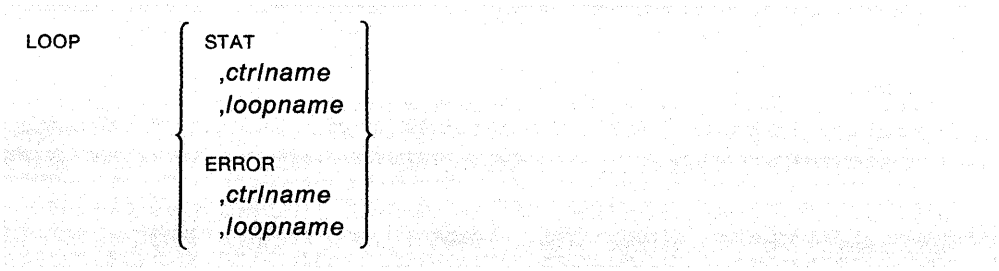
Usage Note

PF1 is set to HELP if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

MVS VSE LOOP

The LOOP command displays the most recent status and error data for a 3600 or 4700 controller loop.

The format of the LOOP command is:



where:

STAT	specifies status data.
ERROR	specifies error data.
ctrlname	specifies the physical unit name of the controller to which the loop is attached.
loopname	specifies the loop name (LPnn) of the loop.

Usage Note

Data is presented in reverse chronological order.

Example

To view detailed error data for controller CTRL01 and loop LP02, enter:

```
LOOP ERROR,CTRL01,LP02
```

MVS VSE MENU

The MENU command displays the 4700 support facility main menu panel.

The format of the MENU command is:

```
menu
```

Example

To display the first panel of the 4700 support facility, enter:

```
MENU
```

MVS VSE RESUME

The RESUME command returns to the 4700 support facility panel from which you issued a command that took you to another NetView component.

The format of the RESUME command is:

```
RESUME
```

Usage Note

The RESUME operation can also be done simply by entering the TARA command while in another component.

MVS VSE RETURN

The RETURN command presents the last panel that you viewed at the previous level in the panel hierarchy of the 4700 support facility.

The format of the RETURN command is:

```
Return
```

Usage Note

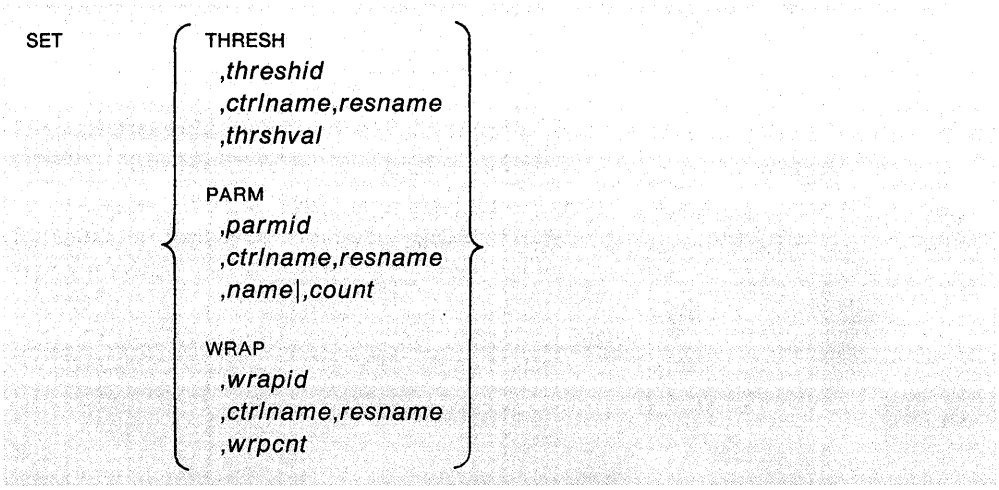
If the present display was created by using an explicit command, the RETURN command displays the Menu panel.

PF3 is set to the RETURN command if the PFKDEF CLIST is invoked. (Ask your lead operator whether your default PF key settings are established.)

MVS VSE SET

The SET command allows you to adjust the 4700 support facility operational operands associated with the specified controller.

The format of the SET command is:



where:

THRESH specifies that a new threshold value is to be set.

threshid indicates the type of threshold value to be set. Valid *threshid*s are:

- BASIC2 Set the Loop Basic Counter 2 threshold value.
- EXTEND Set the threshold value for the extended statistical counter specified by the *resname* operand.
- RESPAVG Set the average response time threshold for the workstation specified by the *resname* operand.
- RESPMIN The minimum number of times that the response measurement must occur before the response time received is compared to the user-defined average threshold value.

ctrlname identifies the specific controller which 4700 support facility operational operands are to be set.

resname identifies the specific resource or group of resources attached to *ctrlname* about which data are to be displayed. Omit this operand when issuing the SET PARM, INTERVAL command. Valid resources are:

loopname (not valid for PARM option)
wsname
ALL (all loops or workstations)

thrshval the new threshold value, expressed as one to four decimal digits, which have the following meanings:

Loop Basic Counter 2: 123 = 123 Errors/Hour

Extended statistical counters: 123 = 1.23% error rate

Workstation response time: 123 = 12.3 seconds.

PARM — specifies that a change is to be made to a CNM/CS operational operand. When PARM is used to change the active interval timer, the 4700 support facility shuts off all timers defined for that resource and then activates the specified timer. The *resname* information should be omitted when issuing the SET PARM, INTERVAL command.

parmid — indicates the operand to be changed. Valid operands are:

TIMER—Activate the timer named by the name operand on the workstation specified by *ctrlname* and *resname*

INTERVAL—Set the interval for monitoring loop status changes.

name — the symbolic names of the timers to be set on. The *name* operand is used only with SET PARM, TIMER.

count — the new value to be used as the loop status monitor interval. The value is expressed as one to four decimal digits, where 123 = 123 seconds. The *count* operand is used only with SET PARM, INTERVAL.

WRAP — specifies that a new wrap count is to be set

wrapid — specifies the type of wrap count to be set.

Valid *wrapid*s are:

STATUS
ERROR
RESP

wrpcnt — new wrap count value. Expressed as one to four decimal digits where 123 = 123 records.

Usage Note

Together, *ctrlname* and *resname* identify the specific resources for which a threshold is to be set.

Example

To set an error wrap count of 25 for LP02 attached to CTRL01, enter:

```
SET WRAP,ERROR,CTRL01,LP02,25
```

MVS VSE SOLICIT

The SOLICIT command requests data and status from the Communications Network Management Controller Support in the specified 3600 or 4700 controller.

The format of the SOLICIT command is:

```
SOLICIT     ctrlname
            [,ERROR|,STAT|,RESP|,ALL|,BATCH]
            [,NONOTIFY|,NOTIFY]
```

where:

ctrlname	specifies the PU name of the controller.
ERROR	specifies loop error statistics. This is the default.
STAT	specifies loop status.
RESP	specifies response time data.
ALL	specifies RESP, STAT, and ERROR data.
BATCH	specifies all basic counters, all extended statistical counters, and controller system log entries.
NONOTIFY	specifies that you are not to receive a successful completion message. This is the default.
NOTIFY	specifies that you are to receive a successful completion message.

Usage Note

The primary use of this command is in timer-initiated CLISTs.

It is not necessary to precede this command with TARA. You can enter it in CLISTs or directly from command facility.

This command does not have an associated display; it is used solely for the collection and recording (with the exception of the BATCH option) of CNM data in the 4700 support facility VSAM file.

You should not use the BATCH operand unless the system programmer has provided the NetView exit routine DSIEX06 or XITCI to process this data.

Whether you specify NOTIFY or NONOTIFY, you receive a message if the request was unsuccessful.

Example

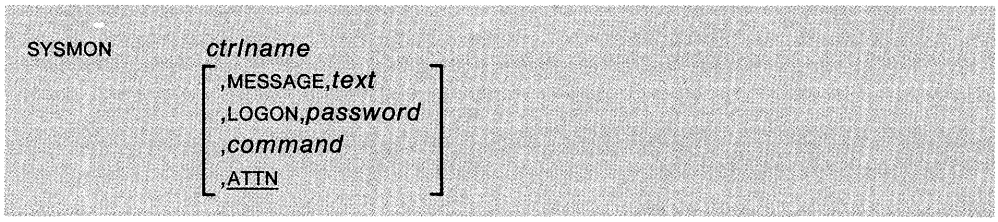
To request response time data for CTRL01, enter:

```
SOLICIT CTRL01, RESP
```

MVS VSE SYSMON

The SYSMON command provides access to the system monitor in the specified 3600 or 4700 controller.

The format of the SYSMON command is:



where:

ctrlname — specifies the name of the PU.

MESSAGE — specifies that a message is to be sent to the operator who is currently logged on to the system monitor facility. Messages may also be sent to a command facility operator by a 3600/4700 operator logged on to the system monitor facility.

text — specifies the message text, can be from 1 to 120 characters.

LOGON — specifies a request to log on to the system monitor facility.

password — specifies a logon password, from 1 to 16 characters.

command — specifies a system monitor command, from 1 to 120 characters.

ATTN — request an attention interrupt to the system monitor. This is the same as pressing the ENTER key on the keyboard attached to the 4700 support facility. This is the default.

Usage Note

If the system monitor is not currently in use, you can log on to the system monitor. You can then issue system monitor commands. Only one operator or application may be logged on to the system monitor at a time. The local 3600 or 4700 operator has priority and can log off a host network operator.

It is not necessary to precede this command with TARA. You can enter it in CLISTs or directly from command facility. Refer to *3600 Finance Communication System: Operating Reference Manual* and *4700 Finance Communication System: Subsystem Operating Procedures* manual for a discussion of 3600 and 4700 system monitor commands.

MVS VSE TARA

The TARA command enters the 4700 support facility, or is used to process a single 4700 support facility command from another NetView component, or to page forward one page on a multiple-page display.

The format of the TARA command is:

TARA

MVS VSE TCTRL

The TCTRL CLIST displays a summary of the data and status associated with a specified 3600 or 4700 controller and its resources.

The format of the TCTRL CLIST is:

```
TCTRL        ctrlname
```

where:

ctrlname specifies the physical unit name of the controller.

Usage Note

This command generates a CTRL command. See page 6-63 for more information.

Example

To display summary data and status for controller CTRL01, enter:

```
TCTRL CTRL01
```

MVS VSE TERR

The TERR CLIST displays error data for a 3600 or 4700 loop.

The format of the TERR CLIST is:

```
TERR        ctrlname
            ,loopname
```

where:

ctrlname — specifies the physical unit name of the controller to which the loop is attached.

loopname — specifies the name (LP*nn*) of the loop.

Usage Note

This CLIST generates a LOOP command. See page 6-63 for more information.

Example

To display error data for controller CTRL01 and loop LP02, enter:

```
TERR CTRL01, LP02
```

MVS VSE TOP

The TOP command displays the first page of a multipage display.

The format of the TOP command is:

```
TOP
```

Usage Note

PF4 is set to the TOP command if the PFKDEF CLIST is invoked. (Ask your lead operator if your default PF key settings are established.)

Example

To display the first page, enter:

```
TOP
```

MVS VSE TSTAT

The TSTAT CLIST displays the most recent status data for a 3600 or 4700 loop.

The format of the TSTAT CLIST is:

```
TSTAT    ctrlname
         ,loopname
```

where:

ctrlname — specifies the physical unit name of the controller to which the loop is attached.

loopname — specifies the name (LP*nn*) of the loop.

Usage Note

This CLIST generates a LOOP command. See page 6-63 for more information.

Example

To display the most recent status data for controller CTRL01 and loop LP02, enter:

```
TSTAT CTRL01,LP02
```

MVS VSE TTERR

The TTERR CLIST returns current 4700 support facility threshold values for the loop basic counter 2 and extended counters for *all* loops attached to the specified 3600 or 4700 controller.

The format of the TTERR CLIST is:

```
TTERR          ctrlname
```

where:

ctrlname the controller for which you want current threshold values.

Usage Note

This CLIST generates a DISPLAY command. You should use that command if you want to restrict data to a specific loop or workstation. See page 6-58 for more information.

Example

To display the current threshold value for controller CTRL01, enter:

```
TTERR CTRL01
```

MVS VSE TTRESP

The TTRESP CLIST returns 4700 support facility response time threshold values for all workstations attached to the specified controller.

The format of the TTRESP CLIST is:

```
TTRESP        ctrlname
```

where:

ctrlname — the controller for which you want current response time threshold values.

Usage Note

This CLIST generates a DISPLAY command. You should use that command if you want to limit data to a specific loop or workstation. See page 6-58 for more information.

Example

To display the current response time threshold value for controller CTRL01, enter:

```
TTRESP CTRL01
```

MVS VSE TWERR

The TWERR CLIST returns the error wrap count for ALL loops attached to the specified 3600 or 4700 controller.

The format of the TWERR CLIST is:

```
TWERR        ctrlname
```

where:

ctrlname the controller for which you want error wrap counts.

Usage Note

This command generates a DISPLAY command. You should use that command if you want to limit data to a specific loop or workstation. See page 6-58 for more information.

Example

To display the error wrap count for controller CTRL01, enter:

```
TWERR, CTRL01
```

MVS VSE TWKSTA

The TWKSTA CLIST displays the 4700 support facility most recent workstation response time data.

The format of the TWKSTA CLIST is:

```
TWKSTA    ctrlname
          ,wsname
```

where:

ctrlname — specifies the physical unit name of the controller to which the workstation is attached.

wsname — specifies the name of the workstation whose response time data is to be displayed.

Usage Note

This CLIST generates a WKSTA command. See page 6-82 for more information.

Example

To display the most recent response time data for controller CTRL01 and workstation WS02, enter:

```
TWKSTA CTRL01, WS02
```

MVS VSE TWRESP

The TWRESP CLIST returns response time wrap count for all workstations attached to the specified 3600 or 4700 controller.

The format of the TWRESP CLIST is:

```
TWRESP        ctrlname
```

where:

ctrlname the controller for which you want response time wrap counts.

Usage Note

This CLIST generates a DISPLAY command. You should use that command if you want to limit data to a specific loop or workstation. See page 6-58 for more information.

Example

To display the response time wrap count for controller CTRL01, enter:

```
TWRESP CTRL01
```

MVS VSE TWSTAT

The TWSTAT CLIST returns the current status wrap count for all loops attached to the specified 3600 or 4700 controller.

The format of the TWSTAT CLIST is:

```
TWSTAT        ctrlname
```

where:

ctrlname the controller for which you want current status wrap counts.

Usage Note

This CLIST generates a DISPLAY command. You should use that command if you want to limit data to a specific loop or workstation. See page 6-58 for more information.

Example

To display the status wrap counts for controller CTRL01, enter:

```
TWSTAT CTRL01
```

MVS VSE WKSTA

The WKSTA command displays the most recent 4700 support facility workstation response time data.

The format of the WKSTA command is:

```
WKSTA        ctrlname    ,wsname
```

where:

ctrlname — specifies the physical unit name of the controller to which the workstation is attached.

wsname — specifies the name of the workstation whose response time data is to be displayed.

Usage Note

Data is displayed in reverse chronological order.

Example

To display most recent response time data for controller CTRL01 and workstation WS02, enter:

```
WKSTA CTRL01,WS02
```

Part 3. Session Monitor

Chapter 7. Getting Acquainted with the Session Monitor

The session monitor (NLDM) collects and correlates data about System Network Architecture (SNA) sessions. The session monitor also helps identify network problems and conditions that might cause errors. Some examples of this are failing or unresponsive terminals, lost path information units (PIUs), buffer errors, and resource status errors. You can display the collected session monitor data by using a sequence of session monitor panels.

The session monitor collects data about same-domain, cross-domain, and cross-network SNA sessions, and maintains the collected data on a session basis. The SNA sessions may involve non-SNA terminals supported by Network Terminal Option (NTO). These NTO sessions appear to the host as normal SNA sessions. The session monitor also collects data about data flows for certain non-SNA terminals that are not supported by NTO. To collect data for cross-domain sessions, either a session monitor or an NLDM must be available in each domain. To collect data for cross-network sessions, either a session monitor or an NLDM must be available in each gateway host on the session path and at session end points.

Data Collection

The session monitor collects the following types of data:

- Session Awareness Data
- Session Trace Data
- Session Response Time Data
- Route Data
- Network Accounting and Availability Measurement Data.

The data is stored in virtual memory and at session end written to the VSAM data base. See Figure 7-1 on page 7-2 for an overview of the sources of session monitor data.

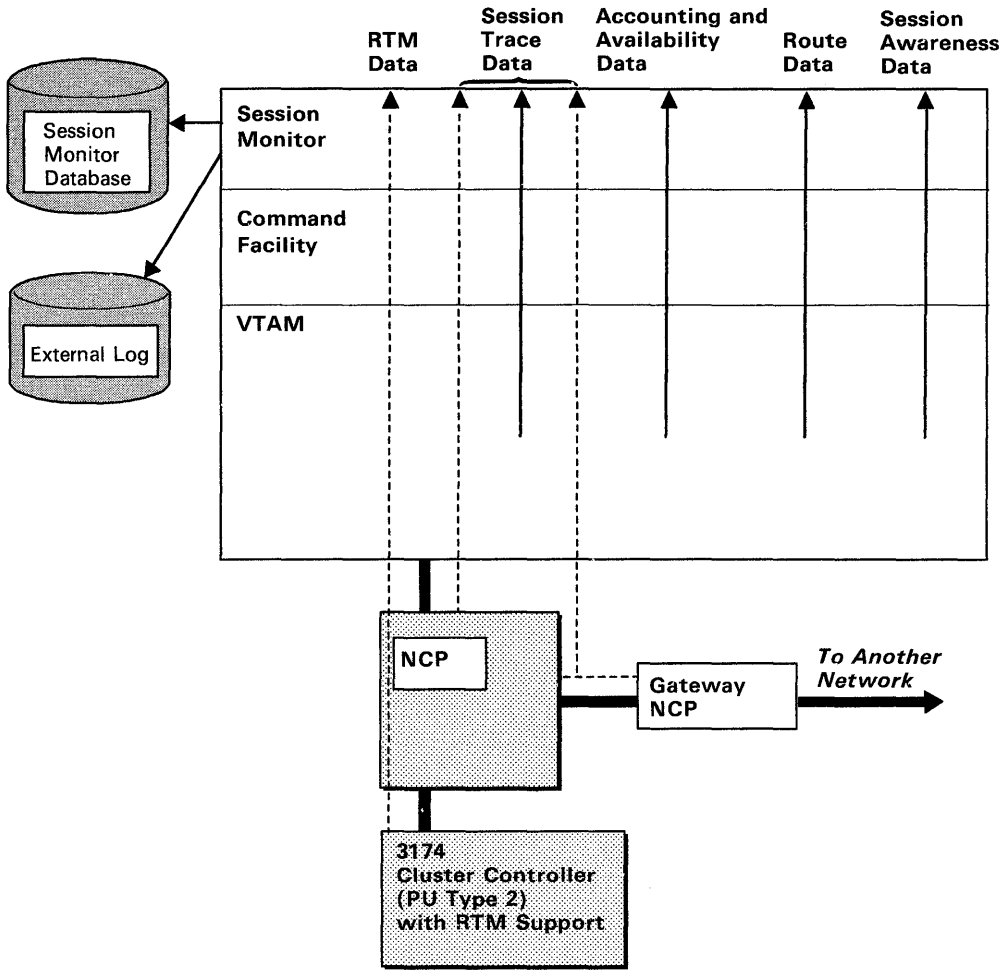


Figure 7-1. Session Monitor Data Collection

Session Awareness Data

Session awareness data is information about session activity within the networks. This data identifies the partners of each session, which can be in the same domain, in different domains, or in different networks.

When the session monitor is active, session awareness data is collected whenever a session begins or ends. Session awareness data consists of information from VTAM, such as session activation status, the session type, the names of the session partners, and session configuration data. Activation status includes BIND failure, UNBIND reason and sense codes, and INIT failure. Session partners can be:

- Logical unit to logical unit (LU-LU)
- System services control point to logical unit (SSCP-LU)
- System services control point to physical unit (SSCP-PU)
- System services control point-system services control point (SSCP-SSCP).

Session awareness data includes information about the activation status for certain non-SNA terminals not supported by the Network Terminal Option (NTO).

Session awareness data is displayed in various forms. Some examples are resource lists, domain lists, session histories for specific resources, and session configuration diagrams. Session awareness data is required for all other types of data collection.

Session Trace Data

Session trace data consists of session activation parameters, VTAM path information unit (PIU) data, and network control program (NCP) data.

Before the session monitor collects session trace data, a session trace must be started. It is possible to start trace for a resource before it is activated. Once trace is started for a node, the session monitor remembers to trace the node if it is deactivated and then activated again. NCP gateway trace data does not depend on trace activation status.

You can display the parameters used in session activation. Session activation parameters are those parameters included in the SNA command used to activate the session. BIND, activate physical unit (ACTPU), activate logical unit (ACTLU), and activate cross-domain resource manager (ACTCDRM) are examples of those commands. The session activation parameters can be displayed in hexadecimal or text representation.

You can display two types of NCP trace data for sessions involving NCP-attached resources. They are boundary function trace data and gateway trace data. Boundary function NCP data consists of the last four PIU sequence numbers (the last two outbound and last two inbound) and selected fields from control blocks passed to the session monitor from the NCP. (These fields are described in *NCP and EP Reference Summary and Data Areas*.) Gateway NCP data consists of the last four PIU sequence numbers (the last two outbound and the last two inbound) to cross the gateway NCP. It also contains all control blocks sent from the gateway NCP. The NCP control blocks displayed depend on the type of resource in the session.

You can display VTAM path information unit (PIU) data of all sessions for which the session monitor collects session trace data. PIU data includes the transmission header (TH), the request/response header (RH), and the request unit (RU). Truncated PIUS will have a maximum of eleven bytes of the RU displayed; otherwise the complete PIU will be displayed. PIU data can be displayed in hexadecimal or text representation.

PIUS that are discarded by VTAM are transferred to the session monitor for trace processing. These PIUS fall into two main categories:

- PIUS that are associated with a specific active session and are discarded because of a protocol violation; for example, an invalid data count field (DCF)
- PIUS that are discarded because they are not associated with a specific active session; for example, extraneous traffic.

In each case, the session monitor retains copies of the discarded PIUS in a "pseudo-session" trace buffer. Using the command SESS *DISCARD, this buffer can be accessed. The PIUS in this area are associated with many different sessions, so no session parameters or session configuration data is available. However, selection from the SESS panel will display the trace data. The size of the *DISCARD area is specified by the NLDM KEEPDISC initialization statement. The *DISCARD data is not saved in the VSAM file when the session monitor is brought down unless the save is set up by a FORCE command. This may be used with a timer-driven CLIST.

If associated with a specific session, PIUs discarded by the access method are inserted in the active session's PIU wrap area. The discarded PIU can then be examined in the context of that session's PIU flow. If the PIU is discarded from this area (because of session activity), a copy may still exist in the *DISCARD file.

Session Response Time Data

Session response time data is measured and accumulated by control units having the response time monitor (RTM) feature. The session monitor collects the response time data on command and displays it in various formats. The control units accumulate the measured response times into ranges of time that are specified by the performance class definitions. Sessions are associated with certain performance classes, and each performance class has associated with it a specific response time objective. Response time graphs can be displayed that show how the actual response time compares to a specified objective.

Response time data is displayed in:

- Response time summaries
- Response time trends
- Response time for a session by collection period.

Response time and configuration data for each session can be written to an external log as the response time data is collected, allowing other programs to process it.

Route Data

Active route data is collected whenever a route is first used by a session. The route information includes a list of PUs and TGs that make up the explicit route. The session monitor allows an operator to view the route and then proceed into the session hierarchy on a route by route basis.

Active route data is displayed in the following ways:

- Active explicit route list
- Active virtual route list
- Active virtual route status
- Explicit route configuration
- Transmission group information.

Network Accounting and Availability Measurement Data

Network Accounting and Availability data measurement provides you with network availability data and distribution of usage of network resources. This function must be started at the time the session monitor is initialized. The measured data is written to an external log by the RECORD command and at session end for off-line processing. See *NetView Installation and Administration Guide* for more information.

Starting the Session Monitor

The session monitor will most often be started when the NetView program is started. However, if your installation chooses to start them separately, NetView must be started first. You can then start the session monitor (NLDM), by entering:

```
STARTCNM NLDM
```

Session Monitor Warm Start

After NetView is active, the session monitor can be started and stopped separately from NetView. Restarting the session monitor this way is called ***warm starting***. When the session monitor is warm-started, session awareness data is received only for active sessions that were started before task AAUTSKLP was ready to receive data. Task AAUTSKLP may not receive session awareness data if:

- SAW=NO was specified in AAUPRMLP. In this case, use the ENABLE command to start the session awareness data.
- Task AAUTSKLP was not started until the sessions were active. In this case, use the START TASK command to initialize AAUTSKLP.

The session monitor will never receive session awareness data for sessions that begin and end before task AAUTSKLP is ready to process the data. Session parameters are not saved by VTAM so they are not available for sessions that are active when NLDM is warm-started. For active sessions, trace data and response time data are available only from the time of the warm start and not before.

Using the Session Monitor

To use the session monitor (NLDM), enter the command:

```
NLDM
```

Terminals that support extended data streams (for example the IBM 3279) will present information in color.

The session monitor does not provide wide-screen (63 x 180) support. Information on these displays is in 24 x 80 format. The supported display sizes are: 24 x 80, 27 x 80, 32 x 80, and 43 x 80.

The next panel displayed is the NLDM.MENU panel:

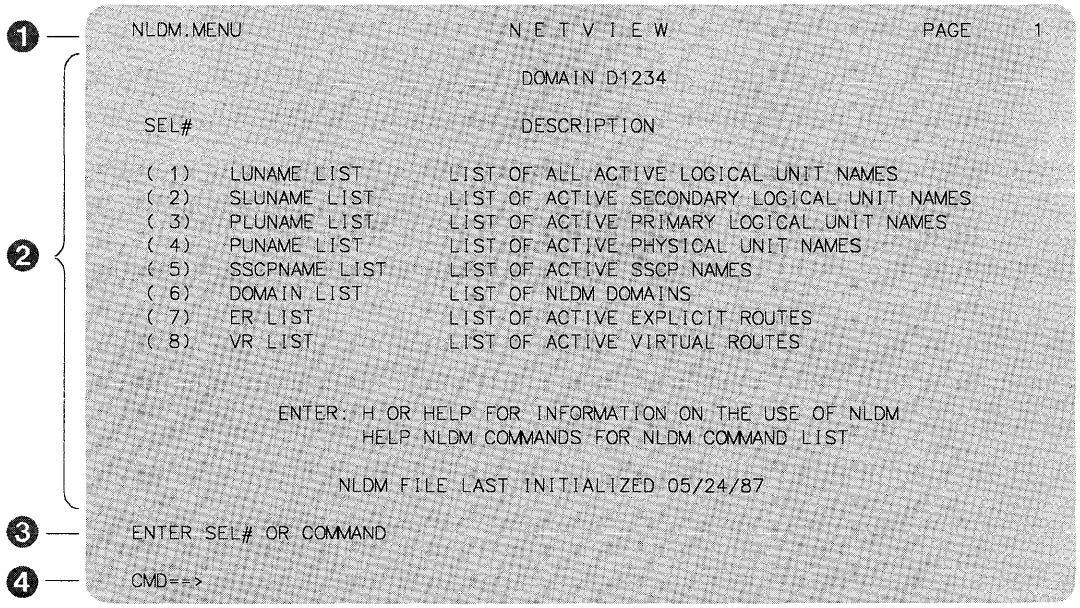


Figure 7-2. Session Monitor Menu Panel

From the NLDM.MENU panel you can select one of the listed options, request help information, or enter any NetView command.

Entering Commands

Session monitor commands that are entered from within the session monitor need not be prefaced with NLDM. For example, to enter the LIST command, type:

```
LIST
```

When session monitor commands are entered from outside the session monitor, you must preface them with NLDM. For example, to enter the LIST command from the hardware monitor, type:

```
NLDM LIST
```

Some session monitor commands require operands, such as the SESS command. Operands are optional for commands such as BACK, FORWARD, SET HEX, and LIST. For specific information on these operands, see the command descriptions in Chapter 9, "Session Monitor Command Descriptions" on page 9-1.

Panel Layout

In panel mode, the panel has four sections:

- Level of Hierarchy and Panel Title - Section ❶
- Information Display Area - Section ❷
- Message Area - Section ❸
- Command Entry Area - Section ❹.

Refer to Figure 7-2 on page 7-5 as you read about each section.

Level of Hierarchy and Panel Title

Section ❶ contains the level of hierarchy and panel title line. If this panel is part of a multiple page display, the page number is shown in the right corner of the display.

Information Display Area

Section ❷ lists the information you requested.

Message Area

Section ❸ contains the message area. This area is reserved for messages such as prompt messages and error messages.

Command Entry Area

Section ❹ contains the command entry area. The command entry line is near the bottom of your panel to the right of CMD= = >. This is where you enter commands or selection numbers.

Moving through the Hierarchy

Session monitor functions are presented in a sequence of panels. Figure 7-3 on page 7-8 shows the sequence of panels through which you can move. Certain commands (listed in the left column of the figure) can be used to access a panel directly, without going through the hierarchy. For example, you can use the RTREND command to go directly to the Response Time Trend panel.

The panels that are not within the hierarchy can be displayed only by issuing the appropriate command.

You can move up or down in the hierarchy of panels by using PF keys or the prompts shown with each display. When you select panels by going through the hierarchy, you can use the RETURN command (or PF3) to go back to the previous panel. When you use a command to go directly to a certain panel from within the session monitor, the RETURN command brings you back to the MENU panel. (If you use the SENSE command, you will go back to the previous panel.)

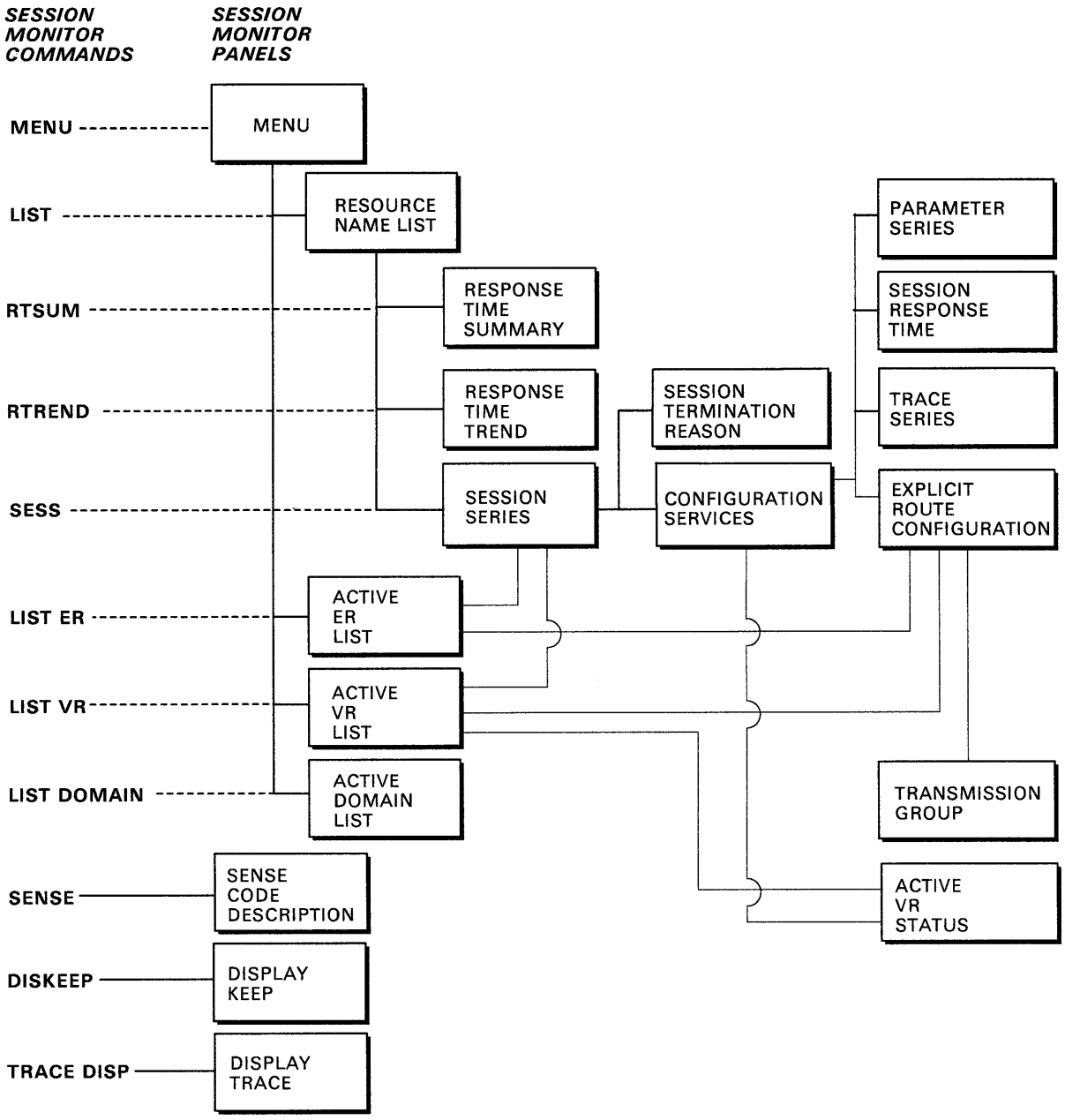


Figure 7-3. Session Monitor Panel Hierarchy

The panels in Figure 7-3 on page 7-8 can be used as follows:

Menu
: Allows you to select the type of resource list, list of domains, active explicit routes (ERs), or active virtual routes (VRs) for which you want information.

Resource Name List
: Displays a list of resources for which data is available. From this panel, you can view response time summary, response time trend, or session series.

Response Time Summary
: Is a series of graphs showing the percentage of transactions in each response time range for a specified period of time. This is done for a specific logical unit in a given domain. This may be a multiple page display. There are different pages for the various performance classes.

Response Time Trend
: Is a graph for a specific terminal logical unit that shows the percentage of transactions with response times that are less than a specified maximum objective for each data collection period. You can specify a maximum or your system programmer can set up the limits. The objective is displayed on the panel.

Session Series
: Shows a list of sessions for which the resource(s) you name on the command are or have been in session with. From this panel, you can view session configuration data, start a session connectivity test for an active session, or display the reason code and sense code for an inactive session.

Session Termination Reason
: Presents in detail a description of the reason codes and sense codes associated with UNBIND, BIND failures or INIT failures.

Configuration Services-Session Configuration
: Shows the local network configuration for a selected session. You can shift the panel to the left (PF10) or right (PF11) for adjacent network configurations. From this panel, you can display trace information, session parameters, explicit route information, session response time or active virtual route status.

Configuration Services-INIT Failure Configuration
: Shows the configuration of SSCPs that attempted to establish the selected failed session. Note this function depends on the session monitor being fully functional in each SSCP that attempted to establish the session.

Parameter Series
: Displays the session parameters for a given session. You can have the information interpreted or displayed in hexadecimal.

Session Response Time
: Is a graph of the percentage of transactions in each response time range for each data collection period of a session. Each data collection period is a separate page, beginning with the earliest period. To display the most recent period, enter the BOTTOM command.

Trace Series
: Provides trace data for the type of trace you requested on the previous panel. Whether you will get a formatted or unformatted list depends on the trace you requested and whether you have HEX set on or off.

Explicit Route Configuration
: Provides a configuration for an explicit route. Explicit route information includes the translation of subarea PU addresses into network names, wherever possible. From this panel, you can select a panel to view transmission group detail information.

Transmission Group
: Displays a list of all the SSCPs that have activated links on either side of the selected transmission group. If SSCP names are not available, their subarea addresses are displayed, in EBCDIC.

Active ER List
: Lists the active explicit routes for which data is available. From this panel, you can display a list of sessions using a specific explicit route or display the configuration of the explicit route.

Active VR List
: Lists the active virtual routes for which data is available. From this panel, you can display the virtual route status, display a list of sessions, or display the configuration of the explicit route.

Virtual Route Status
: Lists the virtual route status data from the virtual route end points.

Active Domain List
: Lists other known domains. It also shows the status of sessions that have been started to each of these domains.

Sense Code Description
: Presents in detail a description for sense codes.

Display Keep
: Lists the PIU KEEP counts that have been set for a specific network name or for a name pair.

Display Trace
: Lists the specific resource names that have been activated/deactivated for tracing with the TRACE command. The first resource listed (GLOBAL) reflects the setting of the TRACE ALL function. If global trace is ON, TRACE STOP can be used to deactivate the trace for all sessions with the specified resource. The session monitor lists the specific network names that have been deactivated. If global trace is OFF, the TRACE START can be used to activate the trace for all sessions with the specified resource. The session monitor lists the specific resource names that have been activated.

Help
: Lists and describes the session monitor commands for which online help is available.

Help Group
: Describes the syntax of the command selected from the previous help panel.

For explanations of the fields shown on the panels, see Appendix B, "List of Panel Fields" on page B-1. To receive online help information for a particular panel you can enter the following command:

```
HELP NLDM.panelname
```

where *panelname* is the name of the panel, found in the upper left corner of each session monitor panel. For example, to receive help on the panel in Figure 7-2 on page 7-5, you would enter:

```
HELP NLDM.MENU
```

To leave the panel hierarchy and return to the command facility, enter END or press PF2.

Program Function Keys for the Session Monitor

In the session monitor, the defaults for the program function keys 1-12 are as follows:

PF1 HELP	Displays help information.
PF2 END	Causes the system to return to the component that the operator was using before entering the current one.
PF3 RETURN	Causes the system to return to the point from which this panel was requested.
PF4 TOP	Displays the first page of a multiple-page panel.
PF5 BOTTOM	Displays the last page of a multiple-page panel.
PF6 ROLL	The system remembers the sequence in which you go from one component to another. When you use the ROLL PF key, the system moves the name of the current component to the beginning of this sequence, and re-enters the component at the end of the sequence.
PF7 BACK	Displays the previous page of a multiple-page panel.
PF8 FORWARD	Displays the next page of a multiple-page panel.
PF9 NCCF	Sends the command you entered directly to the command facility (NCCF).
PF10 LEFT	Shifts the panel to the left over the Session Configuration Data display.
PF11 RIGHT	Shifts the panel to the right over the Session Configuration Data display.
PF12 RETRIEVE	Displays the most recently entered session monitor command.

Online Help Information

To get online help for the session monitor (NLDM), enter:

```
HELP NLDM
```

Chapter 8. Using the Session Monitor Commands

This chapter illustrates some of the capabilities of the session monitor (NLDM). For specific command syntax or for more information, see Chapter 9, "Session Monitor Command Descriptions" on page 9-1. You can also receive online help information on the session monitor commands by entering the following command:

```
HELP NLDM COMMANDS
```

Getting to the Session Monitor

If the session monitor is not already started, use the STARTCNM command to start the task. Then use the NLDM command to get to the session monitor.

Panel Commands

Use the following panel control commands to move from page to page in a multiple-page display. The commands are:

- *BACK* (page 9-5)

  Displays a previous page.

- *FORWARD* (page 9-15)

  Displays a following page.

- *TOP* (page 9-44)

  Displays the first page.

- *BOTTOM* (page 9-6)

  Displays the last page.

You can use the following commands while you are using the session monitor panels.

- *MENU* (page 9-21)

  Displays the primary option menu.

- *RETURN* (page 9-31)

  Returns you to the previous panel.

- *COPY* (page 9-8)

  Prints a copy of the panel that you are viewing.

Repeating a Previous Command

PF12, which provides a *RETRIEVE* function, causes the last command you entered to be placed in the command area. You may then alter the command if you want and press the ENTER key to send the command to the system for processing.

Displaying and Changing PF Keys

The *QUERY PF* command (page 9-27) displays the current settings of your PF keys. To change the setting of a PF key, use the SET PF command (page 9-41).

Collecting and Displaying Session Awareness Data

Use the following commands to display session awareness data:

- *LIST* (page 9-19)

  Lists the following session information:

  - Resource names including logical units, primary logical units, secondary logical units, physical units, or SSCPs
  - Domain names
  - Active explicit routes
  - Active virtual routes.

- *SESS* (page 9-39)

  Lists the sessions for which session awareness data has been recorded that have a specified resource as a session partner.

- *LINEMAP* (page 9-18)

  Displays the NCP line port address associated with a station.

If you receive any messages that contain sense codes, you can get an explanation of these codes by using the *SENSE* (page 9-38) command.

Use the following commands to start and stop session awareness data collection:

- *ENABLE* (page 9-11)

  Starts data collection. This command also allows the session monitor to become aware of any active sessions that may have been started before the session monitor was started.

- *DISABLE* (page 9-9)

  Stops data collection.

Collecting and Controlling Session Trace Data

You can start and stop the collection of session trace data. VTAM and NCP provide session trace data to the session monitor only after the session monitor sends a request to begin tracing data. You can specify that tracing be started for all network resources or for individual network resources. However, to specify trace for an individual network resource, the major node must be active.

Figure 8-1 shows the different types of tracing that are available for the various resources supported by the session monitor.

	Session Awareness Data	PIU Data & Session Activation Parameters	NCP Data
Host LUs associated with user application programs	X	X	
Host SSCP	X	X	
Channel-attached SNA terminals	X	X	
Channel-attached non-SNA terminals	X	X	
NTO terminals (includes BSC and Start/Stop terminals other than 3270)	X	X	
NCP-attached SNA terminals (includes BSC 3270 terminals)	X	X	X
NCP-attached PU	X	X	X

Figure 8-1. Resources That Can Have Sessions Traced

Use the following commands to collect and control session data:

- *TRACE* (page 9-45)

  Starts and stops a session trace. You can also use this command to display which resources are being traced.

- *KEEP* (page 9-16)

  Allows you to change the number of PIU records that will be kept for a specific session. To display the current PIU KEEP counts, use DISKEEP (page 9-10).

- *SET HEX* (page 9-40)

  Displays trace data and the Session Activation Parameters in hexadecimal. If the data is already in hexadecimal, this command displays it in text.

- *FORCE* (page 9-13)

  Writes data to VSAM before a session ends. Normally the data is kept in virtual storage until a session ends.

- *PURGE* (page 9-24)

  Allows the network operator to delete selected data from the VSAM data base.

- *PURGEDB* (page 9-26)

  Purges session monitor and hardware montior data.

Collecting and Displaying Session Response Time Data

Response time data is collected by a 3174 cluster controller with the response time monitor (RTM) feature. The response time is measured for each display station. Use the following commands or CLISTs to collect and display the response time summary information:

- *AUTOCOLL* (page 9-3)

  Gathers response time data from control units.

- *COLLECT* (page 9-7)

  Gathers response time data from control units.

- *RTSUM* (page 9-35)

  For an SNA terminal, displays a graph showing the percentage of transactions that took place in each response time range during a specified period of time.

- *RTREND* (page 9-33)

  For an SNA terminal, displays a graph comparing the measured times with the stated response time objectives during each collection period.

You limit or check the time range of the data that will be displayed by using the following commands:

- *SET RANGE* (page 9-42)

  Sets the time range.

- *QUERY RANGE* (page 9-28)

  Displays the time range.

Viewing Session Data in Another Domain

The session monitor allows you to:

- Use the *SDOMAIN* command (page 9-37) to set your terminal to view session data that resides in another domain. This is used when data does not pass through or terminate in your domain.

  To stop viewing data in another domain and use your terminal to view data from the local domain, issue the SDOMAIN command for the domain that contains your terminal.

Viewing Session Data in Another Network

The session monitor allows you to view session data that is in another network. If you request a display of session data from a session partner in another network, the session monitor coordinates the routing of requests and data between the two networks. Cross-network support for the configuration panels provides the complete session path and alias names. Session data can be routed from any network on the session path.

Recording Accounting, Resource and Session Statistics

Use the *RECORD* command (page 9-29) to send network availability data and information about the distribution of network resources to an external log (for example, SMF for MVS). Event and session counters, and CPU utilization data can also be recorded.

Reloading Definition Statements

Use the *RELOAD* command (page 9-30) to reload dynamically the following definition statements that are located in DSIPARM:

PERFMEM RTM performance class definitions

KEEPMEM KEEP class definitions.

Controlling the VSAM File

Use the *SWLD* command (page 9-43) to switch the VSAM file associated with the task AAUTSKLP to the primary file or to a secondary file.

Chapter 9. Session Monitor Command Descriptions

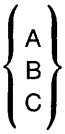
This section describes the formats and operands of the NetView commands and CLISTs that apply to the session monitor (NLDM). The commands can be entered from any component.

The commands are listed in alphabetical order for easy reference. Each command description includes the format and description of operands and, where applicable, usage notes, responses, and examples.

The syntax and notation conventions used for the commands and CLISTs are as follows:

- Items shown in braces { } represent alternatives. You must choose one.

  For example,

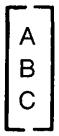
  

  or {A|B|C}

  indicates that you must specify one item only: A, B, or C.

- Items shown in brackets [ ] are optional. You may choose one.

  For example,

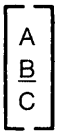
  or [A|B|C]

  indicates that you may enter A, B, or C, or you may omit the operand.

- A series of three periods (...) indicates that a variable number of items may be included in the list.

- An underscored item shows the alternative, or default, the system will choose if you do not specify an item.

  For example,

  If no operand is specified, B is assumed.

- Lowercase italicized items are variable; substitute your own value for them. Uppercase items must be entered exactly as shown.

- Parentheses must be entered as shown.

- Where keywords can be abbreviated, the abbreviations are shown in capital letters.

  For example,

  All

  can be entered as A or ALL.

- Where brackets ([ ]) are nested, you must include commas to denote the absence of the required positional operands. For example,

  ```
  Act     A
          [,B
          [,C]]
  ```

  To specify C only, enter ACT A,,C.

For online help on the session monitor (NLDM) commands, enter:

```
HELP NLDM COMMANDS
```

For help on a specific command, enter:

```
HELP command
```

where *command* is the name of the command.

AUTOCOLL

The AUTOCOLL CLIST controls the collection of response time monitor (RTM) data.

The format of the AUTOCOLL CLIST is:

AUTOCOLL [*time*]

where:

time is the interval, specified as minutes or hours:minutes, for session monitor collection of RTM data. The default is 20 minutes.

Usage Note

The AUTOCOLL CLIST corresponds to the following command: EVERY time, PPT,ID=NLDMC,NLDM COLLECT RTM * * NOLOG. See page 3-67 for a description of the EVERY command and page 9-7 for the related COLLECT command.

Example

To collect RTM data every 15 minutes, enter:

```
AUTOCOLL 15
```

AUTORECD

The AUTORECD CLIST controls the collection of accounting and resource statistics data to the external log.

The format of the AUTORECD CLIST is:

```
AUTORECD          [time]
```

where:

time — is the interval, specified as minutes or hours:minutes, for session monitor collection of accounting and resource statistics data. The default is 20 minutes.

Usage Note

The AUTORECD CLIST corresponds to the following command: EVERY time, PPT,ID=NLDMR, NLDM RECORD SESSTATS * *. See "EVERY" on page 3-67 for a description of the EVERY command, and "RECORD" on page 9-29 for the related RECORD command.

Example

To record accounting and resource statistics data to the external log every 15 minutes, enter:

```
AUTORECD 15
```

BACK

The BACK command displays a previous page of a multipage display.

The format of the BACK command is:

BACK [*n*]

where:

n specifies the number of pages to go back. The default is 1.

Usage Note

The PF7 is set to the BACK command. If the value of *n* is greater than the number of previous pages, the first page is displayed. If the current page is the first page and the BACK command is entered, you will remain on the first page.

Example

To look at a page that is three pages back, enter:

```
B 3
```

BOTTOM

The BOTTOM command displays the last page of a multipage display.

The format of the BOTTOM command is:

```
BOTtom
```

Usage Note

PF5 is set to the BOTTOM command.

When over 999 screens are to be displayed, entering BOTTOM takes you to the last page, but the page number on that screen will only go as high as '999'.

Example

To get to the last page of a multipage display, enter:

```
BOTTOM
```

COLLECT

The COLLECT command gathers response time data from PUs with the RTM feature.

The format of the COLLECT command is:

```
COLLECT          RTM {name|*}
                   [LOG|NOLOG]
```

where:

RTM — collects response time data as measured by the RTM feature of a 3174.

name — is the name of a link, PU, or terminal LU.

* — collects data for all LU terminals in a domain attached to a 3174 with the RTM feature.

LOG — writes collected data to the external log.

NOLOG — does not write collected data to the external log. This is the default.

Usage Note

Every COLLECT command resets the affected LU counters to zero. Data from COLLECT commands that do not have the LOG option is accumulated and will be logged when a COLLECT with LOG is issued or when the session ends.

If you enter this command from a NetView component other than the session monitor, prefix the command with NLDM.

Session start and end times, and data collection times, are stored on the VSAM data base with times that are local to the owner of that data base. For example, suppose the host that owns the primary end point of a session resides in time zone 1 and the host that owns the secondary end point resides in time zone 2. At the session end, the session is logged by the host of the primary end point with its local times (in time zone 1) and logged by the host of the secondary end point with its local times (in time zone 2). If the session lasted from 9:00 to 10:00 in time zone 1 and time zone 2 is 3 hours earlier than time zone 1, the session would be logged in time zone 2 as lasting from 6:00 to 7:00.

When an operator in time zone 1 views this session on the Session History panel, the times appear as 9:00 to 10:00. Suppose the secondary end point is a terminal attached to a 3174 controller equipped with the RTM feature. When the operator in time zone 1 views the panel NLDM.STIME for this session, the times are listed as 6:00 to 7:00, because the information was retrieved from the host residing in time zone 2.

Example

To collect RTM data from all terminals connected to the 3174 whose PU is named LCL3174A, enter:

```
COLLECT RTM LCL3174A
```

COPY

The COPY command sends a copy of the current display to the network log or to a hard copy terminal if one is connected.

The format of the COPY command is:

```
COPY
```

Usage Note

Messages are displayed at the operator's terminal to indicate success or failure of the COPY operation.

Example

To make a copy of the screen you are displaying, enter:

```
COPY
```

A copy of the screen will be recorded on the network log or printed on the hard copy log if one is connected.

DISABLE

The DISABLE command stops the collection of session awareness data by VTAM and the session monitor.

The format of the DISABLE command is:

```
DISABLE
```

Usage Note

If the DISABLE command is issued:

- Tracing cannot be started because session awareness data is not being collected.
- The DISABLE command does not disable session awareness if a trace is active for any resource.
- The DISABLE command does not disable session awareness if the network accounting and availability function is initialized.
- After a DISABLE command is entered, NLDM (AAUTSKLP) must be recycled by using the STOPCNM (page 3-157) and STARTCNM (page 3-151) CLISTS in order to restart session awareness data collection.

Example

To stop collecting session awareness data, enter:

```
NLDM DISABLE
```

DISKEEP

The DISKEEP command displays the number of PIUs kept per session.

The format of the DISKEEP command is:

```
DISKEEP        PIUS  [FOR] name1 [name2|ALL]
```

where:

PIUS — displays the PIU keep count per session. The keep count is the number of PIUs which are retained.

name1 — resource name to apply keep count against (LU, PU, or SSCP name).

name2 — second name (optional) to identify a specific session.

ALL — apply keep count against all sessions with *name1*. ALL is the default.

Usage Note

This command causes panel Display Keep to display the current settings.

Example

To display the PIU count for all sessions with an LU named LCL3278A, enter:

```
DISKEEP PIUS LCL3278A
```

ENABLE

The ENABLE command begins collection of session awareness data.

The format of the ENABLE command is:

```
ENABLE
```

Usage Note

The command allows the session monitor to become aware of any currently active sessions and for any sessions activated after the command is issued (see "Session Monitor Warm Start" on page 7-5).

END

The END command stops the session monitor panel sequence and returns to the component from which the session monitor was invoked.

The format of the END command is:

```
End
```

Usage Note

PF2 is set to the END command.

Example

To return to the component from which you invoked the session monitor, enter:

```
END
```

FORCE

The FORCE command causes session data to be recorded in a VSAM file.

The format of the FORCE command is:

```
FORCE          name1 [NET netid1] [name2 [NET netid2]]
```

where:

name1 — the resource name to force session data to the VSAM data base.

NET netid1 — The name of the network in which the first resource resides. If this operand is not specified, then the specified resource is assumed to reside in the network of the domain (NetView) in which the force command is executed.

name2 — the second name (optional) to identify a specific name pair.

NET netid2 — The name of the network in which the second resource resides. If this operand is not specified, then the specified resource is assumed to reside in the network of the domain (NetView) in which the force command is executed.

Usage Note

You should request the most recent trace data from VTAM before you enter the FORCE command. First display the session trace data selected from the session configuration panel and then issue the FORCE command.

If a session being forced is cross-domain or cross-network, the session must be forced by a separate command in each domain to preserve the data integrity of the forced session.

You can issue the FORCE command naming only one resource. If you do this, data for all sessions with the named resource are forced to the VSAM data base.

If you name a SLU, you cause session data to be recorded for the SSCP-LU session and all LU-LU sessions the SLU is involved in.

If you name a PLU, you will force data for all the sessions involving that PLU. If, for example, you issued FORCE CICS, you might force data to the data base for hundreds of sessions. For this reason, it is better to name only SLUs in the FORCE command if only one resource name is used.

When a session ends, the session monitor automatically saves the session trace data for that session. In addition, at any time, you can save session trace data by using the FORCE command.

The FORCE command can be helpful with a hung terminal, where the session can not be terminated. Here the session monitor will never automatically save the trace data. By using FORCE, you can save the session trace data so the technical support people can perform problem determination.

The FORCE command forces only those sessions that are known to the session monitor which executes the command. For example, session monitor in network A has no knowledge of a single network session in network B, so a FORCE on that session from network A would not be valid.

Example

To record session data for session where resource LCL3278A is in network A01M and resource L51R79M is in network where FORCE command is issued, enter:

```
FORCE LCL3278A NET A01M L51R79M
```

FORWARD

The FORWARD command displays the next page of a multipage display.

The format of the FORWARD command is:

```
FORWARD        [n]
```

where:

n specifies the number of pages to move forward. 1 is the default.

Usage Note

The PF8 is set to the FORWARD command. If the value of n is greater than the number of remaining pages, the final (bottom) page is displayed. If the current page is the final page and the value of n is 1, then page 1 is displayed.

Example

To move ahead five pages, enter:

```
FORWARD 5
```

You will see the fifth page forward from the current page.

KEEP

The KEEP command changes the amount of PIU data to be kept by session monitor.

The format of the KEEP command is:

```
KEEP          nnn PIUS     [FOR] name1 [name2|ALL]
```

where:

nnn specifies the number of items to be kept.

PIUS specifies a change to the PIU KEEP count.

name1 resource name to apply keep count against.

name2 second name to identify a specific session.

ALL applies keep count against all sessions for *name1*. This is the default.

Usage Note

To restrict the amount of data retained by the session monitor, you can establish KEEP counts in the session monitor. These counts determine how much data will be retained.

The KEEP PIUS command restricts the number of PIUS kept by the session monitor for a specific session. It commands that, for the named resource, the specified number (*nnn*) of messages be kept. Once that number has been reached and a new message comes in, that new message is saved and the oldest message is discarded from the session monitor. The default is 10 PIUS, and the maximum is 999.

When a trace has been started for a resource, the session monitor collects session formation parameter data, PIU trace data, and NCP trace data. The PIU trace data consists of a portion of each message sent to and from the traced resource.

Example

To increase the session keep count to 5 for the terminal L51R79M you would enter:

```
KEEP 5 PIUS L51R79M
```

LEFT

The LEFT command displays session configuration data in the primary direction from the Session Configuration Data display.

The format of the LEFT command is:

```
LEft
```

Usage Note

PF10 is set to LEFT.

Example

To move in the primary direction from the Session Configuration Data display, enter:

```
LE
```

LINEMAP

The LINEMAP command displays the network control program (NCP) line port address associated with a station attached to an NCP within the same domain.

The format of the LINEMAP command is:

```
LINEMAP        ncpname stationname
```

where:

ncpname specifies the name of the NCP to which the station is attached.

stationname specifies the name of the PU for which the address is displayed.

Usage Note

You must have NCP V3 or later to be able to use this command.

Example

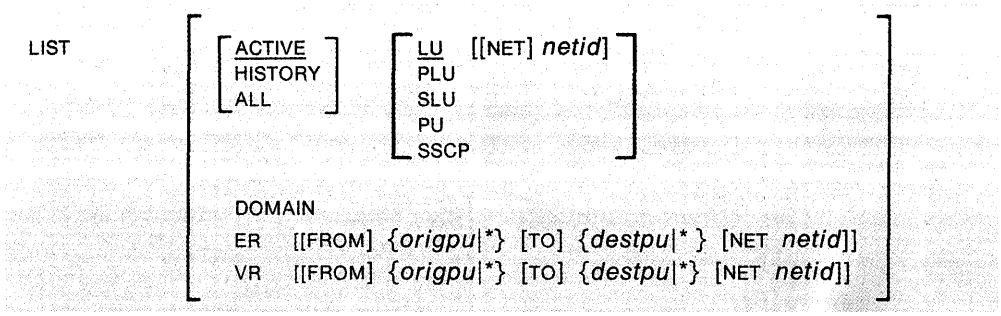
To display NCP line port addresses for PU LCL3174B attached to NCP27, enter:

```
LINEMAP NCP27 LCL3174B
```

LIST

The LIST command displays a list of resources (network addressable unit names), domain names, active explicit routes, or active virtual routes, for which session data has been collected.

The format of the LIST command is:



where:

ACTIVE	displays active resources only.
HISTORY	displays history resources only.
ALL	displays all resources.
LU	displays logical unit names. This is the default.
netid	the network name for which data is to be listed. The default is the local network.
PLU	displays primary logical units for LU-LU sessions only.
SLU	displays secondary logical units for LU-LU sessions only.
PU	displays physical units only.
SSCP	displays SSCPs only.
DOMAIN	lists all domains defined to this NetView.
ER	list active explicit routes as defined by an origin subarea PU name and a destination subarea PU name.
VR	list active virtual routes as defined by an origin subarea PU name and a destination subarea PU name.
origpu	the originating subarea PU name of the route to be displayed.
destpu	destination subarea PU name of the route to be displayed.
*	lists the origination point or destination point of active PUs.

Usage Note

This command displays the panels:

- Resource Name List
- Domain List
- Active Explicit Route List
- Active Virtual Route List.

These session monitor panels provide lists of resource names, domain names, or active explicit and virtual routes known to the session monitor. The resource names displayed are determined by the specific LIST command option you select.

The Domain List panel lists other domains defined to the local session monitor. The table also shows the status of conversations that the local session monitor has started with each of these other domains. Information is available only if the two session monitors have started the session and have exchanged local-domain information, and if the session is active. If the conversation is shown to be inactive or pending activation, the session monitor may display the abbreviation for not applicable (N/A) in certain fields of the panel.

Example

To list active PUs for which session data exists, enter:

```
LIST PU
```

To list all the active ERs that originate in A01MPU, enter:

```
LIST ER FROM A01MPU TO *
```

MENU

The MENU command displays the initial selection options panel which is the first panel in the session monitor panel sequence.

The format of the MENU command is:

```
Menu
```

Usage Note

This command displays the MENU panel.

Example

To display the first panel of the session monitor sequence, enter:

```
MENU
```

NCCF

The NCCF command is used to enter the command facility (NCCF).

The format of the NCCF command is:

```
NCCF        [command [operands]]
```

where:

command — is a command facility command. If command is not specified, the command facility is invoked. Command facility immediate commands are not accepted.

operands — are one or more operands that are passed to the command facility along with the command.

Usage Note

If you enter NCCF without any operands, you see the command facility screen. Then you can enter a command facility command. If you enter a command, you must view the resulting messages and return to the original screen (see "RETURN" on page 9-31) before entering more commands.

When a command is sent to the command facility, from another component, the command is processed by the command facility as if it had been entered directly from the command facility.

PF9 is set to the NCCF command.

When you use this command from another component, the command facility will remain on the NetView component stack that is used with ROLL.

NLDM

The NLDM command is used to enter the full screen mode of the session monitor, or to process a single session monitor command from another NetView component.

The format of the NLDM command is:

```
NLDM          [X|N] [command]
```

where:

X — indicates that the session monitor is to enter full screen mode, using an extended data stream regardless of whether the session monitor has detected an extended data stream terminal. If the terminal is not an extended data stream terminal, I/O errors will occur.

N — indicates that the session monitor is to enter full screen mode, using a non-extended data stream regardless of whether the session monitor has detected an extended data stream terminal.

command — is a session monitor line mode command that is to be processed by the session monitor, unless previously suspended using the PA2 key.

Usage Note

If no operand is specified, the session monitor will determine whether or not to use extended data streams by examining the logon mode.

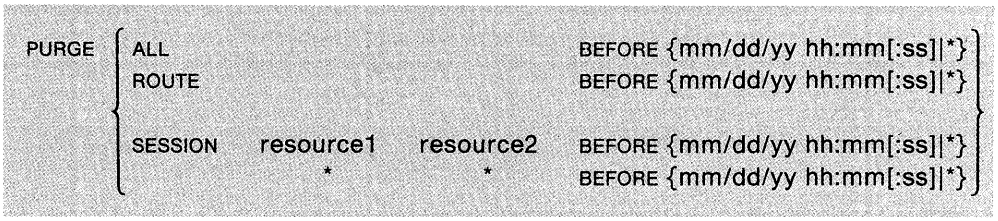
When you use this command, the session monitor remains on the NetView component stack that is used with ROLL until the session monitor ends.

The X|N operand is usually entered only the first time you use the NLDM command or after you use the NLDM END command.

PURGE

The PURGE command allows the network operator to delete selected data from the VSAM data base.

The format of the PURGE command is:



where:

ALL — deletes all data.

BEFORE — deletes data whose ending time stamp occurs before (or at) the specified date and time (mm/dd/yy hh:mm [:ss])

ROUTE — deletes route data only.

SESSION — deletes session data only. If *resource1* and *resource2* are specified, the session monitor deletes data for sessions between *resource1* and *resource2*. *Resource1* and *resource2* must be from 1 to 8 alphanumeric characters and may contain the characters "*" and "?". If *resource1* and *resource2* are not specified, the session monitor deletes data for all sessions.

* — specifies the current date and time when used in place of a specific date and time

represents all resource names when used in place of a specific resource name

Usage Note

The PURGE command permits the network operator to delete from the VSAM data base information which was recorded before (or at) a specific date and time. The options available are: all data, route data, or session data. By the use of resource names, the purge of session data can be limited to specific sessions.

The PURGE command is asynchronous; once initiated by operator or CLIST, it runs concurrently with the session monitor operator. The operator receives a 'PURGE STARTED' message when the purge begins. The operator can continue to enter more commands. The authorized receiver receives a 'PURGE COMPLETED' message when the purge completes. The completion message describes the type and count of the data purged.

If multiple PURGE commands are entered, the session monitor responds to each command with the 'PURGE STARTED' message. However, they will run consecutively. The first purge completes before the second purge, and so on.

Examples

```
PURGE SESSION LCL3278A L51R79M BEFORE 5/26/87 23:59
```

This example purges all sessions which have resource name pairs of LCL3278A and L51R79M and a session end time before (or at) 23:59 on 5/26/87.

```
PURGE ROUTE BEFORE *
```

This example purges all route data with an end time before (or at) the current system date/time.

```
PURGE ALL BEFORE *
```

This example purges all session data and all route data before (or at) the current system date/time.

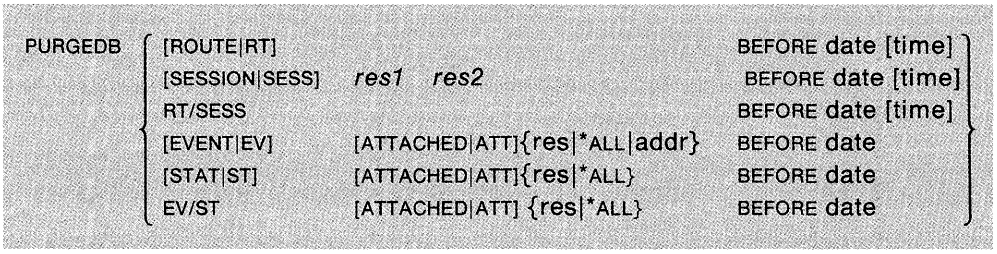
```
PURGE SESSION A?C* * BEFORE *
```

This example purges all sessions which have resource name pairs matching the patterns 'A?C*', '*' and a session end time before (or at) the current system date/time.

PURGEDB

The PURGEDB command purges hardware monitor and session monitor data.

The format of the PURGEDB command is:



where:

ROUTE|RT — specifies session monitor ROUTE data.

SESSION|SESS — specifies session monitor SESSION data.

RT/SESS — specifies session monitor ROUTE and SESSION data.

EVENT|EV — specifies hardware monitor EVENT data.

STAT|ST — specifies hardware monitor STAT data.

EV/ST — specifies hardware monitor EVENT and STAT data.

res1|res2 — specifies the name of the resource for which purging is to be done.

ATTACHED — specifies if resource is attached.

*ALL — deletes data for all resources.

addr — specifies a 12 hexadecimal digit address.

date — acceptable formats for date are:

- MM/DD/YY - leading zeros are not required
- MMDDYY - leading zeros are required
- -NNN - number (from 0-365)
- * - current date (and current time unless time also specified).

time — acceptable formats for time are:

- HH:MM:SS - Leading zeros are not required
- HH:MM - leading zeros are not required
- * - current time.

Example

To purge session monitor data, enter:

```
PURGEDB RT/SESS BEFORE -5 16:25
```

All sessions which have a session start time of five days prior to the current system date and a time of 16:25:00, and all routes which have an end time of the same, are purged.

QUERY PF

The QUERY PF command displays the current session monitor PF key settings.

The format of the QUERY PF command is:

```
Query   PF
```

Example

To display the setting for the session monitor PF keys enter:

```
Q PF
```

QUERY RANGE

The QUERY RANGE command displays the active time range from either the last SET RANGE command or the default time range.

The format of the QUERY RANGE command is:

```
Query   RANGE
```

Example

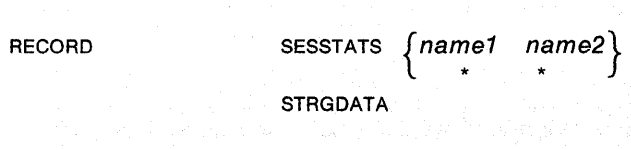
To display the time range you set on your last SET RANGE command, enter:

```
Q RANGE
```

RECORD

The RECORD command writes the accounting and resource statistics data, or storage and CPU utilization data, to the external log.

The format of the RECORD command is:



where:

SESSTATS	writes accounting and resource statistics for name1 and name2 to the external log.
name1	specifies the resource name of the primary session partner.
name2	specifies the resource name of the secondary session partner.
STRGDATA	writes session monitor storage data statistics to the external log.

Usage Note

You can use specific resource names for *name1* and *name2*, or you can use one of the following forms:

*	represents all resource names.
abc*	represents all resource names beginning with abc.
ab?????c	represents all eight character resource names, beginning with ab and ending with c.

Example

To write accounting and resource statistics for all sessions, enter:

```
RECORD SESSTATS * *
```

To write accounting and resource statistics for all sessions between resources beginning with TSO and LU, enter:

```
RECORD SESSTATS TSO* LU*
```

To write accounting and resource statistics for all sessions between resources with eight character names, beginning with a T and ending with 1, and all resources beginning with LU2, enter:

```
RECORD SESSTATS T??????1 LU2*
```

To write session monitor storage and CPU utilization data, enter:

```
RECORD STRGDATA
```

RELOAD

The RELOAD command reloads the RTM PCLASS and MAPSESS or the KCLASS and MAPSESS definition statements.

The format of the RELOAD command is:

```
RELOAD          {PERFMEM|KEEPMEM}
                  [FROM] membername
```

where:

PERFMEM — reloads RTM performance class definitions.

KEEPMEM — reloads KEEP CLASS definitions.

membername — specifies the name of a member in DSIPARM (data set for MVS or a filename with the filetype NCCFLIST for VM) from which definitions are reloaded.

Example

To reload the RTM performance class definitions from member RTMCLASS of DSIPARM, enter:

```
RELOAD PERFMEM RTMCLASS
```

RETURN

The RETURN command is used to go back to a previous panel, or return to the menu.

The format of the RETURN command is:

```
Return
```

Usage Note

If this command is issued following a session monitor command such as RTREND, the menu panel is displayed. Otherwise, the panel that was displayed before the current panel is displayed.

PF3 is set to the RETURN command.

RIGHT

The RIGHT command displays session configuration data in the secondary direction from the Session Configuration Data display.

The format of the RIGHT command is:

```
RIght
```

Usage Note

PF11 is set to the RIGHT command.

Example

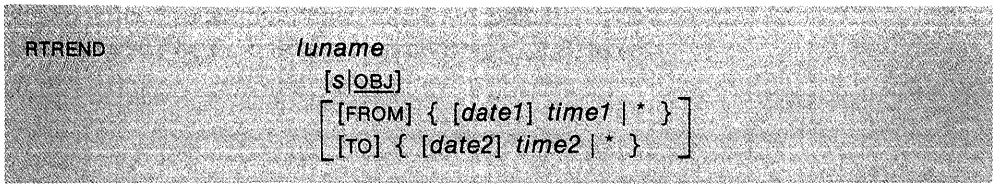
To move in the secondary direction from the Session Configuration Data display, enter:

```
RI
```

RTREND

The RTREND command displays the response-time trend over a specified range of time for a terminal LU connected to a cluster controller that supports the RTM feature.

The format of the RTREND command is:



where:

luname — specifies the name of the terminal for which response time is measured.

s — specifies the maximum response time, in seconds, to be used for the graph. The format is ssss.s; the maximum value allowed is 1800 seconds.

OBJ — specifies the response time objective set for this LU. This is the default.

date1 — specifies the starting date of the time range.

time1 — specifies the starting time of the time range.

date2 — specifies the ending date of the time range.

time2 — specifies the ending time of the time range.

* — uses the default time and date for the command. For ending date and time, the default is the current date and time. For starting date and time, the default is 2 hours before the ending date and time.

Usage Note

This command displays the Response Time Trend panel.

Dates are in the format mm/dd/yy and times are in the format hh:mm. If time is specified but date is omitted, the current date will be used. If all date and time operands are omitted, they default to the time range set by the most recent SET RANGE command. If no SET RANGE command has been issued the defaults are current time for *time2* and 2 hours earlier for *time1*. If you issue a command that has an end time past the last command issued you will get the latest time.

If the LU is in another domain, you must first use the SDOMAIN command to specify the domain that contains the LU.

Example

Given the following conditions:

- You are collecting data every 30 minutes on the quarter hour (07:45, 08:15, 08:45, and so on) and a user with terminal luname LU3270A logged on at 08:43 (March 14, 1987).
- The user is still logged on and the time is now 14:17.
- The user's session was mapped into a performance class with counter boundaries of .5, 2, 5, and 10 seconds, and an objective that 80% of the transactions should take less than 5 seconds.

The command:

```
RTREND LU3270A 9:00 *
```

produces a panel of two pages (since there are more bars than can be shown on one page) with percentages of transactions under 5 seconds from 09:00 to 14:17.

The command:

```
RTREND LU3270A OBJ * 15:00
```

produces a one-page panel with four bars representing the percentage of transactions under 5 seconds from 12:45 to 14:17.

The command:

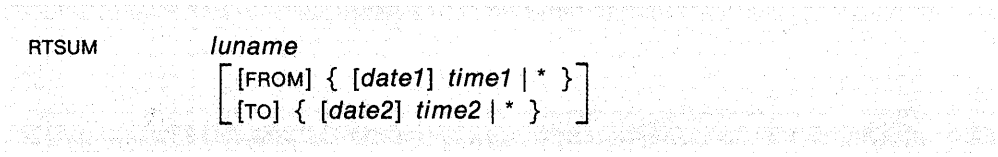
```
RTREND LU3270A 1.5 FROM 3/14/87 08:00 TO 3/14/87 13:30
```

produces a one-page panel showing the percentage of transactions under 2 seconds from 08:43 to 13:45.

RTSUM

The RTSUM command displays the response time summary for the named LU that is connected to a cluster controller that supports the RTM feature.

The format of the RTSUM command is:



where:

luname specifies the name of the terminal for which response time is measured.

date1 specifies the starting date of the time range.

time1 specifies the starting time of the time range.

date 2 specifies the ending date of the time range.

time2 specifies the ending time of the time range.

* uses the default time and date for the command. For ending date and time, the default is the current date and time. For starting date and time, the default is 1 hour before the ending date and time.

Usage Note

This command displays the Response Time Summary panel.

Dates are in the format mm/dd/yy and times are in the format hh:mm. If time is specified but date is omitted, the current date will be used. If date and time are omitted, they default to the time range set by the most recent SET RANGE command. If no SET RANGE command has been issued the defaults are the current time for *time2* and 1 hour earlier for *time1*. If you issue a command that has an end time past the last command issued you will get the latest time.

If the LU is in another domain, you must first use the SDOMAIN command to specify the domain that contains the LU.

Example

Given the following conditions:

- You are collecting data every 30 minutes on the quarter hour (07:45, 08:15, 08:45, and so on) and a user with terminal LU name LU3270B logged on at 08:12 (March 15, 1987).
- The user is still logged on and the time is now 13:24.

The command:

```
RTSUM LU3270B 8:00 *
```

produces a panel showing a summary of his response times between 08:12 to 13:24.

The command:

```
RTSUM LU3270B FROM 3/15/87 8:00 TO 3/15/87 13:30
```

produces the same panel as the one above.

The command:

```
RTSUM LU3270B 9:00 10:00
```

produces a panel showing a summary of the user's response times between 08:45 and 10:15.

The command:

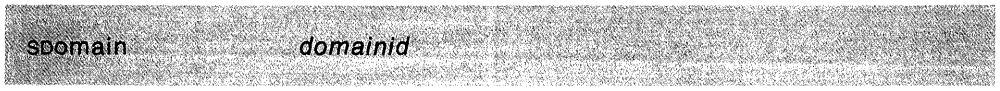
```
RTSUM LU3270B * *
```

produces a panel showing a summary of the user's response times between 12:15 and 13:24.

SDOMAIN

The SDOMAIN command specifies the domain from which session data is to be displayed.

The format of the SDOMAIN command is:



where:

domainid specifies the name of the desired domain.

Usage Note

Before using the SDOMAIN command, a session must exist between the hosts in the two domains. Operators can be allowed or prohibited access to the specified domain by using the appropriate initialization statements for that domain. For more information, see *NetView Installation and Administration Guide*.

Example

To specify that session data is to be displayed from DOM3, enter:

```
SDOMAIN DOM3
```

SENSE

The SENSE command displays the explanation of a specific SNA sense code. SENSE codes are summarized as space on the screen permits.

The format of the SENSE command is:

```
SENSE          code
```

where:

code is the sense code in hexadecimal.

Usage Note

This command displays the Sense Code Description panel.

SENSE codes may be summarized as space on the screen permits.

Example

To get a description of sense code X'0806', enter:

```
SENSE 0806
```

Response

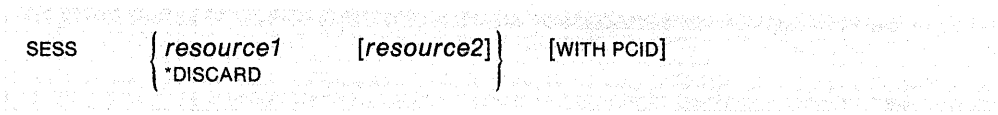
You will see information similar to the following:

```
SENSE DATA:
   CATEGORY - (08) RESOURCE  UNKNOWN:  THE  REQUEST CONTAINED A NAME OR
   MODIFIER - (06) ADDRESS NOT IDENTIFYING A PU, LU, LINK, OR LINK STATION
     BYTE 2 - (00) KNOWN TO THE RECEIVER.
     BYTE 3 - (00)
```

SESS

The SESS command displays the session list for a specific resource or all sessions between two specific resources.

The format of the SESS command is:



where:

resource1 — select only those sessions in which one of the session partners is indicated by *resource1*. *resource1* must be 1 to 8 alphanumeric characters.

resource2 — select only those sessions between *resource1* and *resource2*. *resource2* must be 1 to 8 alphanumeric characters.

WITH PCID — Display the fully-qualified PCID associated with each session. If WITH PCID is not specified, do not display the fully qualified PCIDS.

*DISCARD — select the *DISCARD pseudo session (the session to which all discarded PIUS are associated).

Usage Note

This command displays the Session History panel.

For more information on *DISCARD, see page 7-3.

Example

To display the session list that the LU L51R79M has been and currently is included in, enter:

```
SESS L51R79M
```

To display a list of active and inactive sessions between two specific resources, LCL3278A and L51R79M, along with their PCIDS, enter:

```
SESS LCL3278A L51R79M WITH PCID
```

SET HEX

The SET HEX command sets hexadecimal display mode.

The format of the SET HEX command is:

```
SET HEX    [ON|OFF]
```

where:

ON specifies that hexadecimal mode is to be turned on.

OFF specifies that hexadecimal mode is to be turned off.

Usage Note

When hexadecimal mode is on, the trace data and the Session Activation Parameters are displayed in hexadecimal. When hexadecimal mode is off, the trace data and the Session Activation Parameters are displayed as text.

If neither ON or OFF is specified, the SET HEX command reverses the current setting.

This command affects the following panels only:

- PIU Trace Data
- NCP Session Trace Data
- Session Parameters.

The hexadecimal mode setting remains in effect until you leave the session monitor with the END command. Hexadecimal mode will be turned off the next time you enter the session monitor.

SET PF

The SET PF command defines a PF key function.

The format of the SET PF command is:

```
SET PFnn          [IMMED|DELAY]  [APPEND|IGNORE]  text
```

where:

PFnn	specifies the PF key (1 - 24) being defined.
IMMED	indicates the command is processed immediately when the PF key is pressed.
DELAY	indicates that the command is written into the input area of the terminal and the cursor positioned after the last character. The command is processed by the session monitor when the ENTER key is pressed. This is the default.
APPEND	indicates that data in the input area is added to the end of the command when the PF key is pressed.
IGNORE	indicates the data in the input area is ignored. This is the default.
command text	specifies the command is to be executed when the PF key is pressed.

Usage Note

This command when entered in the session monitor only affects the session monitor PF keys.

The PF key settings remain in effect until you leave the session monitor with the END command. The PF keys will be returned to their default settings the next time you enter the session monitor.

Example

To set PF 4 to execute the SET HEX command immediately, and have it append data such as ON or OFF from the command input line, enter:

```
SET PF4 IMMED APPEND SET HEX
```

SET RANGE

The SET RANGE command sets the time range that is used for all session monitor commands that display data by time.

The format of the SET RANGE command is:

```
SET RANGE          [FROM] {[date1] time1 | *}   [TO] {[date2] time2 | *}
```

where:

date1 specifies the starting date of the time range.

time1 specifies the starting time of the time range.

date2 specifies the ending date of the time range.

time2 specifies the ending time of the time range.

* uses the default time and date for the date display command being issued.

Usage Note

Dates are in the form *mm/dd/yy* and times are in the form *hh:mm* using the 24-hour clock. If the time is specified but the date is omitted, the date defaults to the current date.

The time range setting remains in effect until you leave the session monitor with the END command. The time range returns to its default setting the next time you enter the session monitor. Refer to the *NetView Installation and Administration Guide* for a description of the default setting.

Example

To set a default range of 8:00 AM to 5:00 PM, enter:

```
SET RANGE FROM 08:00 TO 17:00
```

SWLD

The SWLD CLIST switches the files used by the session monitor to store data on a VSAM file.

The format of the SWLD command is:

```
SWLD                {P|S}
```

where:

P specifies to use the primary VSAM file.

S specifies to use the secondary VSAM file.

Usage Note

Session data is logged to VSAM by the session monitor at various times during a session. Switching the session monitor data base between the primary and secondary VSAM files could cause a session's data to become divided between the two VSAM files. Division of a session's data may give unpredictable results when trying to display data which is not on the active VSAM file.

Example

If you are encountering errors on the primary file, you can change to the secondary file by using the following command:

```
SWLD S
```

Response

You will see a message similar to:

```
DSI547I AAUTSKLP: SECONDARY VSAM DATA SET IS NOW ACTIVE
```

TOP

The TOP command displays the first page of a multipage display.

The format of the TOP command is:

```
Top
```

Usage Note

If you enter this command for a single-page display, no change occurs.

PF4 is set to the TOP command.

Example

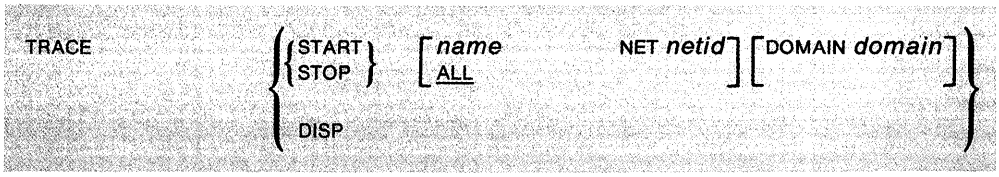
To display the first page, enter:

```
TOP
```

TRACE

The TRACE command starts or stops a session trace or displays resources that are being traced.

The format of the TRACE command is:



where:

START	starts trace functions for specified resources.
STOP	stops trace functions for specified resources.
name	specifies any valid network name (such as LU, PU, or SSCP name).
NET netid	specifies the name of the network in which the specified resource resides.
ALL	performs tracing for all network resources.
DOMAIN domain	specifies the domain in which the TRACE command is executed.
DISP	displays all traces that have been activated or deactivated explicitly.

Usage Note

If collecting trace data has not been automated by the system programmer, you might be instructed to start data collection for some resources. The TRACE START command starts a session trace. It will start collecting session formation parameters, PIU trace data, and NCP trace data.

It is possible for the system programmer to start gathering trace data following session monitor initialization, and start tracing all resources. If this is done, you might be instructed to stop data collection for some resources.

You can learn which devices are being traced by using the TRACE DISP command, which invokes panel Display Trace. The TRACE DISP command displays a list of resource names. Interpretation of that list depends on how tracing was started.

If TRACE is started for all resources then the *Global Trace* field will indicate ON and any resources that are displayed will have had trace stopped.

If TRACE is stopped for all resources then the *Global Trace* field will indicate OFF and any resources that are being traced will be displayed.

You can issue the TRACE command as a line-mode command. In this case, the TRACE command must be preceded with NLDM.

Example

If tracing has been started for specific resources, enter:

```
TRACE DISP
```

to display a list of network names that are being traced.

To start tracing a specific LU, for instance LCL3278A, which is in network A01M, enter:

```
TRACE START LCL3278A NET A01M
```

Part 4. Status Monitor

Chapter 10. Getting Acquainted with the Status Monitor

The status monitor collects and summarizes information on the status of resources defined in a VTAM domain. You can use this information to control these resources. The status monitor can automatically restart failing network resources and monitor important NetView messages. You can also use it to browse the network log.

Terminology

The status monitor groups VTAM resources into major and minor nodes. Figure 10-1 shows an example of the hierarchy that the status monitor uses.

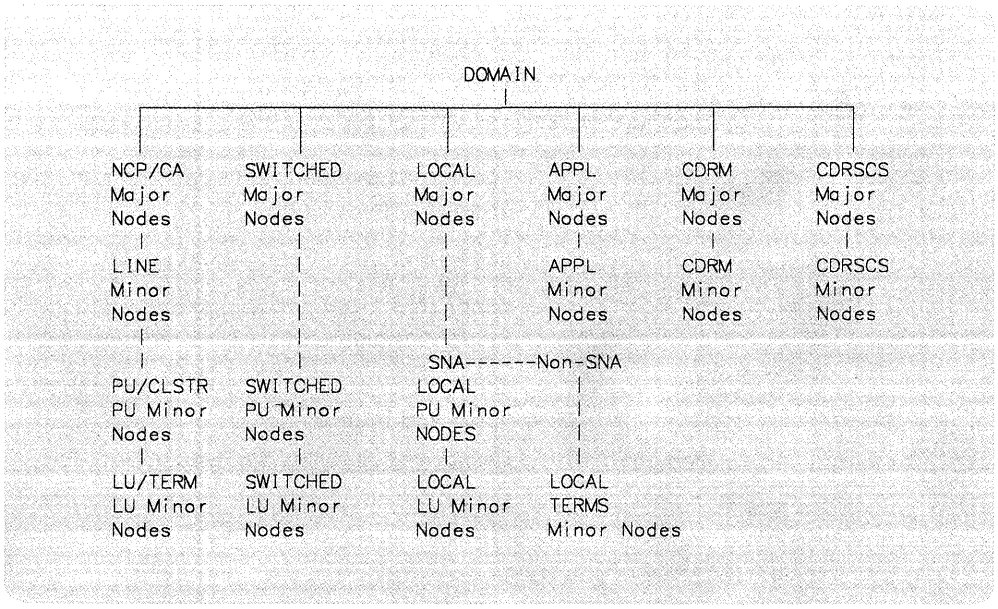


Figure 10-1. Status Monitor Hierarchy

The term ***higher node*** refers to the next node up in the hierarchy. For example, in Figure 10-1, the switched major nodes are the next higher node in relation to the switched PU minor nodes. The term ***lower node*** refers to the next node down in the hierarchy. ***Domain*** represents the highest level in the status monitor hierarchy. Resources of the same type are considered to be at the same level. For example, all PUs are on the same level in the hierarchy.

Color or Intensity Usage

The status monitor uses the following colors (on color terminals) or high-low intensity (on monochrome terminals) as follows:

- Green (normal intensity) – normal condition
- Pink (normal intensity) – pending condition
- Turquoise (normal intensity) – normal condition
- Yellow (normal intensity) – caution condition
- Red (high intensity) – problem condition.

Resource States

The status monitor displays information about different resource states. These states can be any of the following:

ACTIVE	nodes that are active (shown in green or normal intensity).
PENDING	nodes that are waiting to become active or inactive (shown in pink or normal intensity).
INACT	nodes that have been inactivated (shown in red or high intensity).
MONIT	nodes that are inactive, but that status monitor is automatically trying to make active (shown in yellow or normal intensity).
NEVACT	nodes that have never been in an active state (shown in turquoise or normal intensity).
OTHER	all other possible states (shown in turquoise or normal intensity).

Monitoring Inactive Nodes

The status monitor can reactivate minor nodes (other than applications (APPLS) and cross domain resources (CDRSCS)) that are in the VTAM inactive state. This is known as the monitoring function.

When the NetView program is started, every node that is not active but has a desired state of active, will be monitored. While NetView is running, non-switched PUs, lines, or NCPs may fail, causing VTAM to issue an unsolicited "IST105I nodename NODE NOW INACTIVE" message. Status monitor intercepts this message. If a node that has failed can be monitored and its higher node is active, pending, or being monitored, status monitor will monitor the failed node for reactivation. On the status monitor screens, these nodes are displayed under the MONIT heading. Inactive nodes that are not monitored are displayed under the INACT heading.

Status monitor attempts to activate monitored nodes once every minute. When the node leaves the inactive state, its lower level nodes will be monitored.

At installation time the system programmer can modify VTAMLST files to disable monitoring for individual resources.

While status monitor is running, automatic reactivation can be controlled using the MONIT command. Using the ALL parameter, the entire monitoring function may be

turned off or on by the operator. The MONIT command will also allow monitoring to be stopped and later restarted for individual resources.

Using the Status Monitor

To use the status monitor, enter the command:

```
STATMON
```

The next panel displayed is the Domain Status Summary panel:

```
STATMON.DSS                        DOMAIN STATUS SUMMARY                    05:48

HOST: HOST11        *0*     *1*     *2*     *3*     *4*

                    ACTIVE  PENDING  INACT   MONIT   NEVACT  OTHER
....4 NCP/CA MAJOR  ....4   .....   .....   .....   .....   .....
..121  LINES        ...87   .....   .....   .....   ...32   ....2
..226  PUS/CLUSTERS ...16   ...32   .....   .....   ..178   .....
..937  LUS/TERMS    ...88   ...22   ....3   .....   .824    .....
....9 SWITCHED MAJ  ....9   .....   .....   .....   .....   .....
...12  SWITCHED PUS .....   .....   .....   .....   .....   ...12
...44  SWITCHED LUS .....   .....   .....   .....   ....9   ...35
....2 LOCAL MAJ NDS ....2   .....   .....   .....   .....   .....
...30  LUS/TERMS    ...25   ....1   .....   .....   ....4   .....
...19 APPL MAJ NDS  ...19   .....   .....   .....   .....   .....
..378  APPLICATIONS ...30   .....   .....   .....   ...39   ..309
....1 CDRM MAJ NDS  ....1   .....   .....   .....   .....   .....
...17  CDRMS        ....7   ....7   .....   .....   ....3   .....
...25 CDRSC MAJ NDS ...25   .....   .....   .....   .....   .....
..100  CDRSCS       ...98   .....   .....   .....   ....1   ....1
-----  -----------  -----   -----   -----   -----   -----   -----
.1925 TOTAL NODES   ..411   ...62   ....3   .....   .1090   ..359

CMD==>

1=HELP 2=END 3=RETURN 4=BROWSE LOG 6=ROLL              9=REFRESH
```

Figure 10-2. Domain Status Summary Panel

The Domain Status Summary panel summarizes the status for all the resource types in the hierarchy within the domain. The status monitor uses two types of panels:

Summary — Provides information on the status for all resource types under any node.

Detail — Provides a list of nodes (by name) one level immediately below the node for which the detail panel was selected.

Panel Layout

Each panel is divided into the following sections:

- General Information — Section ❶
- Command Interface Area — Section ❷
- Detailed Information Area — Section ❸
- Command Entry Area — Section ❹
- PF Key Area — Section ❺.

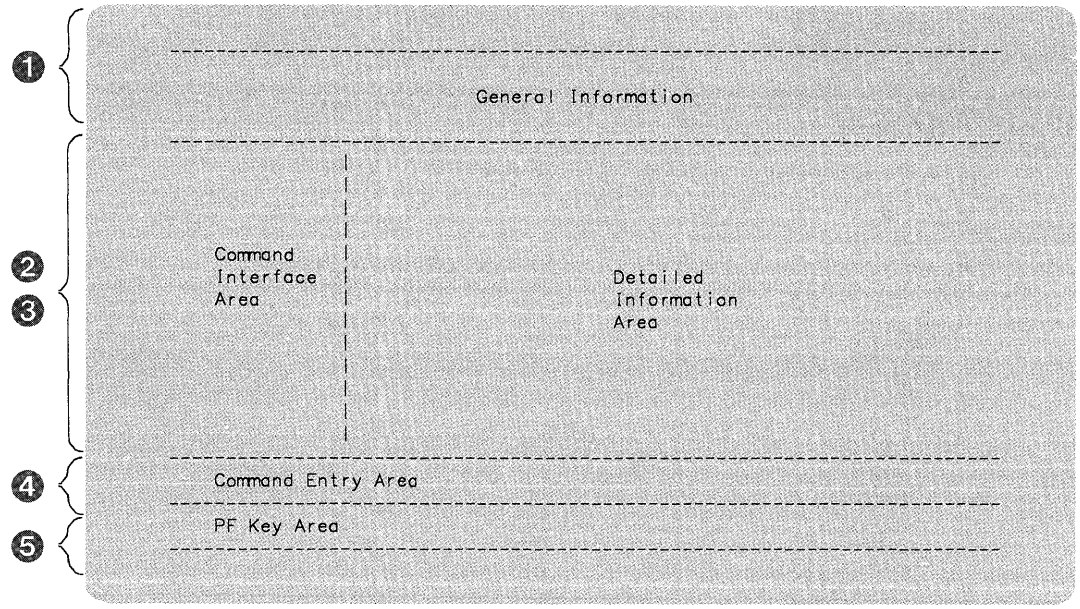


Figure 10-3. Status Monitor Panel Layout

Refer to Figure 10-3 as you read about each section.

General Information

Section 1 gives general information about the panel that is displayed. Information such as the panel name, date and time that the panel was last updated, and information on the resources that are listed is given. Also, if appropriate, the name of the domain (host) and the higher level node in the hierarchy are listed.

Command Interface Area

Section 2 (found only on the detail displays) contains commands that you can select to control and monitor the resources that are listed. You can select the commands by using the cursor or light pen. You can use PF10, PF11, PF12, or a corresponding command to access the Command Interface Area which will contain one of the following:

- VTAM commands let you display, activate, or deactivate specified resources
- CLISTs let you perform additional functions on the specified resources
- MENU display lets you control panel formats, the data to be displayed, and move up and down the hierarchy.
- Selection of the 'total' counter is equivalent to the selection of every resource name shown on the panel.

Detailed Information Area

Section 3 (found only on detail panels) lists information about the resources that are displayed.

Command Entry Area

Section ❹ allows you to enter NetView (browse facility, command facility, hardware monitor, session monitor, or status monitor) commands. You can also enter VTAM commands. Enter commands to the right of CMD = = > (the command line).

PF Key Area

Section ❺ lists the PF keys that can be used on this display.

Selecting Fields Using a Light Pen

To select a command (for example VARY ACT), press the tip of the light pen at any character in the VARY ACT field.

Once you have selected the field with the light pen, the space (sometimes a question mark) that precedes the field will be changed to a less-than symbol (<). On detail panels, you would then select the resource or resources that are associated with the command. When you are ready to send the command to the system, press ENTER. The system processes the command. Some commands will return the information in line mode. If this happens, press ENTER when the asterisks (***) are displayed in the lower left corner of the screen. Not all the commands result in a line mode display. Depending on the command, a status monitor panel may be displayed.

Selecting Fields Using the Keyboard

To select a command (for example VARY ACT), use the tab key to place the cursor next to the field you want to select. Type any character over the question mark (?), except another question mark or a blank. Repeat this for each field you want to select. When you are ready to send the command to the system, press ENTER. The system processes the command and displays the results on a line mode screen (for example MONON). When some commands are entered from the status monitor, a NCCF screen is displayed in full-screen mode without asterisks (***) in the lower left corner. Then you must enter return or roll back to status monitor, not just press ENTER. When some commands are entered from status monitor, a NCCF screen is displayed with asterisks (***) in the lower left corner (for example DISPFK). Then you will return to status monitor by just pressing ENTER. Not all the commands result in a line mode display. Some commands resulting in a status monitor panel may be displayed.

Moving through the Hierarchy

The status monitor presents information in a sequence of panels. Figure 10-4 on page 10-6 shows the sequence of panels through which you can move. Certain commands (listed in the left column of the figure) can be used to go to a panel directly, without going through the hierarchy. For example, you can use the STATMON *nodename* command to go directly to the Node Status Detail panel. You can then move up or down in the hierarchy of panels by using the prompts shown with each display.

When you select panels by going through the hierarchy, use PF3 to go back to the Domain Status Summary panel or to the command facility.

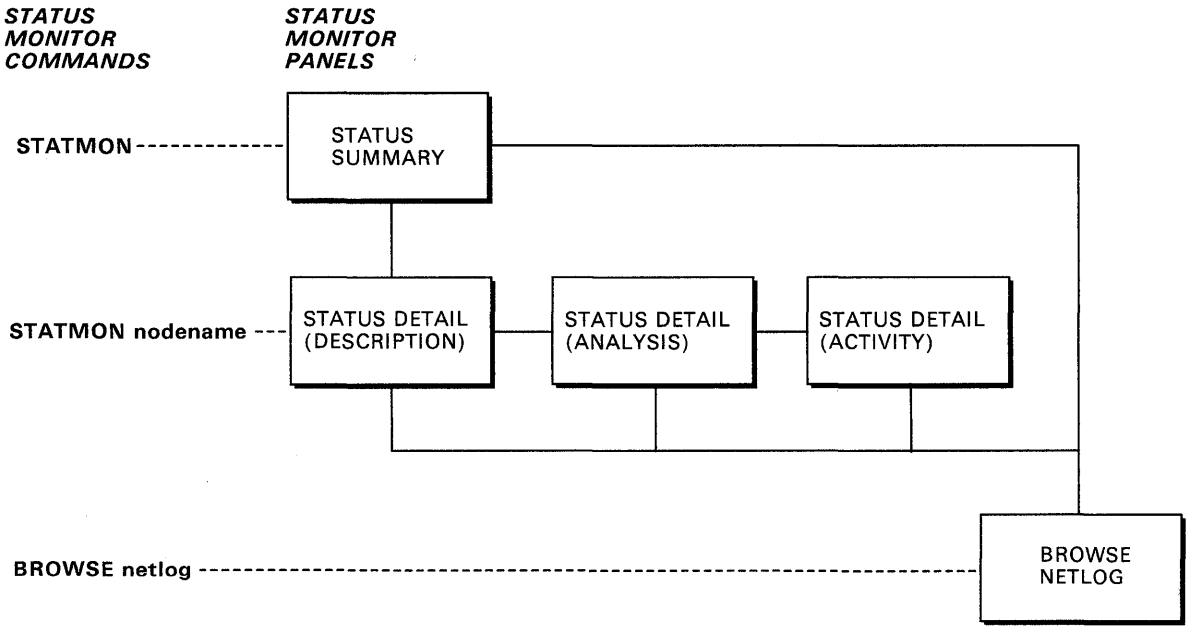


Figure 10-4. Status Monitor Panel Hierarchy

The panels in Figure 10-4 can be used as follows:

Domain Status Summary

This panel shows you every type of major and minor node within your domain. It gives you a total node count for each resource type and, for each resource type, shows you the number of resources that fall into each VTAM activation state.

Domain Status Detail

By selecting any total displayed in the Domain Status Summary, you can display the Domain Status Detail for that resource type. For example, if you selected LINES, the Domain Status Detail would display all of the lines for the domain identified in the header section.

Initially, the Domain Status Detail display is presented in description format. In this format each node is listed followed by a description of the node. By pressing PF12 (MENU), you can select the analysis or activity format of the domain status detail display. The analysis format summarizes the status of each displayed node, over a period of time. The activity format, available only for application programs and application program major nodes, summarizes the message traffic to and from the listed application programs or terminal LUs.

Node Status Summary

This panel is similar in format to the Domain Status Summary, but it is for a selected node rather than for the entire domain. The rows in this panel list VTAM node levels lower than the selected level, and the columns list the activation states: active, pending, inactive, monitored, never active, and other. This panel is filled in with the count of each node and its status as indicated by the column heading.

Node Status Detail

This panel is similar in format to the Domain Status Detail. The resources shown in this panel are the minor nodes included in the selected major node from the Domain Status Detail panel.

Initially, the Node Status Detail display presents each node, followed by a description of the node. By pressing PF12 (MENU), you can select the analysis or activity format of the node status detail display. The analysis format summarizes the status of each displayed node, over a period of time. The activity format, available only for application programs and application major nodes, summarizes the message traffic to and from the listed application programs or terminal LUs.

Network Log

By selecting one of the message indicators at the top of a status monitor panel or by pressing PF4, you can look at messages that are written to the active network log. Depending on the indicator you selected, the messages will be highlighted in different colors. You can also look at the network log by entering BROWSE NETLOGX where 'x' is either 'a' for the active log, 'i' for the inactive log, 'p' for the primary log or 's' for the secondary log. See "BROWSE" on page 3-32 for more information.

For explanations of the fields shown on the panels, see Appendix B, "List of Panel Fields" on page B-1.

To leave the panel hierarchy and return to NetView, press PF2.

Program Function Keys

The status monitor program function keys are as follows:

PF1 HELP	Displays help information.
PF2 END	Returns you to the component that you were using before you entered the status monitor.
PF3 RETURN	Returns you to the previous panel in the hierarchy.
PF4 BROWSE	Allows you to browse the active network log (where the messages processed by NetView are stored) and look at all the messages that have been logged. *Note*: If you do not have an active network log, an error message appears, and you need to enter BROWSE NETLOGS or BROWSE NETLOGP on the command line to browse the network log.
PF6 ROLL	Allows you to move among active components in a continuous loop. ROLL returns you to the last panel you viewed in an active component.
PF7 BACK	Returns to the previous page of a multipage panel.
PF8 FORWARD	Goes to the next page in a multipage panel. *Note*: PF7 and PF8 appear on a panel only when there are more screens to see.
PF9 REFRESH	Updates the Domain Status Summary panel every minute, or within 15 seconds of a VTAM status change. If you press PF9 again, no automatic update will be made.
PF10 VTAM	Displays a set of VTAM commands.
PF11 CLIST	Displays a set of CLISTs.

PF12 MENU	Displays commands that you can use to move between panels or to control the panel format. The commands are placed in the command interface area of the panel. *Note:* PF10, PF11 and PF12 are valid only in detail screens.

The status monitor PF keys cannot be changed.

Online Help Information

To get online help for the status monitor, enter:

```
HELP STATMON
```

You can enter the HELP command from any status monitor panel and you will get online help.

Chapter 11. Using Status Monitor Commands

This chapter illustrates some of the abilities of the status monitor. For specific command syntax or for more information, see Chapter 12, "Status Monitor Command Descriptions" on page 12-1. You can also receive online help information on the status monitor commands by entering the following command:

```
HELP STATMON COMMANDS
```

Getting to the Status Monitor

To get to the status monitor, use the *STATMON* command (page 12-11).

Automatic Reactivation of Resources

The status monitor tries to reactivate nodes that have failed and have been made inactive by VTAM. You can use the *MONIT* command (page 12-5) to control this reactivation of nodes. You can also use the CLISTS *MONON* (page 12-7) or *MONOFF* (page 12-6), to control reactivation.

Your system programmer can indicate in the VTAMLST file the nodes that cannot be reactivated automatically. All these nodes go into a reactivation exclusion list. You can add nodes to this list using MONIT STOP or MONOFF. You can remove nodes from this list using MONIT START or MONON so long as NOMONIT was not specified in the file VTAMLST for the particular node.

Browsing the Network Log

The status monitor allows you to browse the network log.

You can browse the network log by pressing PF4, or by selecting one of the message indicators at the top of a status monitor display. The message indicators look like:

```
*0*   *1*   *2*   *3*   *4*
```

If the message indicator selected is not on (without any highlighting — including color or blinking), the last line of the active log will be displayed. If the message indicator selected is on (blinking or displayed in reverse video), 18 lines of the log will be displayed starting at the message that first set the message indicator on and continuing with the messages that were generated after the indicator was set on. Messages associated with this indicator will be displayed in the associated color. When all messages for a particular indicator have been viewed, that indicator will no longer be on.

Generally, when you browse the network log, you browse the active log. However, if you select an old message indicator, you may browse the inactive log (NETLOGI). If you press PF4 (TOP), the top of the log file appears.

Your system programmer defines which messages will be associated with a particular indicator (*1*, *2*, and so on) and also defines the colors and highlighting of the message indicators. Usually, the message indicators signify levels of severity.

For example, messages associated with indicator *4* could be more critical (severe) than messages associated with indicator *1*.

For a network log line that contains KANJI data, zero to three consecutive dummy characters (periods) may appear at the start and end of the line to correct KANJI information that is incomplete. This can happen because of the length of the information or the affect of left and right scrolling. Invalid KANJI characters are replaced by double-byte asterisks.

See Figure 11-1 for an example of the Network Log panel.

```
STATMON.BROWSE    ACTS  NETWORK LOG FOR 02/06/86 (86037) COLS 017 094 14:07
HOST: HOST1         *0*     *1*     *2*     *3*     *4*        SCROLL ==> HALF
---2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----
 NCF01    14:05:13   DISPLAY NET,ID=A01A446,SCOPE=ALL
 NCF01    14:05:13   IST097I  DISPLAY  ACCEPTED
 NCF01    14:05:13   IST075I  VTAM DISPLAY - NODE TYPE = LOGICAL UNIT
 NCF01    14:05:13 0 IST486I  NAME= A01A446 , STATUS= ACTIV        , DESIRED
 NCF01    14:05:14   IST597I  CAPABILITY-PLU INHIBITED,SLU ENABLED ,SESSION LI
 NCF01    14:05:14   IST598I  NETID = NETA
 NCF01    14:05:14 0 IST082I  DEVTYPE = LU01, CONTROLLING PLU =
 NCF01    14:05:14   IST654I  I/O TRACE = OFF, BUFFER TRACE = OFF
 NCF01    14:05:14   IST077I  SIO = 00000002 CUA = 446
 NCF01    14:05:14   IST171I  ACTIVE SESSIONS = 00000, SESSION REQUESTS =00000
 NCF01    14:05:14   IST206I  SESSIONS:
 NCF01    14:05:14   IST172I  NO SESSIONS      EXIST
 NCF01    14:05:14   IST314I  END
 NCF01    14:05:32   INACT A01A446
 NCF01    14:05:37   VARY NET,INACT,ID=A01A446,I
 NCF01    14:05:37   IST097I  VARY     ACCEPTED
 NCF01    14:05:40 1 IST105I  A01A446  NODE NOW INACTIVE
                     **** END OF LOG ****

 CMD==>

1=HELP 2=END 3=RET 4=TOP      6=ROLL 7=BCK      9=RPTFND 10=LFT 11=RGT 12=ALL
```

Figure 11-1. Network Log Browse

In addition to the PF keys used throughout the NetView program, the network log browse facility provides the following additional PF key functions:

PF4 TOP — Displays the first line of the browsed network log.

PF5 BOTTOM — Displays the last line of the browsed network log.

PF7 BACK — Moves the screen backward through the information being browsed. You can vary the amount that you go back by entering one of the following values in the SCROLL field in the upper right corner of the panel:

- Half — Moves back half a screen.
- Max — Moves back to the beginning of the network log.
- Page — Moves back one screen.
- nnnn — A one- to four-digit number that specifies the number of lines to move back.

PF8 FORWARD — Moves the screen forward through the network log. You can vary the amount that you go forward by entering one of the following values in the SCROLL field in the upper right corner of the panel:

Half Moves forward half a screen.

Max Moves forward to the end of network log.

Page Moves forward one screen.

nnnn A one- to four-digit number that specifies the number of lines to move forward.

PF9 REPEAT (FIND) Causes the previously entered FIND command to be issued again. See "FIND" on page 12-4 for information on the FIND command. You can also use the REPEAT command (page 12-10) to issue the previous FIND command.

PF10 LEFT Moves the screen left over the network log. You can vary the amount that you go left by entering one of the following values in the SCROLL field in the upper right corner of the panel:

Half Moves to the left half a screen.

Max Moves the screen to the left-hand margin of the log.

Page moves to the left one screen.

nnnn A one- to four-digit number that specifies the number of columns to move left.

PF11 RIGHT Moves the screen right over the network log. You can vary the amount that you go right by entering one of the following values in the SCROLL field in the upper right corner of the panel:

Half Moves to the right half a screen.

Max Moves the screen to the right-hand margin of the log.

Page Moves to the right one screen.

nnnn A one- to four-digit number that specifies the number of columns to move right.

PF12 ALL or ONE Displays all important message indicator types (*1*, *2*, *3*, and *4*) in their respective colors (ALL). If you press PF12 again, only the important message indicators for the type you selected last are shown in color (ONE). However, if you have never selected an indicator, no message indicators are shown in color. The words ALL or ONE are located next to the PF key explanation on the bottom of the screen indicate which mode you are not using.

Resetting the Status Analysis Counts

The status monitor collects node status analysis statistics continuously. These statistics are displayed cumulatively. However, you can clear these statistics to set a new starting point at any time. To do this, use the *CLRSTATS* command (page 12-3).

Chapter 12. Status Monitor Command Descriptions

This section describes the formats and operands of the status monitor commands and CLISTS. The commands can be entered from any component.

The commands are listed in alphabetical order for easy reference. Each command description includes the format and description of operands and, where applicable, usage notes, responses, and examples.

The syntax and notation conventions used for the commands and CLISTS are as follows:

- Items shown in braces { } represent alternatives. You must choose one. For example,

  $\left\{\begin{matrix}A\\B\\C\end{matrix}\right\}$ or {A|B|C}

  indicates that you must specify either A, B, or C.

- Items shown in brackets [ ] are optional. You may choose one, or none. For example,

  $\left[\begin{matrix}A\\B\\C\end{matrix}\right]$ or [A|B|C]

  indicates that you may enter A, B, or C, or you may omit the operand.

- A series of three periods (...) indicates that a variable number of items may be included in the list.

- An underscored item shows the alternative, or default, the system will choose if you do not specify an item. For example,

  $\left[\begin{matrix}A\\\underline{B}\\C\end{matrix}\right]$

  If no operand is specified, B is assumed.

- Lowercase italicized items are variable; substitute your own value for them. Uppercase items must be entered exactly as shown.

- Parentheses must be entered as shown.

- Where keywords can be abbreviated, the abbreviations are shown in capital letters. For example,
  All

  can be entered as A or ALL.

- Where brackets ([ ]) are nested, you must include commas to denote the absence of the required positional operands. For example,

  ```
  Act     A
          [,B
          [,C]]
  ```

  To specify C only, enter ACT A,,C.

For online help on the status monitor commands, enter:

```
HELP STATMON COMMANDS
```

For help on a specific command, enter:

```
HELP command
```

where *command* is the name of the command.

CLRSTATS

The CLRSTATS command resets the node status analysis statistics to zero. You may want to do this periodically so that you can better notice when nodes become inactive. The analysis statistics are cumulative.

The format of the CLRSTATS command is:

```
CLRSTATS
```

FIND

The FIND command is used while browsing a data set to locate specific information.

The format of the FIND command is:

```
Find          'string'  [P|N]  [lll rrr]
```

where:

string	specifies the information for which you are searching. If the information contains blanks or single apostrophes, you must enclose the information in single apostrophes. If the information contains single apostrophes, each must be entered as two single apostrophes. If the information contains neither blanks nor single apostrophes, you do not have to use the single apostrophes to enclose the information.
P	searches backward to find the previous entry (used in log browse only)
N	searches forward to find the next entry (used in log browse only)
lll	specifies the leftmost column for search (used in log browse only)
rrr	specifies the rightmost column for search (used in log browse only)

Usage Note

You can search for a previous entry or for the next entry. The default is N for next. You can limit columns to be searched by specifying left (lll) and right (rrr) column numbers. Defaults are 1 for start (left) column and 1-255 for end (right) column (0 is invalid). Also, the Repeat Find PF key can be used to repeat the last FIND command entered.

Example

To find the next occurrence of DSI, enter:

```
F DSI or FIND DSI
```

To find the next occurrence of THE NCP'S STATUS, enter:

```
F 'THE NCP''S STATUS'
```

To limit the search for the next occurrence of CNM to columns 1 to 20, enter:

```
F CNM 1 20
```

To find the previous occurrence of CNM, enter:

```
FIND CNM P
```

MONIT

The MONIT command does one of the following:

- Enables the automatic node reactivation function
- Disables the automatic node reactivation function.

The format of the MONIT command is:

```
MONIT          {START|STOP}  {,ALL|,ID=nodename}
```

where:

START	starts automatic node reactivation.
STOP	stops automatic node reactivation.
ALL	specifies all applicable nodes.
ID=nodename	specifies a specific node.

Usage Note

The only nodes that you can add to (start) or remove from (stop) the reactivation list are those that were ***not*** specified as NOMONIT in the file VTAMLST.

Example

To start the automatic node reactivation function for all nodes which have failed and are still inactive, enter:

```
MONIT START,ALL
```

MONOFF

The MONOFF CLIST stops automatic reactivation of one or all resources.

The format of the MONOFF CLIST is:

```
MONOFF          {ALL|nodename}
```

where:

ALL specifies all applicable nodes.

nodename specifies a specific node.

Usage Note

This CLIST generates a MONIT STOP command; see page 12-5 for more information.

Example

To stop automatic reactivation for LINE27, enter:

```
MONOFF LINE27
```

MONON

The MONON CLIST starts automatic reactivation of one or all resources.

The format of the MONON CLIST is:

```
MONON          {ALL|nodename}
```

where:

ALL	specifies all applicable nodes.
nodename	specifies a specific node.

Usage Note

This CLIST generates a MONIT START command; see page 12-5 for more information.

Example

To start automatic reactivation for LINE27, enter:

```
MONON LINE27
```

NCCF

The NCCF command is used to enter the command facility (NCCF).

The format of the NCCF command is:

```
NCCF        [command [operands]]
```

where:

command — is a command facility command. If command is not specified, the command facility is invoked. Command facility immediate commands are not accepted.

operands — are one or more operands that are passed to the command facility along with the command.

Usage Note

If you enter NCCF without any operands, you are presented with the command facility screen. Then you can enter a command facility command. If you enter a command, you must view the resulting messages and then return to the original screen (see "RETURN" on page 6-33) before entering more commands.

When a command is sent to the command facility from another component, the command is processed by the command facility as if it had been entered directly from the command facility.

When you use this command from another component, the command facility will remain on the NetView component stack that is used with ROLL.

PARSE

The PARSE command allows you to see how the status monitor parses a message.

The format of the PARSE command is:

```
PARSE          [messagenumber messagetext]
```

where:

messagenumber — identifies the number of the message.

messagetext — specifies the full message text.

Usage Note

The PARSE command helps the system programmer set up filter definition statements by showing how messages are parsed.

Example

If you are writing a filter to set off message indicator 2 for certain nodes, you need to know how the message is parsed. To find this information, enter:

```
PARSE IST105I nodename node now inactive
```

Response

The following table is displayed on your screen:

```
CNM131I      Element      Text              Delimiter
CNM132I      -------      -------------     ---------
CNM133I        1          IST105I            ' '
CNM133I        2          nodename           ' '
CNM133I        3          NODE               ' '
CNM133I        4          NOW                ' '
CNM133I        5          INACTIVE           ' '
CNM134I      END OF PARSE DISPLAY
```

REPEAT (FIND)

The REPEAT command is used while browsing a data set to reissue the last FIND command.

The format of the REPEAT command is:

```
Repeat
```

Usage Note

For more information on the FIND command, see "FIND" on page 12-4.

PF9 is set to this command.

STATMON

The STATMON command invokes the status monitor full-screen node status displays.

The format of the STATMON command is:

```
STATMON          [nodename]
```

where:

nodename specifies the name of the node for which you want information.

Usage Note

If you specify only STATMON, the Domain Status Summary panel is displayed. If you enter a node name, the Node Status Detail panel is displayed for the specified node name.

When you use this command, the status monitor component will remain on the NetView component stack that is used with ROLL.

Appendix A. List of Commands

This section contains an alphabetical list of commands and CLISTS that are in this manual. The 4700 support facility can be run in MVS only.

Command	Component	Function	Page
ACQ	command facility	Acquires resources that belong to another SSCP	3-3
ACT	command facility	Activates VTAM resources	3-5
ACTION	hardware monitor	Provides a description of a specified recommended action	6-3
AGAIN	command facility	Causes the last command you entered to be rerun.	3-7
AINQ	command facility	Retrieves information from the alias translation tables	3-8
ALERTSD	hardware monitor	Presents the Alerts-Dynamic display	6-4
ALERTSH	hardware monitor	Presents the Alerts-History display	6-5
ALLC	4700 support facility	Displays a summary of the 3600 and 4700 controllers in the network	6-53
APPLS	command facility	Displays the status of active, inactive, or all application program major nodes in the domain and their respective application program minor nodes	3-10
APPLSACT	command facility	Displays VTAM applications in a specific state	3-11
APPLSPEN	command facility	Displays sessions for particular applications in a specific state	3-12
ASSIGN	command facility	Defines which operators get unsolicited and authorized messages and which operators get solicited messages	3-13
AT	command facility	Sets a timer that causes a command to be executed at the specified time of day	3-15
AUPD	command facility	Alters the alias translation tables	3-17
AUTOCOLL	session monitor	Controls the collection of response-time monitor (RTM) data	9-3
AUTOMSG	command facility	Activates the message automation function	3-20

Command	Component	Function	Page
AUTORECD	session monitor	Controls the collection of accounting and resource statistics data to the external log.	9-4
AUTOTASK	command facility	Starts the automated operator specified	3-22
AUTOTR	command facility	Sets the buffer trace on or off for cross-domain terminals	3-23
AUTOWRAP	command facility	Controls whether your terminal will be locked when screen is full of data or if and when screen will be automatically overlaid with new data.	3-24
BACK	session monitor hardware monitor 4700 support facility	Displays a previous page of a multipage display	9-5 6-6 6-54
BFRUSE	command facility	Displays information about VTAM buffer usage	3-26
BFSESS	command facility	Starts a full screen session with another subsystem	3-27
BGNSESS	command facility	Starts a session with another subsystem	3-28
BOSESS	command facility	Starts an operator control session with another subsystem	3-31
BOTTOM	session monitor hardware monitor	Displays the final page of a multiple-page display	9-6 6-7
BROWSE	command facility	Looks at the network log or at library members	3-32
CANCEL	command facility	Ends a command list (if the list is in PAUSE or WAIT) without running the rest of the commands in the list	3-36
CANCMD	command facility	Allows you to cancel any outstanding 3710 Network Controller command or 586X modem command except for CANCMD, DISPCMD, and MDMCNFG.	3-37
CCPDR	command facility	Sends dynamic reconfiguration data to a 3710 Network Controller	3-38
CCPLOADF	command facility	Signals that a load sequence has completed in CCP-generated CLISTS.	3-39
CCPLOADI	command facility	Signals that a load sequence has started in CCP-generated CLISTS.	3-40

Command	Component	Function	Page
CCPLOADT	command facility	In CCP-generated CLISTs, it sends load text information to a 3710 Network Controller	3-41
CDRMS	command facility	Displays cross-domain resource manager (CDRM) major nodes known in your domain	3-42
CDRSCS	command facility	Displays cross-domain resource (CDRSC) major nodes known in your domain	3-43
CLEAR	command facility	Clears the screen	3-44
CLOSE	command facility	Ends NetView	3-45
CLRSTATS	status monitor	Resets the node status analysis statistics to zero	12-3
CLSTRS	command facility	Displays the status of all type 1 and 2 physical units and their respective major nodes	3-47
COLLECT	session monitor	Uses the response-time monitor to gather response time data from 3174s	9-7
COMMAND	hardware monitor	Displays a list of all commands that you can use in hardware monitor	6-8
COMMAND	4700 support facility	Displays a list of all commands that you can use in the 4700 support facility	6-55
COPY	session monitor hardware monitor 4700 support facility	Prints a copy of the panel being displayed or sends a copy of the panel being displayed to the network log.	9-8 6-9 6-56
CTRL	hardware monitor	Solicits and displays controller link test data, hardware or microcode levels, or error data from a specific resource	6-10
CTRL (4700)	4700 support facility	Displays a summary of the data and status associated with a specified 3600 or 4700 controller and its resources	6-57
DATE	command facility	Displays the current date and time	3-48
DDOMAIN	hardware monitor	Displays the identification of the current domain in which the specified resource resides	6-11
DEFAULTS	command facility	Sets system-wide defaults for the logging and display of messages, and determines how the HOLD and BEEP actions are interpreted in the message automation table.	3-49
DELAY	command facility	Tells the system to wait for a specified time, and then, if one is specified, sends a command to the system	3-50

Command	Component	Function	Page
DELAY2	command facility	Issues a command and purges the timer	3-51
DFILTER	hardware monitor	Displays which recording or viewing filters are currently in effect	6-12
DIS	command facility	Displays the status of system resources	3-52
DIS	hardware monitor	Displays the results of modem or controller tests	6-13
DISABLE	session monitor	Stops the collection of session awareness data by the access method and session monitor	9-9
DISG	command facility	Displays resource status and connectivity information for LUs, PUs, lines, NCPs, and major nodes	3-54
DISKEEP	session monitor	Displays the number of PIUs kept per session	9-10
DISPCMD	command facility	Displays a list of the outstanding 3710 Network Controller commands	3-56
DISPCNFG	command facility	Displays a 3710 configuration	3-57
DISPFK	command facility	Displays the PF key settings for the component you are using	3-58
DISPLAY	4700 support facility	Displays the current 3600 and 4700 operational parameters associated with the specified controller	6-58
DRATIO	hardware monitor	Displays the current ratio established for the error to traffic alerting threshold for a specific resource	6-15
DRDS	command facility	Reconfigures an NCP with a specific dynamic reconfiguration data set or file	3-60
DROUTE	command facility	Displays the status of explicit routes and virtual routes in a domain	3-61
DSISAPDR	command facility	Changes the service adapter password for a 3710	3-63
DWRAP	hardware monitor	Displays the current wrap count	6-16
ENABLE	session monitor	Begins collection of session awareness data	9-11
END	session monitor	Stops the session monitor panel sequence and returns to the component from which session monitor was invoked	238
END	hardware monitor	Stops the hardware monitor panel sequence and returns to the component from which hardware monitor was invoked	6-17

Command	Component	Function	Page
END	4700 support facility	Stops the 4700 support facility panel sequence and returns to the component from which 4700 support facility was invoked.	6-60
ENDSESS	command facility	Ends terminal access facility sessions	3-64
ERST	command facility	Displays the meanings of the explicit route status	3-65
ESESS	command facility	Ends terminal access facility sessions	3-66
EVENTS	hardware monitor	Displays a reverse chronological list of the most recent events from a specified resource	6-18
EVERY	command facility	Schedules a command to be run repetitively at intervals	3-67
FIND	status monitor	Used under BROWSE to locate information	12-4
FORCE	session monitor	Causes session data to be recorded in the VSAM data base	9-13
FORWARD	session monitor hardware monitor	Displays a forward page of a multipage display	9-15 6-19
FORWARD	4700 support facility	Displays only the next page of a multipage listing	6-61
FTRACE	command facility	Starts, modifies, or stops VTAM traces	3-70
GO	command facility	Allows you to resume running a CLIST that is in PAUSE or WAIT status	3-73
HELP	command facility	Displays help information for NetView components and commands	3-74
HELP	hardware monitor	Provides directions for moving from panel to panel in a multiple page display or moving through the hierarchy of hardware monitor panels	6-20
HELP	4700 support facility	Provides directions for moving from panel to panel in a multiple page display or moving through the hierarchy of the 4700 support facility	6-62
HELPDESK	command facility	Provides information to help you determine what a user's problem may be	3-76
HEXDEC	command facility	Displays the decimal equivalent of a hexadecimal number	3-77
HOLD	command facility	PF or PA key to prevent the screen from unlocking until you unlock it	3-78

Command	Component	Function	Page
IMR	command facility	Starts or stops intensive mode recording for a link station or physical unit	3-79
INACT	command facility	Deactivates a VTAM resource	3-80
INACTF	command facility	Deactivates a VTAM resource with a forced deactivation	3-81
INDEX	command facility	Displays subjects discussed in the HELP facility	3-82
INPUT	command facility	Modifies the length of the command entry area of the regular panel	3-83
IOPD	command facility	Allows the operator to change the I/O problem determination time-out interval	3-84
KEEP	session monitor	Changes the amount of PIUs to be kept in virtual storage	9-16
LEFT	session monitor	Shifts the panel left over the Session Configuration Data display	9-17
LINEMAP	session monitor	Displays the Network Control Program (NCP) line port address associated with a station attached to an NCP within the same domain	9-18
LINES	command facility	Displays the status of lines and channel links in the domain	3-85
LINESTAT	command facility	Controls a specified 3710 line	3-86
LINKDATA	command facility	Displays link data from a service point	3-87
LINKPD	command facility	Does problem determination analysis on a given link or link segment	3-89
LINKTEST	command facility	Tests a given link or link segment	3-91
LIST	command facility	Gives information about your NetView session	3-93
LIST	session monitor	Displays a list of resources, domains, active ERs or active VRs, for which session data has been collected	9-19
LISTSESS	command facility	Displays the status of your sessions	3-96
LISTVAR	command facility	Displays the status of these variables: APPLID, DATE, HCOPY, LU, NCCFCNT, OPID, PARMCNT, PARMSTR, RETCODE, TASK, and TIME	3-97
LL2	command facility	Requests a link level 2 test for a non-switched SDLC link	3-98

Command	Component	Function	Page
LOGOFF	command facility	Ends the session between your terminal and the system	3-99
LOOP	4700 support facility	Displays the most recent status and error data for a loop	6-63
LPDA	command facility	Changes or queries the LPDA status of a line or station attached to a node.	3-100
LSESS	command facility	Displays the status of your terminal access facility sessions	3-102
MAINMENU	command facility	Displays the NetView menu panel	3-103
MAJNODES	command facility	Displays the status of all the active major nodes in the domain	3-104
MDMCNFG	command facility	Retrieves and updates the 586X configuration data	3-105
MDMCNTL	command facility	(1) changes line speed; (2) closes or opens a contact; (3) dials the station; (4) disconnects the station; (5) senses current on a sensor relay of the modem	3-107
MENU	session monitor	Displays the menu, which is the first panel in the session monitor panel sequence	9-21
MENU	hardware monitor	Displays the hardware monitor main menu panel	6-21
MENU	4700 support facility	Displays the 4700 support facility panel	6-64
MONIT	status monitor	(1) Removes nodes from the node reactivation exclusion list (VTAMLST); (2) adds nodes to the node reactivation exclusion list (VTAMLST); (3) disables the automatic node reactivation function; (4) enables the automatic node reactivation function	12-5
MONOFF	status monitor	Stops automatic reactivation of one or all resources	12-6
MONON	status monitor	Starts automatic reactivation of one or all resources	12-7
MOVE	command facility	Shifts activity from one NetView terminal to another	3-109
MRECENT	hardware monitor	Displays a reverse chronological list of the most recent events or statistics from the specified resource	6-22
MSG	command facility	Enables you to write and send a message to a command facility operator, operators, or to the network log	3-110
MVS	command facility	Gets control when a "MVS commandtext" is entered from a NetView terminal. The command processor strips the "MVS" off the command and sends the commandtext to MVS as a MVS operator command.	3-111

Command	Component	Function	Page
NCCF	session monitor hardware monitor status monitor	Enters the full screen mode of command facility	9-22 6-23 12-8
NCPDUMP	command facility	Initiates a dump of an active NCP	3-112
NCPSTOR	command facility	Displays the storage contents of a communications controller running an NCP	3-114
NETWORK	command facility	Displays all networks defined to an NCP	3-115
NEWS	command facility	Contains messages from your network control center	3-116
NLDM	session monitor	Enters the full screen mode of session monitor or processes a single session monitor command from a NetView component	9-23
NODE	command facility	Provides information about a particular major node or minor node and its subordinate resources	3-117
NOSTAT	command facility	Stops the recording of tuning statistics	3-118
NPDA	hardware monitor	Enters the full screen mode of hardware monitor or processes a single hardware monitor command from a NetView component	6-24
OVERRIDE	command facility	Sets message processing options that are used instead of the display options selected by the message automation table for a particular operator.	3-119
PARSE	status monitor	Allows you to see how status monitor parses a message	12-9
PATHS	command facility	Displays dial-out path information about a switched physical unit	3-120
PDFILTER	hardware monitor	Defines the viewing filter that you will be using during your hardware monitor session	6-25
PENDING	command facility	Displays information about nodes in the domain in a pending state	3-121
PFKDEF	command facility	Sets PF keys for an Operator Station Task (OST) for command facility and hardware monitor	3-122
PRINTLOG	command facility	Prints the network log or trace log	3-123
PRGATT	hardware monitor	Removes event or statistical data for the specified resource and all the resources that are attached to it and known to hardware monitor	6-26

Command	Component	Function	Page
PURGE	command facility	Enables you to purge a timer request scheduled by the AT or EVERY command	3-124
PURGE	hardware monitor	Removes event or statistical data for a specified resource or for all resources from the data base	6-27
PURGE	session monitor	Allows the network operator to delete selected data from the VSAM data base.	9-24
PURGEDB	hardware monitor	Purges hardware monitor data.	6-29
PURGEDB	session monitor	Purges session monitor data.	9-26
QHCL	command facility	Displays information about the hardcopy log, if one exists	3-126
QUERY PF	session monitor	Displays the current session monitor PF key settings	9-27
QUERY RANGE	session monitor	Displays the active time range from either the last SET RANGE command or the default time range	9-28
RCFB	command facility	Displays information describing the specified return code and feedback code	3-127
RECORD	session monitor	Writes accounting and resource statistics data or storage and CPU utilization data to the external log	9-29
RECYCLE	command facility	Deactivates, then activates a network node	3-128
REDIAL	command facility	Requests that VTAM search for an alternate path if a dial-out attempt is unsuccessful, or ends a session request without a search for an alternate path	3-129
REL	command facility	Releases a previously acquired NCP or releases a physical unit attached by a non-switched line to an NCP	3-130
RELOAD	session monitor	Dynamically reloads the RTM PCLASS and MAPSESS or the KCLASS and MAPSESS definition statements	9-30
REPEAT	status monitor	Reissues the last FIND command, while you are browsing the network log	12-10
REPLY	command facility	Responds to outstanding VTAM requests	3-132
REPORTS	hardware monitor	Controls the logging of report records	6-30
REQMS	hardware monitor	Requests SNA summary error counts from a physical unit and stores the data on the hardware monitor data base	6-31
RESET	command facility	To end the command or CLIST	3-133

Command	Component	Function	Page
RESUME	hardware monitor	Returns to the hardware monitor panel from which you issued a command that took you to another NetView component	6-32
RESUME	4700 support facility	Returns to the 4700 support facility display from which you issued another operation (for example, a command facility command)	6-65
RETRIEVE	command facility	To place the last command you issued in the command input area	3-135
RETURN	command facility	Takes you to the previous component or the last selection panel	3-136
RETURN	session monitor	Takes you back to a previous panel, or returns you to the menu	9-31
RETURN	hardware monitor	Presents the last panel that you viewed at the previous level in the panel hierarchy of hardware monitor	6-33
RETURN	4700 support facility	Displays the last display of the previous level in the panel hierarchy of the 4700 support facility panels that you viewed	6-66
RIGHT	session monitor	Shifts the panel right over the Session Configuration Data display	9-32
ROLL	All	Lets you go to a previous component and panel that you used in that component	3-137
ROUTE	command facility	Lets you send NetView and VTAM commands to other domains	3-138
RSESS	command facility	Returns the operator to a previously disconnected full-screen terminal access facility session	3-139
RTREND	session monitor	Causes the response time trend for the named LU to be displayed	9-33
RTRNSESS	command facility	Returns you to a previously disconnected full-screen session with any of the subsystems	3-140
RTSUM	session monitor	Displays the response time summary for named LU	9-35
RUNCMD	command facility	Routes commands to service points for execution by one of the service point applications	3-142
RUNDIAG	command facility	To perform online diagnostics in a 3710	3-143
SDOMAIN	session monitor hardware monitor	Defines the domain from which data is to be displayed	9-37 6-34

Command	Component	Function	Page
SENDSESS	command facility	To send a command to CICS/VS, IMS/VS or HCF	3-144
SENSE	session monitor	Displays the English interpretation of a specific SNA sense code	9-38
SESS	session monitor	Displays the session list for a specific resource or sessions between two specific resources	9-39
SET	command facility	Defines PA and PF keys for one session only	3-145
SET	4700 support facility	Allows you to adjust the 4700 support facility operational parameters associated with the specified controller	6-67
SET HEX	session monitor	Sets hexadecimal display mode on or off	9-40
SET PF	session monitor	Defines a PF key function.	9-41
SET RANGE	session monitor	Sets the default time range that is used for all session monitor commands that display data by time	9-42
SOLICIT	4700 support facility	Requests data and status from the Communications Network Management Controller Support in a 3600 or 4700 controller	6-69
SRATIO	hardware monitor	Enables or disables the creation of a performance event for a specified resource when an E/T threshold is exceeded. Changes the threshold value that generates an alert for a specified resource	6-35
SRFILTER	hardware monitor	Allows you to establish the conditions governing the recording of data in the hardware monitor data base and controls the forwarding of alert data to the network operator	6-37
STACK	command facility	To suspend a CLIST while it is in PAUSE or WAIT status so that commands can be entered	3-148
START	command facility	• a hardcopy log • a terminal in recovery status • a sesion between the entering operator and another domain • an optional task • a span (add it to an operator's span of control) • a resource within a span	3-149
STARTCNM	command facility	Starts NetView by component	3-151
STATIONS	command facility	Displays the status of all cross-subarea stations within each node or for a specific node	3-152

Command	Component	Function	Page
STATMON	status monitor	Invokes the STATMON full-screen node status displays	12-11
STATS	hardware monitor	Displays a list of the most recent statistics for the specified resource	6-41
STATUS	command facility	Displays information on VTAM status codes and modifiers	3-153
STOP	command facility	• a hardcopy log • a terminal in recovery status • a session between the entering operator and another domain • an optional task • a span (add it to an operator's span of control) • a resource within a span.	3-154
STOPCNM	command facility	Stops NetView by component	3-157
SVFILTER	hardware monitor	Allows you to control which records will be displayed at your terminal	6-42
SWITCH	command facility	Allows you to specify or control access to either the primary or the secondary network/trace log , or switch control of the DST tasks	3-159
SWLD	session monitor	Switches the primary and secondary files used to store data on VSAM	9-43
SWPD	hardware monitor	Switches the primary and secondary files associated with task BNJDSERV	6-44
SWRAP	hardware monitor	Establishes the number of event or statistical records to be retained for a specified resource or the total number of alert records to be retained on the hardware monitor data base	6-45
SYSMON	4700 support facility	Provides access to the System Monitor in the specified controller	6-70
TARA	4700 support facility	Enters the 4700 support facility	6-71
TCTRL	4700 support facility	Displays a summary of the data and status associated with a specified 3600 or 4700 controller and its resources	6-72
TERMS	command facility	Displays the status of all device-type logical units (terminals) in active major nodes	3-160
TERR	4700 support facility	Displays error data for a 3600 or 4700 loop	6-73
TEST	hardware monitor	Causes a test to be conducted of the modems and communication facilities to a specified resource	6-47

Command	Component	Function	Page
THRESH	command facility	Displays or changes the current threshold value for stations attached to 3710s and NCPs	3-161
TNSTAT	command facility	To change, restart, or stop the recording of tuning statistics	3-163
TOP	session monitor hardware monitor 4700 support facility	Displays the first page of a multipage display	9-44 6-49 6-74
TOTAL	hardware monitor	Displays a count of event or statistical records for a specified resource or resource type	6-50
TRACE	command facility	Initiates a sequence trace that records, either in virtual storage or on DSITRACE, a sequence of NetView processing steps	3-164
TRACE	session monitor	Starts or stops a session trace or displays resources that are being traced	9-45
TSOUSER (MVS Only)	command facility	Displays the status of a TSO user id	3-166
TSTAT	4700 support facility	Displays the most recent status data for a 3600 or 4700 loop	6-75
TTERR	4700 support facility	Displays the current threshold value for the 3600 or 4700 Loop Basic Counter 2 and extended counter threshold values	6-76
TTRESP	4700 support facility	Displays 3600 and 4700 response time threshold values	6-77
TUTOR	command facility	Displays the panels that you have entered into the DSICLD library	3-167
TWERR	4700 support facility	Displays the 3600 and 4700 error wrap count	6-78
TWKSTA	4700 support facility	Displays the 3600 and 4700 most recent workstation response time data	6-79
TWRESP	4700 support facility	Displays 3600 and 4700 response time wrap values	6-80
TWSTAT	4700 support facility	Displays 3600 and 4700 current status wrap count	6-81
UNSTACK	command facility	Causes a CLIST suspended by STACK to continue processing in the WAIT or PAUSE state	3-168

Command	Component	Function	Page
VRST	command facility	Displays the meaning of the virtual route status	3-170
WHO	command facility	Lists the status of all operator terminals, command facility-to-command facility sessions requested by other NetViews, and information about your session	3-171
WKSTA	4700 support facility	Displays the most recent workstation response time data	6-82
WRAP	command facility	Changes the setting of AUTOWRAP	3-172
?	hardware monitor	Displays the definition of any term or phrase used as a heading on a hardware monitor display	6-51

Appendix B. List of Panel Fields

This appendix lists the fields that appear on panels for the following components:

- command facility
- session monitor
- hardware monitor

  (Hardware monitor has its own help that you can access without going through the NetView help desk.)
- status monitor
- 4700 support facility

The fields are listed alphabetically with a brief description of each.

Term	Component	Definition
ACCEPTABLE LIMITS	hardware monitor	The acceptable limits of the impairments with which the modem will give satisfactory operation. Except for impulse hits whose acceptable limit is constant, these limits may vary from one modem to another. If the data being displayed exceeds the acceptable limits, then the data is colored red.
ACT	session monitor	The actual response time performance of the terminal during the collection period represented in the display. On the Session Parameters panels, it is the type of activation, either COLD or ERP.
ACTION	hardware monitor	Indicates whether the data described by this detail line will be passed or blocked. The recommended action code associated with the event.
ACTIONS	hardware monitor	The recommended action to isolate further or to correct the condition that caused the problem.
ACTIVE	session monitor	The time the conversation was activated.
ACTIVE	status monitor	Nodes having counts in this column monitor are in one of the VTAM active states (ACT), but excluding ACT/U.
ACTIVE COUNT	status monitor	The number of times the status monitor has recorded a status change to ACTIVE since statistics were last initialized.
ACTIVE%	status monitor	The percentage of time the node had ACTIVE status since the status statistics were last initialized.
ACTIVE SESSIONS	session monitor	Number of sessions using the displayed route.
ADAPTADR	hardware monitor	Specifies the 12 hexadecimal digit adapter address

Term	Component	Definition
ADDRESS	hardware monitor	The channel address of the channel adapter on the communication controller.
ADJACENT NETID	session monitor	The identifier of the next adjacent network in the direction of the primary session partner (left) or secondary session partner (right). By entering left or right you can view the session configuration of the adjacent network.
ALERT DESCRIPTION: PROBABLE CAUSE	hardware monitor	Briefly describes why the alert was generated and identifies the most likely failing components. An asterisk (*) in the leftmost position of the description indicates that the condition that caused the alert is being repeated at a rate of at least five per minute. If the field is enclosed in parentheses, the input record was not in a format predefined to HARDWARE MONITOR and therefore the text is based on a general interpretation of the record contents. A plus sign (+) in the rightmost column indicates that multiple probable causes may be viewed on the event detail display.
AMPLITUDE	hardware monitor	A value of 0 or 1 means modem is responding properly.
AMPLITUDE HIT	hardware monitor	Occurs when, in a 256-baud block of data, at least one baud is received so distorted that the modem cannot reliably correct it. Amplitude hits is distinguished from impulse hits on the display by an '-A' following the number in the impulse hits entry.
ANTISTREAMING	command facility	Applies to multipoint tributary modems. In all other cases the value of the antistreaming option has no effect on the modem's behavior. It prevents any tributary modem or a multipoint network from transmitting for more than 40 seconds in any period of time. The possible settings for antistreaming are: Y - Yes N - No.
AT	session monitor	The date and time the TRACE was set or reset.
ATTACHED RESOURCES EV	hardware monitor	The total number of events present on the hardware monitor data base associated with all the resources attached (those that have a connectivity relationship, direct or indirect) to the resource named.
AUTO ANSWER	command facility	A modem automatically answers a call if it has a yes option. The possible settings are: Y - Yes N - No.

Term	Component	Definition
AVG	4700 support facility	The average response time in seconds recorded by this timer during the solicitation period. This value is compared to the user-specified threshold (see THRESH) to determine if the user-specified threshold has been exceeded (see EXCEED).
AVG RESP TIME	session monitor	The statistical average of the response times of all the transactions within the displayed period of time.
BLOCKID	hardware monitor	A code used to identify the hardware or software product that sent the event to the hardware monitor.
BY	session monitor	The id of the network operator who set or reset the TRACE.
BYTE 2	session monitor	Byte 2 of the sense code associated with session termination (hexadecimal).
BYTE 3	session monitor	Byte 3 of the sense code associated with session termination (hexadecimal).
CALL PROGRESS SIGNAL	hardware monitor	This appears only for X.21 errors reported by VTAM. It indicates the progress made towards establishing the connection to a called number, or the circumstances that have prevented the connection being established.
CARRIER DETECT LOST (CDLST)	hardware monitor	See the RLSD definition.
CATEGORY	session monitor	The category byte (byte 0) of the sense code that is associated with session termination (hexadecimal).
CDRM	session monitor	The name of the SCCP associated with the named domain.
CLEAR TO SEND DELAY	hardware monitor	This term is also known as READY FOR SEND DELAY. The time period expressed as SHORT or LONG between the DTE's raising the Request To Send (RTS) and the modem's responding with Clear To Send (CTS) on the EIA interface. The options (SHORT or LONG) are selected with a switch on the rear panel of the modem. See the appropriate modem User's Guide for exact values of SHORT and LONG.
CODE	hardware monitor	The 5 character hardware monitor code for an alert or an event description.
COMMAND	session monitor	Screen control commands. The specific session monitor commands that are available to you.
COMMAND DESCRIPTION DISPLAYS	hardware monitor	Provides details of the instruction parameters and examples on how to use the command.
COMMAND RETRIED	hardware monitor	Indicates that the local modem has retried the command to the remote modem because no response or an invalid response was received upon the first attempt. Range for local modem is YES or NO; range for remote modem is always N/A.

Term	Component	Definition
COMMANDS	hardware monitor	A list of each hardware monitor data command and a brief explanation of each. You may enter a selection number from the Command List display in order to view the required command format.
COMMUNICATION	hardware monitor	The count of the communications check errors recorded for the identified event.
COMPLEMENTARY RFS DELAY	command facility	Ready for sending delay, applicable on multipoint tributary modems. Usually set to short, but may be set to long if a telecommunication line problem is detected when operating with a particular modem. A delay of between 0 to 250 ms can be specified in 10 ms increments.
CONFIGURATION	command facility	This refers to the type of network you wish to configure. The possible settings for configuration are: M - Multipoint which means a link or circuit interconnecting several modems P - Point to point which means a link that connects a single modem to a single modem. You can assign different roles to your modem. In a point-to-point configuration, one or both of the modems is assigned the role of primary modem. A primary modem controls the speed and testing of the remote modem and link. Both modems may be nominated primary modems where communication is between sites of equal importance, and speed control and testing may; be initiated from either end. In a multipoint configuration one modem is assigned the role of the primary modem and several other modems are assigned the role of secondary or tributary modems.
CONFIGURATION	hardware monitor	This field identifies the configuration of a modem rear panel switch. One of two possible values is displayed: PRIMARY (CONTROL) or SECONDARY (TRIBUTARY). Modems on a line are set to allow one of them to control the speed of the others 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 modems being controlled are referred to as the SECONDARY or TRIBUTARY modems. Normally the modem at the central site is set to PRIMARY (CONTROL).
CONFIGURATION DATA	hardware monitor	A pictorial representation of the configuration as reported in the record received by the hardware monitor. Four lines are used to present the configuration data. The configuration data starts on the fourth line of each panel display except the recommended action display or the event detail menu where it starts on the third line.

Term	Component	Definition
CONTROL ID	session monitor	A symbolic name that represents installation dependent information about the SSCP issuing the ACTCDRM. If there is no information, the field does not appear.
CONTROL VECTORS	session monitor	Defined in *SNA Reference Summary*.
COSNAME	session monitor	The name of the class of service associated with the session. The notation N/A may appear instead of the class of service name if any NLDMs are in the configuration.
COUNT	session monitor	The PIU KEEP count value for the identified session.
COUNT	4700 support facility	The number of response time measurements recorded by this timer during the solicitation period.
COUNTER ID	4700 support facility	Identifies a loop error counter. The first counter listed for each date or time is Loop Basic Counter 2. The format of the identifier is LPnn, where nn is the loop address (01-08).
CRW	hardware monitor	The hexacecimal presentation of the channel report word.
CRWCD	hardware monitor	The hexadecimal code that indicates the origin of the channel report word generation.
CRWSQNO	hardware monitor	The hexadecimal code for the channel report word sequence number.
CS	hardware monitor	Contains the channel status (CS) byte (bytes) from the Channel Status Word (CSW). It is expressed as two hexadecimal characters.
CTL BLK	session monitor	The name of an NCP control block. To the right of the value are hex control block data. See *NCP and EP Reference Summary and Data Areas* for details of the NCP control blocks.
CTRLNAME	4700 support facility	The physical unit name of a controller.
CUM%	session monitor	The cumulative percentage of transactions in a given time range and all those to the left of that time range. The sum over all the time ranges is always 100 percent.
CURRENT/ TRANSITION STATE OF THE EIA LEADS	hardware monitor	Current state is not reported for RD and RLSD. Indicator will be shown as X.
CURRENT TRANSMIT SPEED	hardware monitor	The speed in kilobits per second (KBPS) that the modem is currently transmitting. If the displayed modem speed is '?KBPS', then an invalid speed indication was received from the modem.

Term	Component	Definition
CURRENT VALUE	session monitor	The text invoked by the PF key number.
CUSTOMER CONFIG DATA LOST	hardware monitor	Indicates whether there has been some alteration of the modem's non-volatile memory where its non-vital operational parameters are stored. Because of this alteration, the modem is operational with default values for its non-vital operational parameters. The loss of non-vital operational parameters does not cause the modem to indicate that the base modem is in error, to send a failure tone, or to leave data state. Or, indicates that the modem has not been configured at installation time. Possible values are YES, DEFAULTS USED or NO.
CUSTOMER- SPECIFIED IDENTIFIER	hardware monitor	This allows differentiation among system definition options, configurations, or capabilities.
CUSTOMER INFORMA-TION	command facility	Up to 10 alpha numeric characters may be entered.
CUSTOMIZATION DATE/TIME	hardware monitor	The date and time when a set of executable instructions was customized to a user's environment.
CUSTOMIZATION IDENTI-FIER	hardware monitor	The identification of a set of executable instructions, custom-ized to a user's environment.
DAILY E/T	hardware monitor	A ratio of the temporary error count to the traffic count expressed as a percentage. It is calculated only from the data received on the date shown under the TO heading. This value applies to channel and link-attached communication control units and to channel-attached communication devices.
DATA RATE	hardware monitor	Contains a FULL or BKUP (backup) designation of the data rate at which the modem is operating.
DATE/TIME	hardware monitor	The date and time the alert was recorded in the hardware monitor data base.
DB	hardware monitor	Decibel.
DBM	hardware monitor	Decibel based on one milliwatt.
DEFAULT ACTION	hardware monitor	Shows the hardware monitor default that becomes effective when the filter elements fail to select a data record.
DEFAULT SPEED	command facility	The default speed is the starting speed of the modem at power on. The permanent storage of the mdoem holds a default speed record. It is used by all modems which have the speed control mode option. You can change the default speed to be backup speed, if you plan to operate at backup speed for an extended period of time. The possible settings are: F - Full speed B - Backup speed.

Term	Component	Definition
DESCRIPTION	session monitor	A high-level description of the command.
DESTINATION	session monitor	The name of the destination subarea PU in which the displayed virtual route terminates.
DESTINATION ADDRESS	session monitor	The address of the subarea PU in which the displayed virtual route terminates.
DESTINATION NAME	session monitor	The name of the destination subarea PU in which the displayed virtual route terminates.
DIALING	command facility	Selection of the type of dialing to be performed by the coupler, either pulse or tone (multifrequency). The type of dialing for the second line in a four wire coupler is the same as for the first one. The possible settings are: T - Tone or multifrequency P - Pulse.
DIR	session monitor	The direction of PIU flow (primary to secondary or secondary to primary).
DISPLAY-ID	hardware monitor	The display identification that uniquely identifies the display to the user.
DLC PROTOCOL TYPE	hardware monitor	The data link control protocol type: synchronous (SDLC), binary synchronous (BSC), or synchronous start-stop (S/S).
DOMAIN	session monitor	The command facility domain from which the panel data was retrieved.
DOMAIN	hardware monitor	The name of the domain associated with the resource.
DOMAIN	4700 support facility	The name of the domain that the 3600 feature is monitoring.
DTE INTERFACE CONNECTION	hardware monitor	Indicates whether the modem's DTE interface is connected to a DTE or another modem.
DTR DROP DETECTED	hardware monitor	The data terminal ready values are shown as YES or NO. YES is displayed if DTR has dropped at least once since the last LPDA status report. If DTR DROPis not detected and a fanout configuration exists, N/A will be displayed. 'NO' is the normal value.
DUPLEX SETTING	hardware monitor	This tells whether the link is half duplex or full duplex.

Term	Component	Definition
EIA LEAD INDICATOR DEFINITIONS	hardware monitor	The current and transition states of EIA leads are shown on the Remote DTE Interface Status Display panel by the characters N (off), X (not reported), and Y (on). This is applicable only to LPDA-1. The transition states are 'Y' under these conditions: • CTS - Clear to Send was on at least once since the last DTE test or is still on. • DTE POWER LOSS - Power was off at least once since the last DTE test or is still off. • DTR - Data Terminal Ready was off at least once since the last DTE test or is still off. • RD - Data was received since the last DTE test. • RSLD - Receive Line Signal Detect was off at least once since the last DTE test or is still off. • RTS - Request to Send was on at least once since the last DTE test or is still on. • SPEED - Changed at least once since the last DTE TEST. • TD - Data was transmitted since the last DTE test.
EIA LEAD FANOUT CONSIDERATIONS	hardware monitor	The EIA indicators may not fully represent conditions of the interface when the fanout feature is installed on the remote device. Actual problem determination may have to be done by powering up one terminal at a time and observing the EIA lead states.
ELAPSED TIME	status monitor	The elapsed time since the status statistics were last initialized.
ELEMENT	session monitor	The element address, (hhhh) on the panel, associated with the gateway resource.
EMULATED PRODUCT MACHINE TYPE	hardware monitor	The type of hardware product being emulated, if emulation is being done.
EMULATED PRODUCT MODEL NUMBER	hardware monitor	The model number of the hardware product being emulated, if emulation is being done.
END TIME	session monitor	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, as "***BINDF***" for sessions that failed to set up because of BIND failures, and as "***INITF***" for sessions that failed to set up before the BIND flow. The pseudo session for discarded PIUS is considered to be an active session.

Term	Component	Definition
ER	session monitor	The number of the explicit route used by the session. The notation NA may appear instead of the ER number. This means the network of the operator making the request is not authorized to view the specific configuration data of the network displayed, or the numbers were not supplied by VTAM in session awareness data.
ER INOP	session monitor	This field contains INOP if ER-INOP has been received. If no ER-INOP has been received, this field is left blank.
ERROR BYTES	4700 support facility	For an extended statistical counter, the number of bytes in error that have been received from input devices during the indicated solicitation period.
ERROR DESCRIPTION	hardware monitor	This presents a description of the condition that caused the event to be generated.
ERRORS	hardware monitor	Error types can be as follows: • COMMUNICATION - The count of the communication check errors. When this value is 0, display HARDWARE MONITOR-43P (shown in upper left corner of your screen) appears; however, when a communication check error count is at least one, the SNA Event Summary display appears. • PRODUCT - The count of the product check errors. Product check errors are generally due to internal hardware errors. • SNA NEG-RESPONSE - Counts the number of times the identified unit originated a SNA negative response.
ERRS	hardware monitor	Count of communications check errors of the type identified. N/A is displayed when the counter is not supported by the controller.
E/T CALC or ERROR/TRAFFIC CALC	hardware monitor	A ratio (shown as a percentage) of temporary errors to traffic, for the statistical record.
E/T SET or ERROR/TRAFFIC SET	hardware monitor	The threshold value used by the hardware monitor to determine if the E/T RATIO CALC value indicated a performance problem. This threshold value is established by: • The SRATIO command • Initialization parameters • Default (at 3.0% for network controllers or 1.0% for channel attached communication control units and devices).
E/T	hardware monitor	A ratio of temporary errors to total traffic calculated by the hardware monitor and shown as a percentage.

Term	Component	Definition
ETYP or EVENT TYPE	hardware monitor	This event type code refers to the type of data associated with the alert or event found in the Most Recent Events displays as follows: • AVAL - Availability. A network component that was previously unavailable when its service was required is now available • CUST - Customer application. A program that does not have an IBM order number generated the alert or event. • DLRC- Delayed-recovered. The sender is reporting recovery from a condition that occurred earlier. • ENV - Environment. A physical environmental problem has occurred. • HELD - Alert condition was detected earlier, but the alert was not sent at that time because there was no session available to send it on. • IMPD - A loss of availability to the end user is impending but has not yet happened. • IMR - Intensive mode recording. Records resulting from the user invoking intensive mode recording. When invoked, each time the NCP goes through an error recovery, an IMR record is sent to hardware monitor. • INST Installation. A system definition or incompatibility problem between components has been reported. • INTV - Intervention required. Intervention of a human operator is required. • NTFY - Notification. An important change of component or network status requiring operator notification has occurred. • PAFF - Permanent-affected. A resource has been lost because of an error in another resource. • PERF - Performance. A recognized measurement of performance has exceeded a predetermined threshold. • PERM - Permanent error. An error has occurred that is not recovered by the detecting component without external intervention. • PROC - Operation or procedure. This type indicates the inability to perform a requested function because of an operational or procedural error. • SCUR - Security. This type is used to report system-detected incidents that indicate exposure to security problems.

Term	Component	Definition
ETYP or EVENT TYPE (cont.)	hardware monitor	• SNA -SNA summary. A record that contains SNA summary error counters. It is normally the result of an hardware monitor solicitation. • TEMP - Temporary error. An error that is recovered, yet it is recurring at a rate that may affect operation. • UNKN - It is impossible to assess the severity of the alert condition. • USER - End user generated. A record is initiated by a terminal operator.
EVENT DESCRIPTION:PROBABLE CAUSE	hardware monitor	This briefly describes why the alert was generated in an event. It also identifies the most likely failing components. An asterisk (*) in the left-most position of the description indicates that the condition that caused the event is being repeated at a rate of at least five per minute. If the field is enclosed in parentheses the input record was not in a format predefined to the hardware monitor and therefore the text is based on a general interpretation of the record contents. A plus sign (+) in the rightmost column indicates multiple probable causes may be viewed on the event detail display.
EXAMPLES	session monitor	These are examples of commands from the Help series panels.
EXCEED	4700 support facility	Indicates whether the user-defined minimum threshold was exceeded. YES indicates that the threshold was exceeded and an alert was generated. A blank field indicates that no threshold was exceeded.
EXTERNAL CLOCK LOST	hardware monitor	Indicates whether external clock option is active in modem configuration and no clock is provided by DTE. Possible values are N/A for the local modem, YES or NO for remote modem.
FAILURE CAUSED	hardware monitor	A list of possible causes for the conditions which are the result of failures in the hardware, software, environment, or a combination of the three.
FAILURE TONE, AGE	hardware monitor	Tells whether a failure tone was detected and, if so, the age when the last failure tone was detected. Possible values for FAILURE TONE are YES and NO. The range for AGE is from 1 second to 2 minutes, or is left blank.
FAULT DOMAIN	hardware monitor	The pair of LAN stations (for token-ring LANS) that make up a fault domain (two LAN stations and the cabling between them).
FEATURE(S) IN ERROR	hardware monitor	Contains a list of modem features in error. Possibilities are NONE, FAN OUT, and COUPLER.
FEATURES INSTALLED	hardware monitor	This is the list of features installed, such as TAC or SNBU. If no features are identified, "NONE" will appear.

Term	Component	Definition
FID	session monitor	Format Identifier; it may be 0, 1, or 4.
FILTER TYPE	hardware monitor	Identifies the specific filter being displayed. • AL RECORDING - Alert Recording • EV/ST RECORDING - Event/Statistical Recording • NCCF AUTH OPER - the command facility Authorized Operator
FM PROFILE	session monitor	Function Management Profile; may be 0, 2 through 7, 17, or 18. For the Session Parameters panel, it may be 0, 2 through 7, or 17 through 19.
FM USAGE/PLU	session monitor	Defined in *SNA Reference Summary*.
FM USAGE/SLU	session monitor	Defined in *SNA Reference Summary*.
FORMAT	hardware monitor	A description of the information common to all displays.
FREQUENCY SHIFT	hardware monitor	The difference between the frequency of a transmitted signal and the frequency of the same signal as seen by the modem at the other end of the line. The field can contain N/A or N/AV.
FROM	hardware monitor	The date and time associated with the oldest event or statistical record (as appropriate to the display) received since the data base was initialized or since the last purge for this resource.
FROM, TO	session monitor	The starting and ending dates and times. If the starting and ending dates are the same, only the starting date is displayed.
GATEWAY NAU	session monitor	This designates a gateway resource representation for the primary or secondary session partner residing in another network.
GENERAL	hardware monitor	The general cause code indicating the general classification and cause of the condition (event) that was not expected.
GLOBAL TRACE	session monitor	The current setting of the TRACE ALL function in the Display Trace panel. The value is ON or OFF.
GLOSSARY	hardware monitor	A description of the contents of the fields presented on the current hardware monitor display panel.
HEXADECIMAL DISPLAY OF DATA RECORD	hardware monitor	The contents of the data record displayed in hexadecimal form.
HOST: host-name	status monitor	It is the host on which the status monitor is running. The host-name is constructed from the host subarea number and appears on every display.

Term	Component	Definition
IBM PLANT OF MANUFACTURE	hardware monitor	The plant of manufacture, or 00 if the plant of manufacture is not required to uniquely identify the product instance identifier.
ID	hardware monitor	Can be one of the following: • A unique physical unit identification of the SNA controller expressed is eight hexadecimal characters. The first three characters are the machine type designator, the last five are device dependent. This is followed by the IBM machine type designator (within parentheses) when the designator can be interpreted. • The hardware monitor-designed product code in the first 12 bits of the identifier, which is used internally to identify hardware and software products. • The serial number (VOLSER) of the volume on the I/O device at the time of the event. • The serial number of the printer. • The IBM machine type designator.
IMPULSE HIT	hardware monitor	The number of impulses occurring within a 100-msec. window 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. N/A FOR PROBE when a 3867 line probe is installed.
INACT	status monitor	Inactive node counts are in this column and reflect those nodes that have been deactivated by an operator command or have been deactivated by VTAM automatically.
INACT COUNT	status monitor	The number of times the status monitor has recorded a status change to INACT since the analysis statistics were last initialized.
INACT%	status monitor	This column contains the percentage of time the node has been in the INACT state since the status statistics were last initialized.
INN	session monitor	A subarea (intermediate network node) in the path of the explicit route.
INSTALL CAUSED	hardware monitor	A list of conditions for the problem that are the result of activities surrounding the installation of new or updated hardware or software.
INSTRUCTION ADDRESS	hardware monitor	The 37XX address of the exception instruction recorded in the lagging address register (LAR).

Term	Component	Definition
INTERVAL	4700 support facility	The current timing interval (expressed in seconds) used by the communication network management controller support (CNM/CS) to check for changes in loop status.
ISTTSXMM	session monitor	The CSECT name of the VTAM module that determined the PIU should be discarded (mm = module identifier).
JOBID	hardware monitor	The name of the job (identified by the JOB JCL statement) that was being executed at the time of the event.
KBPS	hardware monitor	Kilobits (1000 bits) per second.
KEEP TYPE	session monitor	The type of KEEP COUNT being displayed on the panel. The type can be PIUS.
KY	session monitor	The PF key number (01-24).
LAN	hardware monitor	Local area network.
LAST TRANS TIME	session monitor	The response time of the last transaction that occurred during the displayed period of time.
LEASED OR SWITCHED SETTING	hardware monitor	Tells whether the link is leased or switched.
LEAST RECEIVE LEVEL	hardware monitor	The value of the last received dBm level measurement during the 15 minutes before the command was executed or since the last modem reinitialization.
LINE ANALYSIS (LA)	hardware monitor	Test in which the modems respond with the analog parameters of the line.
LINE QUALITY	hardware monitor	A modem-calculated running average ranging from 0 to 14 for LPDA-1 and from 0 to 14 for LPDA-2 that shows the quality of the signal received by the modem. A value in the range of 0 to 4 is considered GOOD. The range of 5 to 9 is considered indeterminate, and the range of 10 to 15 is considered BAD. This field should contain 'N/AV' if the quality could not be measured.
LINE TYPE, MODE	hardware monitor	This indicates the type of line as 2 wire leased or 4 wire leased. Note that an LDM line is always leased.
LINK CONFIGURATION	hardware monitor	The modem and link configuration of the link.
LINK CONFIGURATION TYPE	hardware monitor	Range is SWITCHED PRIME or LEASED, POINT TO POINT, or MULTIPOINT.

Term	Component	Definition
LINK OWNERS	session monitor	Can be one of the following: • SSCP - The names of SSCPS that own links in the selected transmission group. A list of such SSCPS is provided for both SUBAREA1 and SUBAREA2. • TGN - The number of the selected transmission group.
LINK SEGMENT LEVEL	hardware monitor	Indicates whether the command was sent to the primary link segment or to a tailed link segment of the line. If this field contains 'FF', then the local modem configuration either has not been initialized or has been altered such that its address has been set to the default value of X'FF'.
LINK STATION TYPE	hardware monitor	Tells the type of link station: PU TYPE 1 (Terminal Node), PU TYPE 2 (Cluster Controller), PU TYPE 4 (Communication Controller), or NON-SNA (BSC DEVICE). For SNA devices, it also tells whether the link station is primary or secondary.
LIST TYPE	session monitor	The status of the list requested and the type of list requested. The list status can be ACTIVE, HISTORY, or ALL. If no status is specified the default if ACTIVE. The list type can be LU, SLU, PLU, PU, or SSCP. If no LIST TYPE is specified the default is LU.
LOCAL LOOP BACK WRAP	command facility	If the test control lead is active, the modem loops back data to the DTE for checking. The possible settings are: Y - Yes N - No.
LOCAL MODEM	hardware monitor	The local modem machine type. IBM MODEM is displayed if the test results indicate not executed, no response, or bad response. The modem that receives LPDA-2 commands from its DTE interface not its line interface.
LOCAL NETID	session monitor	The name of the network whose session configuration data is being displayed.

Term	Component	Definition
LOCAL/REMOTE MODEM DATA	hardware monitor	Each contains the following pieces of information about the local and remote modems on the line (LPDA-2): • FREQUENCY SHIFT- The difference between the frequency of a transmitted signal and the frequency of the same signal as seen by the modem at the other end of the line. Measured in HZ (Hertz); may also contain N/A (not applicable) or N/AV (not available). • IMPULSE HITS- Contains the number of impulse hits measured during the last 15 minutes, or N/A (not applicable), to this this product or to this configuration. • LINE QUALITY - Contains the line quality expressed as a quadratic error (for example, frequency distortion or phase jitter) for the local or remote modem. Numeric values 0 to 4 are qualified with the word GOOD, 5 to 9 are not qualified, 10 to 15 are qualified with the word BAD N/AV indicates not available. • PHASE JITTER - The phase modulation, expressed in degrees peak-to-peak (DEG PP), imposed by the channel to a 1004-HZ tone; may also be N/A (not applicable) or N/AV (not available). • RCV LEVEL - Contains the value of the receive DBM level measurement. Values range from -45 to 3, or N/A (not applicable), or N/AV (not available). • RCV LEVEL, LEAST - RCV LEVEL contains the value of the receive level measurement in decibels based on 1 milliwatt (DBM), N/A (not applicable), or N/AV (not available). LEAST contains the value of the least receive level measurement during the last 15 minutes in (DBM),N/A (not applicable), or N/AV (not available). • RE INT - Contains a YES or NO indication as the reinitialization of the local or remote modem. • RLSD LOSSES - Contains the number of line drop-outs during the last 15 minutes, or N/A (not applicable) to this product or to this configuration. • ROUND TRIP DELAY - The difference between the time a command is sent and the time an acknowledgement to that command is received, as measured in milliseconds at the local modem; or N/AV when not available. • SIGNAL TO NOISE RATIO - Contains the value of the signal to noise ratio in decibel (DB), N/A (not applicable), or N/AV (not available). • SPEED, RMT MODEM ADDRESS - SPEED contains the current transmit speed between local and remote modems. The valid speeds are 0.6, 1.2, 2.4, 4.8, 7.2, 9.6, 12.0, 14.4, 16.8, 19.2, 56.0, and 64.0 kbps. This field also displays the speed rate which can be FULL or BKUP (backup).

Term	Component	Definition
LOCAL/REMOTE MODEM DATA (cont.)	hardware monitor	• TRANSMIT LEVEL - Contains the value of the transmit level measurement in decibel based on 1 milliwatt (DBM), N/A (not applicable), or N/AV (not available). • TYPE-MODEL, CMD RETRIED - TYPE contains the four-character modem type. MODEL contains the 2-character modem model type. CMD RETRIED contains a YES/NO to indicate whether the local modem has retried the command to the remote modem because no response or an invalid response was received upon the first attempt; this field is always N/A (not applicable) to the remote modem. RMT MODEM ADDRESS contains the address of the remote modem which is the target of the command; for the local modem this field is always N/A (not applicable). • 2ND HARMONIC DISTORTION - The measurement, expressed in dB (decibels), of the non-linear distortion characteristics of the channel; may also be N/A (not applicable) or N/AV (not available). • 3RD HARMONIC DISTORTION - The measurement, expressed in dB (decibels), of the non-linear distortion characteristics of the channel; may also be N/A (not applicable) or N/AV (not available).
LOCAL STATION DLC ADDRESS	hardware monitor	The DLC address of the local physical link station.
LOCAL STATION LAN ADDRESS	hardware monitor	The LAN address of the local physical link station.
LOCAL STATION SNA NAME	hardware monitor	The SNA name of the local physical link station.
LOGMODE	session monitor	The LOGON mode name associated with the session.
LOOPNAME	4700 support facility	The loop name (LPnn) of the selected loop.
LOOP STATS	4700 support facility	loop status as follows: • BAS2 - The number of loop errors (Loop Basic Counter 2) that occurred during the last solicitation period. • %ERR - For an extended statistical counter, the percentage of bytes in error sent during the last solicitation period. • STAT - Indicates the current operational status of each attached loop (OPT = operative, INOP = inoperative).

Term	Component	Definition
LOST RLSD	hardware monitor	Receive Line Signal Detect. A YES or NO value indicating 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, the N/A is displayed for the local modem.
LPDA MICROCODE LEVEL	hardware monitor	A number (0-15) which identifies the link problem determination aid microcode level installed in the modem.
LUNAME	session monitor	The LU name of the terminal for which the response time is displayed.
LVL	session monitor	The control block level.
MACHINE MODEL NUMBER	hardware monitor	The model number of the machine.
MACHINE TYPE	hardware monitor	A four-digit descriptor of the machine type.
MAX	4700 support facility	The maximum response time in seconds recorded by this timer during the solicitation period.
MDMCNFG	command facility	The command that retrieves and updates the 586X modem configuration data.
MESSAGE	hardware monitor	The line used by hardware monitor to provide the user with error, information, or data messages.
MICROCODE LEVEL	hardware monitor	A decimal number which identifies the microcode level installed in the LDM.
MM/DD HH:MM	4700 support facility	The date and time that the immediately preceding Communication Network Management (CNM) data was recorded.
MODEL	hardware monitor	A two character modem model. If 'C' is displayed, indicates that the modem is in an operating mode and at a speed that is compatible with S865/S868-2 modems.
MODEM AND LINE STATUS	hardware monitor	Detailed modem information for link segment 1 or 2, as indicated.
MODEM SENSE	hardware monitor	When this data field is displayed, then a modem execution exception has occurred during the processing of the command. The modem sense code is displayed, and a description of the exception is stated on the message line.
MODEM REINT	hardware monitor	The modem reinitialization indicator is set on when the modem is powered on, when it is reset on a hard or soft error, or for 386X modems, by a change to a modem setup switch.

Term	Component	Definition
MONIT	status monitor	This column contains the number of nodes being monitored for automatic reactivation at the present time. These nodes are currently inactive but are not included in the INACT column.
MR	hardware monitor	An indicator of Y signifies that most recent statistical data is present for the resource associated with the selection number. If most recent statistical data is not available, the field is left blank.
MSEC	hardware monitor	Milliseconds.
N	session monitor	N on the Session Trace panel indicates a note. In this column, there may be a blank, meaning the PIU is complete, a D means the PIU is discarded, or a T means the PIU has been truncated.
N/A	hardware monitor	Not applicable.
N/AV	hardware monitor	Not available.
NAME	session monitor	The network names for which the session monitor has data that corresponds to each display panel option in the session monitor. For example, in panel NLDM.TG, it is the name of the subarea as known by the indicated SSCP.
NAME	4700 support facility	Identifies the resource by symbolic name (physical unit name, LPnn, or WSnn).
NCP LEVEL	session monitor	The level identifier supplied by NCP.
NCP VERSION	session monitor	The version level of the NCP. *Note*: If the VERSION data is 0, the corresponding field and heading are not displayed.
NEGOTIABLE	session monitor	Negotiable BIND, value can be YES or NO.
NETID	session monitor	The identifier of the network in which the primary or secondary session partner resides. In the Resource Name List panel, the *netid* would be the identifier of the network specified in the LIST LU command. In the List of Explicit Routes panel, the *netid* is the name of the network specified in the LIST ER command. Only those LUS and ERS in the specified network that are known by that domain are displayed.

Term	Component	Definition
NETWORK FUNCTION	command facility	A modem's relationship to its placement on a link of a given topology. The possible settings for network function are: C - Control on a multipoint link / Primary on a point to point link S - Secondary on a point to point link / Tributary on a multipoint link
NEVACT	status monitor	Never Active status counts appear here and refer to those nodes that have not been activated with an operator command or have not been activated automatically by VTAM.
NLDM FILE LAST INITIALIZED	session monitor	The date on which the SESSION MONITOR VSAM data base was last initialized (mm/dd/yy format).
NMVT	hardware monitor	The type of network management vector transport record through which statistical data or information about an event was reported.
NO TRANS	session monitor	This appears when no transactions have occurred for this collection period.
NODE ID	status monitor	The node name.
NODES (TOTAL/MIGRATION)	session monitor	The number of total nodes and the number of migration (down-level) nodes. The difference between these two numbers is the number of nodes displayed on the panel.
NODE TOTALS	status monitor	This column contains the row status totals for each node type and, because it contains all possible states, it is also the total count of nodes of the corresponding type in the domain defined to the status monitor.
NODE TYPE	status monitor	This column contains the abbreviated names for the types of nodes defined to the status monitor.

Term	Component	Definition
NOISE COUNT	4700 support facility	For Loop Basic Counter 2, a count that reflects errors incurred on the loop during the last solicitation period. This counter is incremented once for every 16 hours. The Loop Basic Counter 2 is not reset upon solicitation. The incremental change during the last solicitation period is calculated and displayed by the 3600 feature. If the counter has reached its maximum value of 255, the noise count value is immediately followed by an asterisk (*). The 3600/4700 control program does not increment the counter until the counter is reset to zero by an IML or system monitor command. The noise count value is expressed in units of s per solicitation period, where the solicitation period is defined as the time difference between the last two consecutive solicitations for the particular loop. The noise count value is internally converted to errors per hour and then compared to the user-specified threshold (see THRESH) to determine if the user-specified threshold has been exceeded (see EXCEED).
NPDA PROMPT LINE	hardware monitor	The prompt line indicates the most common options which the user might select from the current display panel.
N-/T-/A	hardware monitor	This indicates that the filter entry relates to a resource name or type as follows: • N- The filter element applies to records pertaining to the named resource only. • NREF - The filter element applies to records pertaining to the named resource or records that include the named resource in the HARDWARE MONITOR NAME/TYPE list. For example, if a line is named, all records that contain that line name are affected by this filter. • T - The filter element applies to all records pertaining to the specified resource type. • TREF - The filter element applies to records pertaining to the specified resource type or to records that include the resource type in the HARDWARE MONITOR NAME/TYPE list. For example, if a type of LINE is specified, all records that contain that type of LINE are affected by this filter.
NUMBER OF LINK SEGMENTS ACTIVE ON THIS LINK CONNECTION	hardware monitor	Tells the number of active link segments on the link.
NUMBER OF TRANS	session monitor	The number of transactions that occurred during the displayed time period. If this value is less than 10, this line is shown in red on a color screen or highlighted on a monochrome device.

Term	Component	Definition
OBJ	session monitor	The response time performance objective, or target, specified on the PCLASS initialization statement. This value is shown graphically by the downward- pointing arrow that appears immediately below the OBJ statement.
OPERATION	hardware monitor	A detailed description of the operation being executed at the event (error) occurred. If not available, N/A will be displayed.
OPSW	hardware monitor	The contents of the old program status word (PSW) associated with the machine check.
ORIGIN	session monitor	The name of the origin end point subarea PU for the displayed route
ORIGIN ADDRESS	session monitor	The address of the origin end point subarea PU for the displayed route
ORIGIN NAME	session monitor	The name of the subarea end point PU for the displayed route
OTHER	status monitor	This column contains the names of nodes that have a VTAM status other than those statuses represented in the status monitor columns ACTIVE, PENDING, INACT, MONIT, AND NEVACT.
OTHER COUNT	status monitor	The number of times STATMON has recorded a status change to other than ACTIVE, PENDING, OR INACT since the analysis statistics were last initialized.
OTHER%	status monitor	The percentage of time the node had a status other than ACTIVE, PENDING, OR INACT since the status statistics were last initialized.
OVRN	hardware monitor	The number of read operation overruns.
PACING COUNT	session monitor	This line appears on the panel only if TYPE=RSP. For more information, see *SNA Reference Summary*.
PAGE	session monitor	Number of page.
PARMS	session monitor	The parameters for the display control commands.
PATH	hardware monitor	For MVS/370, the secondary channel unit address (SCUA) that indicates the path at the time the event occurred. This may reflect a channel different from the one indicated in the resource name, which is the Primary-Channel-Unit-Address (PCUA). Error counts are always charged and displayed against the PCUA. For MVS/XA, a 1-byte channel path identification is followed by a 2-byte logical device number.
PCLASS NAME	session monitor	The performance class name of the session displayed.

Term	Component	Definition
PENDING	status monitor	These nodes are in one of the pending states (ACT/U, PSUB1, PACTL, and so on).
PENDING COUNT	status monitor	The number of times the status monitor had recorded a status change to PENDING since the analysis statistics were last initialized.
PENDING%	status monitor	The percentage of time the node has been in PENDING status since the status statistics were last initialized.
PERFORMANCE CLASS	session monitor	The performance class the terminal LU was assigned to during the displayed time period.
PG	session monitor	Displays a Trace Series panel for a Primary Gateway Trace.
PHASE JITTER	hardware monitor	Disturbance on the line.
PORT ADDRESS	hardware monitor	The port address of the link.
POSITION	hardware monitor	For the channel adapter and communications scanner displays, the POS field contains: • The communication scanner position • The channel adapter position in the communication controller
POWER DROP DETECTED	hardware monitor	A value of YES or NO that relates to the power and cabling of the remote device. A value of YES indicates the remote device has dropped power or become disconnected from the modem at lease once since the last LPDA status report. The normal value is NO. When fanout is installed, a power drop is detected only when all attached DTE'S drop power.
POWER LOSS DETECTED	hardware monitor	A value of YES, NO, or ignored, that relates to the power of the remote modems. Ignored 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. A value of YES indicates the remote modem has dropped power at least once since the last LPDA status report. On multipoint lines, any remote modem power loss will set this indicator to YES.
POWER-OFF TONE	hardware monitor	Indicates whether the adjacent modem of a modem pair has dropped power. If a power off time was received, the age of the last detected power off tone is displayed. If IGNORED is displayed, a power off tone was detected but the hardware monitor has determined that the power off tone received was not from the adjacent modem of the modem pair which was addressed in the MLS command. Range for POWER-OFF TONE is YES or NO. Range for AGE is 1 second to 2 minutes, or is left blank.

Term	Component	Definition
PRIMARY DOM	session monitor	The name of the primary session partner's domain. This is the domain name of the session monitor that collected the primary session partner's configuration data. The primary session partner's domain name is displayed as X-NET if the primary session partner resides in a network different from that of the reporting session monitor.
PRIMARY EL	session monitor	The element address of the primary session partner (hexadecimal).
PRIMARY KNOWS SECONDARY BY ALIAS	session monitor	The name of the secondary session partner as known in the primary session partner's network.
PRIMARY NAME	session monitor	The network name of the primary partner of an identified session.
PRIMARY SA	session monitor	The subarea address of the primary session partner (hexadecimal).
PRIMARY TYPE	session monitor	The resource type of the primary session partner. The type can be SSCP, PU, OR LU.
PROBABLE CAUSE	hardware monitor	Contains a summarized list of the most probable failing components.
PROD	hardware monitor	This appears alternatively with BLOCK ID for NMVTs and precedes either a four-character machine type or a seven- or nine-character product number to identify a product that is not included in NMVT support for the user's level of the hardware monitor. No third detail qualifier is displayed even if one was present in the original record.
PRODUCT	hardware monitor	The count of the product check errors. These are usually caused by internal hardware errors.
PRODUCT CLASSIFICATION	hardware monitor	For hardware or software, it identifies the product as IBM or non-IBM, or indicates a failure to distinguish.
PRODUCT DATA	hardware monitor	This field contains the interrupt code and error indication area for machine checks.
PRODUCT SET IDENTIFICATION DISPLAY	hardware monitor	Information on the hardware or software that implements a network component.
PRODUCT- SPECIFIED MODIFIER	hardware monitor	A unique product instance identifier.
PRODUCT UNIQUE TEXT	hardware monitor	The variable length text data transmitted in the event record.
PROGRAM PRODUCT NUMBER	hardware monitor	The product number of the program.
PT	session monitor	Displays a Trace Series panel for a Primary Trace.

Term	Component	Definition
PROMPT	hardware monitor	A list of selection options and special commands available from the current data display.
PTF LEVEL OF SOFTWARE	hardware monitor	Identification of software PTF level data as documented in the IBM product announcement documentation for IBM products.
PU TYPE	session monitor	The PU Type is either 4 (NCP) or 5 (VTAM).
QUALIFIERS	hardware monitor	Two to three lines of data from the product that generated the record. Multiple qualifiers can be displayed; a blank line is displayed if no qualifiers are sent by the product. *Note*: The meanings and uses of the qualifiers, if present, are described on the displayed panel.
READ	hardware monitor	Contains statistical data associated with read operations: • DCHK contains the number of data checks that occurred during the read operations. • M-BYTES - Contains the number of megabytes read
READ DCHK	hardware monitor	The number of data checks and check-data checks.
READ M-BYTES	hardware monitor	The amount of data read, rounded down to the nearest megabyte.
READ PERMS	hardware monitor	The count of permanent read errors.
READ TEMPS	hardware monitor	The count of temporary read errors.
READY FOR SEND DELAY	hardware monitor	See CLEAR TO SEND DELAY.
REASON	session monitor	The reason code in either hexadecimal or an English interpretation.
REASON CODE	session monitor	The reason code associated with session termination (hexadecimal). The reason code is displayed below the session start time. For sessions that terminated because of a BIND failure, the reason code and its associated heading are not displayed if it is '00'x. For sessions that terminated because of UNBIND, the reason code and its associated heading are not displayed if it is '00'x, '01'x, or '02'x. For sessions that terminated because of failure BIND flow (INIT failure), the reason code and its associated heading are not displayed if it is '00'x.
REC BYTES	4700 support facility	For an extended statistical counter, the total number of bytes received from input devices during the indicated solicitation period.

Term	Component	Definition
RECEIVE CONGESTION COUNTER	hardware monitor	The count of transmissions not able to be copied by the local physical link station.
RECEIVE LEVEL	hardware monitor	Contains the value of the receive dBm level measurement if available. Displayed values range from -48 to -4 dBm for LPDA-1 test and -45 to 3 dBm for LPDA-2 test. The field could also contain N/A (not applicable), N/I (not installed), N/AV (not available), if the receive level function is not installed or is not supported in the configuration.
REC LVL THRESH EXCEEDED	hardware monitor	Receive Level Threshold Exceeded. Indicates whether the receive level has exceeded the user-specified threshold in the last two minutes before the execution of the command.
RECEIVE PACKETS INTER-RUPTS	hardware monitor	The count of interrupt packets received.
RECEIVE PACKETS TOTAL	hardware monitor	The sum of information (I), receive ready (RR), and receive not ready (RNR) packets received.
RECEIVED	session monitor	The sequence number of the last PU that was received. Sample 2 always represents the last sample taken while sample 1 is the next to last sample taken.
RECEIVED	hardware monitor	The number of times the SNA controller has received as SDLC TEST command with or without a valid frame check sequence (FCS). However, some controllers may count valid frames received only. Refer to the controller's component description manual for details.
RECEIVES TEMPS	hardware monitor	The count of temporary receive errors.
RECEIVES TRAFFIC	hardware monitor	Contains the following: • The count of all receive operations. • The count of all received frames.
REFRESH	status monitor	The Domain Status Summary display may be automatically refreshed periodically by pressing PF9. This field will be highlighted (white) if automatic refresh is on. When this feature is on, the screen will be updated automatically every minute. In addition, it will be updated automatically when any of the totals are changed. To switch automatic refresh off, press PF9.
REINT	hardware monitor	A 'yes' or 'no' value indicating whether modem initialization has occcurred within the last two minutes. The modem reinitialization occurs when the modem is powered on, when it is reset on a hard or soft error, or by a change to a modem setup switch.
RELEASE	hardware monitor	The release level of the program.

Term	Component	Definition
REMOTE DEVICE DLC ADDRESS	hardware monitor	The Data Link Control address of the remote link component.
REMOTE DTE	hardware monitor	The DTE that attaches to the remote LDM.
REMOTE MODEM	hardware monitor	The modem that receives LPDA-2 commands from its line interface, not its DTE interface. These commands have previously been intercepted and retransmitted by the local modem.
REMOTE MODEM ADDRESS	hardware monitor	Actual modem address as reported by the remote modem.
REMOTE MODEM SELF-TEST	hardware monitor	The heading is displayed when the record received indicates that the test was not executed, or that there was no response or a bad response. No other modem status will appear on the screen if this line appears.
REMOTE OPERATION TEST	hardware monitor	Contains a passed/failed indicator for the remote LDM operation test.
REMOTE STATION DLC ADDRESS	hardware monitor	The DLC address of the remote SDLC station.
REMOTE STATION LAN ADDRESS	hardware monitor	The LAN address of the remote SDLC station.
REMOTE STATION SNA NAME	hardware monitor	The SNA name of the remote SDLC station.
REQ PARMS	4700 support facility	Parameters required in addition to the selection number.
REQ/RESP HEADER	session monitor	The EBCIDIC interpretation of the bit settings in the request/response header (RH).
RER	session monitor	The number of the reverse explicit route used by the session. The notation N/A may appear instead of the RER number. This means the network of the operator making the request is not authorized to view the specific configuration data of the network displayed, or the numbers were not supplied by VTAM in session awareness data.
RESNAME	hardware monitor	The name of the failing resource, or, when an * appears after the resname, the resource to which the failing resource is attached or the first SNA device to which the failing resource is attached.
RESOURCE	session monitor	The network name of the resource.

Term	Component	Definition
RESOURCE EVENTS	hardware monitor	These subheadings refer to events logged against resources named in the RESOURCE column: • FROM - The date and time associated with the oldest event record received since the data base was initialized or since records for this resource were purged. • RESNAME - The resource name or the failing resource name associated with the event or statistical data. When an asterisk (*) appears before the RESNAME, it is the resource to which the failing resource is attached. • TO - The date and time associated with the most recent event record for this resource. • TOTAL - The total number or event records hardware monitor has recorded in its data base for this resource since data base initialization or since the last purge for this resource. • TYPE - The resource type associated with the alert. Some common resource types are as follows: – CHAN - Selector, byte/block-multiplexor, or integrated channel – COMC - Communication controller or transmission control unit – CPU - Central processing unit of the network host system – CTRL - Link-attached cluster controller – DEV - Link-attached device or terminal – IOCU - Channel-attached I/O control unit for 3800 printer – LCTL - Channel-attached controller (communications and cluster) – LDEV - Channel-attached terminal – LINE - Link attachment between the communication controller and the cluster controller or between communications controllers – SCU - DASD storage control unit of the network host system – TCU - Tape control unit of the network host system.
RESOURCE TYPE	session monitor	The physical unit, logical unit, or pre-SNA device that is the secondary session partner.

Term	Component	Definition
RESP TIME DATA	4700 support facility	Response time data as follows: • AVG - The average response time recorded for this resource (WS or CTRL) during the last solicitation period (expressed in seconds). • COUNT - The number of response time measurements made for this resource (CTRL or WS) during the last solicitation period. • NAME - The name assigned by the user to the interval timer associated with the response time data that follows on the same line.
RETURN	hardware monitor	A presentation of the previous Data display or the Main Menu display.
RH	session monitor	The HEX representation of the Request or Response Header.
RING NUMBER	hardware monitor	The ring or segment identifier.
RLSD LOSSES (Receive Line Signal Detect)	hardware monitor	The number of carrier detect losses which were detected during the last 15 minutes before the LA or unsolicited MLS command was executed. On the Link Problem Determination Aid panels, either 'N/A' or 'NO' may be shown for the Local Modem when the configuration is multipoint. This is due to the fact that these displays analyze both permanent error and statistical records. The permanent error records that contain long link status data have the configuration present. From this, hardware monitor can determine that the local modem is in a multipoint configuration and thus show 'N/A' for RLSD. The statistical records do not have the configuration data, so hardware monitor reads the state of the 'lost RLSD' bit and shows 'NO' on the display. The term CARRIER DETECT LOST (CDLST) is equivalent to RLSD.
RLSD LOSSES, AGE	hardware monitor	Contains the number of carrier detect losses detected during the the last 15 minutes and the age of the last RLSD loss. Range for the number of RLSD losses is 0 to 255. Range for AGE is 1 second to 2 minutes or more, or is left blank.
RLSD (RECEIVE LINE SIGNAL DETECT) SENSITIVITY	hardware monitor	The carrier detect sensitivity expressed as normal or limited. The options (NORMAL or LIMITED) can be selected with a switch on the rear panel of the modem. For 386X, the LIMITED position is not often used. Value is always 'normal' for 586X modems.
RLSD STATE	hardware monitor	Receive Line Signal Detect (RLSD) indicates whether the local modem received a signal from the remote modem when the command was issued. Range for the local modem is ON or OFF. RLSD is not applicable to the remote modem.

Term	Component	Definition
ROUTING INFORMATION	hardware monitor	The LAN routing information used by a link connection.
RT	session monitor	Displays the Session Response Time panel.
RU	session monitor	The HEX representation of the Request Unit. To view the request unit, enter SEL# for the line desired.
RU DATA	session monitor	The request unit in hexadecimal and EBCDIC representations
RULEN	session monitor	The length (bytes) of the request unit, as taken from the transmission header (TH).
SA	session monitor	The subarea address of the named SSCP.
SA, EL	session monitor	The subarea and element address of the PLU and SLU.
SCREEN CONTROL	hardware monitor	A list of the screen control commands and a brief explanation of each.
SCS	hardware monitor	The sub-channel status byte from the CSW (channel status word). It is expressed as two hexadecimal characters.
SECONDARY KNOWS PRIMARY BY ALIAS	session monitor	The name of the primary session partner as known in the secondary session partner's network.
SECONDARY CONTROLLER SDLC LINK TEST COUNTS	hardware monitor	Information can be as follows: • RECEIVED - The count of the number of times the SNA controller has received an SDLC TEST command with or without a valid frame check sequence (FCS). • TRANSMITTED - The count of the number of times the SNA controller has received an SDLC TEST command with a valid FCS and has transmitted a response to that command.
SECONDARY DOM	session monitor	The name of the secondary session partner's domain. This is the domain name of the session monitor that collected the secondary session partner's configuration data. The secondary session partner's domain name is displayed as X-NET if the secondary session partner resides in a network different from that of the reporting session monitor.
SECONDARY EL	session monitor	The element address of the secondary session partner (hexadecimal).
SECONDARY NAME	session monitor	The network name of the secondary session partner.
SECONDARY SA	session monitor	The subarea address of the secondary session partner (hexadecimal).

Term	Component	Definition
SECONDARY TYPE	session monitor	The resource type of the secondary session partner. This type can be SSCP, PU, OR LU.
SEEKS K-COUNT	hardware monitor	The count of seek commands executed, shown in thousands.
SEEKS SKCHK	hardware monitor	The count of seek checks associated with the count of seek commands.
SEL#	session monitor	The selection number that allows you to proceed further into the session monitor panel sequence. You can enter the selection number of another session monitor panel to transfer over to that panel, or 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. For panels in the Help series, the selection number allows you to proceed to a more detailed command description for a specific command. • SEL# CT - Issues a connectivity test for the selected session. • SEL# ER - Displays the Explicit Route Configuration panel. • SEL# RTS - Displays the Response Time Summary panel. • SEL# RTT - Displays the Response Time Trend panel. • SEL# STR - Session Termination Reason panel. • SEL# VR - Displays the Virtual Status panel.

Term	Component	Definition
SEL#	hardware monitor	The selection number which, when entered on the command line, provides the operator with the following display or function related to the selected alert: • SEL# - The Recommended Action display for the alert is presented. • SEL# C - the hardware monitor code representing the alert "alert description": probable cause is displayed on the hardware monitor message line. • SEL# DEL - the selected alert is deleted from the data base. • SEL# M - The Most-Recent Events display for the resource associated with the alert is presented. • SEL# P - alert information is entered in the Information/Management data base. • SEL# P id - alert information is entered in the specified (id) Information/Management data base record. The 'id' field is a five-character record number assigned by Information/Management. • SEL# SRF - for the resource to which the alert pertains, it creates on entry in the alert recording filter to block future recording of alerts. • SEL# SRF ALL - for any resource, it creates an entry in the alert recording filter to block future recording of all alerts.
SEL#	4700 support facility	The selection number that allows the network operator to proceed further into the display sequence.
SELECT ENTRY	4700 support facility	The displays that may be selected.
SELF TEST	hardware monitor	Contains a PASSED or FAILED indicator for the test.
SENS	session monitor	The SNA code for any negative responses.
SENSE	session monitor	The sense code associated with session termination (hexadecimal). The sense code is displayed below the session end time. The sense code and its associated heading are not displayed if the sense code is '00000000'x.
SENSE	hardware monitor	Contains data extracted from the sense field of the OBR record (up to 48 hexadecimal characters, depending on the device type): • For DASD devices it is the 2-byte fault symptom code. • For local communication and tape devices it contains the complete sense field. • For 3800 printers it is the status code.

Term	Component	Definition
SENSE DATA	session monitor	The following values appear by this field: • BYTE 2 - The hexadecimal value of BYTE 2. • BYTE 3 - The hexadecimal value of BYTE 3. • CATEGORY - The hexadecimal value of CATEGORY. • MODIFIER - The hexadecimal value of MODIFIER. Explanations in English for the values of CATEGORY, MODIFIER, BYTE2, and BYTE3 follow the hexadecimal values. For more discussion of sense data, see *SNA Reference Summary*.
SENT	session monitor	The sequence number of the last PIU that was sent by the VR endpoint PU. Sample 2 always represents the last sample taken while sample 1 is the next to last sample taken.
SEQ# (REF#)	session monitor	The last (maximum of four) PIU sequence numbers passed to session monitor from NCP for the specified NCP sessions. They are the sequence numbers of the last two PIUs outbound and inbound for the NCP. The first sequence number displayed is the most recent outbound sequence number. The third sequence number is the most recent inbound. For a pre-SNA device, this field is a 1-byte reference number (REF#) for the three most recent outbound and the most recent inbound PIUs (rightmost). The sequence numbers will not necessarily be in numerical order, but rather in the order in which they were sent from NCP. See *ACF/NCP Diagnosis Guide* for details.
SEQUENCE NUMBER	hardware monitor	The sequence number of the machine originating the data record.
SER#	hardware monitor	The six-character CPU serial number.
SERVICEABLE COMPONENT IDENTIFIER LEVEL	hardware monitor	The component identification of a serviceable component, as assigned by service personnel.
SESSION DOMAIN	hardware monitor	The domain name associated with the data you are viewing.
SG	session monitor	Displays a Trace Series panel for a Secondary Gateway Trace.
SIGNAL TO NOISE RATIO	hardware monitor	The separation of noise power level and the received signal level seen by a modem.
SNA NEG-RESPONSE	hardware monitor	The count of the number of times the identified unit originated an SNA negative response for the identified event.
SNBU	hardware monitor	The switched network backup values are YES or NO. A YES indicates that the modem has switched the primary line that is unavailable or unusable to an alternate backup line. This line on the panel will not be displayed if the SNBU feature is not installed.

Term	Component	Definition
SNBU, TYPE OF CONNECTION	HARDWARE MONITOR	Indicates if Switched Network BackUp is active (YES or NO) and what type of connection (2 WIRE or 4 WIRE) if SNBU is active.
SPECIFIC	hardware monitor	This indicates the type of component, sub-component, or logical resource that can be most closely related to the exception condition (event).
SPEED	hardware monitor	The transmit speed of the modem in kilobits per second (KBPS). A value of '? KBPS' indicates that the reported speed is invalid. Indicates whether the line is operating in FULL or BACKUP speed.
SPEED CONTROL MODE	command facility	Can be set either by the modem or the DTE. The possible settings for speed control mode are: D - The data terminal equipment sets the mode M - A modem command sets the mode.
SSCP	session monitor	The name of the SSCP associated with the named domain, which supplies the name of the subarea node. For migration hosts, this is the access method name.
SSCP ID	session monitor	Hexadecimal value of the id of the SSCP that issued the ACTPU or ACTCDRM for the Session Parameters panels.
SSCP PU TYPE	session monitor	PU type of the node containing the SSCP must be 5.
ST	session monitor	Displays a Trace Series panel for a Secondary Trace.
START TIME	session monitor	The date and time the session was started in month/day hour:minute:second format.
STAT	session monitor	The status of the conversation between this session monitor and the session monitor in the named domain. The status values are: • ALLOC - Allocated • DEALL - Deallocated • NEVAL - Never allocated • PNDAL - Pending allocation • PNDDE - Pending deallocation

Term	Component	Definition
THRESHOLDS	command facility	The modems monitor permanently some line parameters: • Receive Level Threshold. Specify a threshold for the amplitude of the received signal above which a warning signal will be reported. The setting range is between 00 and -43. • Impulse Hits Threshold. (Impulse Noise) Specify the threshold above which a warning indication will be reported. The setting range is between 00 through 63. • Line Quality Threshold. A modem calculated running average ranging from 0 to 14 that shows the quality of signal received by the modem. A value in the range 0 to 4 is considered "good", the range of 5 to 9 considered indeterminate and the range 10 to 14 is considered "bad".
TIME	session monitor	A time stamp provided by the access method at the time the PIU was traced.
TIME	hardware monitor	The value specified in hours and minutes. This indicates that the filter element applies to any resource that has had recent activity, either directly (for event or statistical data) or indirectly via an attached resource (for event data). There is recent activity if data has been received and recorded within the last HH hours and MM minutes before viewing a total display.
TIMER	4700 support facility	The name assigned by the user to the interval timer associated with the response time data that follows on the same line. The name may change from solicitation to solicitation as the network operator has the ability (using the SET command) to change the active 3600/4700 interval timer on a workstation basis.
TO	hardware monitor	The date and time associated with the latest event or statistical record (as appropriate to the display).
TONE TEST	hardware monitor	This field displays FAILED if the test failed, or the entire line will be blank if the status indicated passed. NOT SUPPORTED indicates that the TAC (Test Alarm Card) feature is not installed.

Term	Component	Definition
TOTALS	hardware monitor	The statistical data associated with the identified resource. Fields that are totaled include: • E/T - A calculated ratio of the recoverable error count to the traffic count expressed as a percentage. This applies to channel attached communication control units and attached devices (except local controllers under VTAM), and link attached control units. Otherwise, the field will be marked N/A. • FROM - The date and time associated with the oldest statistical record on the data base. For LINES, a N/A is displayed. • TEMPS - Contains a total count of all recoverable errors. For those devices not supported the field is marked N/A. TEMPS for SDLC does not include temporary errors caused by polling. • TO - The date and time associated with the most current statistical record: – For level 1 with TYPE COMC, the date of the most current level-2 or level-3 statistical record with a type of LINE at level-2. For communication controllers at level-1, it is the date of the most recent statistical record received for any of the stations on the lines attached to that communication controller. – For level-4 or level-2 with TYPE LINE, the date of the most current level-5 statistical record with a type of CTRL at level-5. For lines at level 2 or 4, it is the date of the most recent statistical record received for any station on that line. – A ratio of the recoverable error count to the traffic count expressed as a percentage that is calculated daily from the records received since 00:00 (midnight). This applies to channel attached communication control units and attached devices (except local controllers under VTAM), and link attached control units. Otherwise, the field will be marked N/A. • TRAFFIC - A total count of traffic for the specified resource: – For channel attached communication devices it is the count of SIOS. – For S/S and BSC stations, it is the count of the number of blocks transmitted.

Term	Component	Definition
TOTALS (cont.)	hardware monitor	– For SDLC stations, it is a count of all transmit and receive operations. It does not include polling operations. Traffic counts reported by an NCP for devices downstream from a 3710 are reported as if the station was attached to an SDLC line. For traffic counts received from 3710 for its downstream stations, hardware monitor will sum the transmit data counter, the poll counter and receive data counter. – For lines at level 2 or 4 of the hardware monitor hierarchy, it is the sum of counts for all attached stations. Statistics are only maintained for lines at hierarchy level 2 or 4. – For storage, it is stated in megabytes of data read. – For tape, it is a count of SIOS, stated in thousands. – For unit record, traffic is applicable for 3800 printing sub-system only, where it is measured in thousands of feet of paper processed. – For communication controllers attached to X.25 virtual links, traffic is the sum of I, RR, and RNR packets transmitted and received. – For communication controllers attached to X.25 physical links, traffic is the sum of I, RR, RNR, and REJ frames transmitted and received. – Traffic count is not applicable for CPU, channel, and control units in network host processor hierarchy or in communication controllers and lines at other than level 2 in the network hierarchy. The field is marked (N/A).
TOTAL ERRS	hardware monitor	The number of times a communication check error occurred.
TOTAL KSIO	hardware monitor	The count of SIOS (rounded down to the nearest thousand).
TOTAL TEMPS	hardware monitor	Contains the following: • The 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 or transmission errors fields. • The count of all temporary errors, including bus-out parity checks, equipment checks, overruns, seek checks, and data checks. • The count of all temporary read and write errors. • The count of transmit and receive temporary errors.

Term	Component	Definition
TOTAL TRAFFIC	hardware monitor	Contains the following: • The count of all transmit and receive operations for SDLC stations, a count of the blocks transmitted for BSC and S/S stations, or a count of SIOS for channel attached communication devices. • The amount of paper processed, shown in thousands of feet. • The count of all frames transmitted and received. • The sum of RECEIVE PACKETS TOTAL and TRANSMISSION PACKETS TOTAL.
TP	session monitor	The transmission priority field for the virtual route. The notation N/A may appear instead of the TP number. This means the network of the operator making the request is not authorized to view the specific configuration data of the network displayed, or the numbers were not supplied by VTAM in session awareness data.
TRACE	session monitor	The trace setting for the specified resource; either ON or OFF.
TRAINING SEQUENCE	command facility	A predefined bit pattern that modems exchange when they need to get synchronized. This occurs on point to point links after a loss of signal, and on multipoint link every time a tributary modem starts sending data. The possible settings for training sequences are: L - Long training sequence S - Short training sequence.
TRANSMISSION PACKETS INTERRUPTS	hardware monitor	The count of interrupt packets transmitted.
TRANSMISSION PACKETS TOTAL	hardware monitor	The sum of information (I), receive ready (RR), and receive not ready (RNR) packets transmitted.
TRANSMISSION TEMPS	hardware monitor	Contains the following: • The count of temporary transmission errors. *Note*: For SDLC stations and for stations attached to a network controller. N/A is displayed for all other resources. • The count of retransmitted frames.
TRANSMISSIONS TRAFFIC	hardware monitor	Contains the following: • The count of all transmit operations. *Note*: For SDLC stations and for stations attached to a network controller. N/A is displayed for all other resources. • The count of all transmitted frames (I, RR, RNR, AND REJ).

Term	Component	Definition
TRANSMIT CLOCK OPTION	command facility	Defines what clock controls the internal clock of the modem. The possible settings are: Internal - The modem uses the modem internal clock External - The modem uses the external clock of the DTE Receive - The local transmit clock is locked to receive clock.
TRANSMIT LEVEL	hardware monitor	The value of the transmit dBm level measurement. Field can contain N/A or N/AV.
TRANSMIT RECEIVE TEST (TRT)	hardware monitor	Test in which the modems exchange pre-defined bit patterns over the line and report the results that the modems detected.
TRANSMITS NOT COPIED	hardware monitor	The count of transmissions not able to be copied by the remote SDLC link station.
TRANSMITTED	hardware monitor	The number of times the SNA controller has received the SDLC TEST command with a valid FCS and has transmitted a response to that command.
TS PROFILE	session monitor	Transmission Subsystem Profile; may be 1 through 5, 7, or 17.
TYP	session monitor	Type of command (*x*/*y*) where *x* can be: • Immediate • Delay and *y* can be: • Append • Ignore.
TYPE	session monitor	For the Session Termination Reason panel, it is the session termination type. It can be BIND, UNBIND, or INIT Failure. For the Session Trace Data for PIU panel, it is the type of RU in the PIU (positive response, negative response command or data). For the Session Parameters panels, the interpretation can be either REQ (request) or RSP (response). For BSC attached resources, this field contains an abbreviation of the BTU commands. (See *NCP and EP Reference Summary and Data Areas* for more information on BTU commands.) If "* NOTE" is displayed, the data is device-dependent and you should refer to the appropriate device documentation for a command definition. For example, if the device is NCP, see *NCP and EP Reference Summary and Data Areas*.
TYPE	hardware monitor	Represents the device type associated with the failing resource or a 4-character modem type.
TYPE	4700 support facility	The type of 3600/4700 controller.

Term	Component	Definition
TYPE OF COMM. ERRORS	hardware monitor	Identifies each of the communication check error types that the user may select. The counter for each of these individual communication error types has a maximum value of 255; therefore, the sum of the individual counters may be less than the value shown in the ERRORS-COMMUNICATION field. The types of errors are: • COMM ADAPTER MACHINE CHECK — Non-recoverable machine checks were caused by the communication adapter. • CONNECTION PROBLEM - The connection command retry count has been exceeded. • DCE ERROR - Data communication equipment (DCE) drops ready or some other interruption has occurred. • FCS ERROR - Invalid frame check sequences (FCS) were received. • IDLE TIMEOUT - No SDLC framing characters have been received within a time interval specified by the communications adapter. • INVALID STATUS - The status generated by the communication adapter is meaningless because of a hardware failure. • NON-PRODUCTIVE TIMEOUT - No valid SDLC frames have been received within a specified time interval. • OVERUN - The number of times received characters have been overlaid. • PRIMARY STATION ABORT - Eight or more consecutive 1 bits were received. • RECEIVED HPCA (High Performance Communications Adapter) OVERRUN — The line is "hung", or insufficient buffer space has been allocated. • SDLC COMMAND REJECT - An SDLC command was rejected because it was invalid, had data without a command, or had a sequence count error. • UNDERRUN - The number of times characters have been retransmitted erroneously. • WRITE RETRY - SDLC I-frame re-transmissions were caused by the failure of the primary station to acknowledge the sequence number. • WRITE TIMEOUT - Write failures occurred because of a clock malfunction or a missing clear to send (CTS).

Term	Component	Definition
TYPE OF COMM. ERRORS	hardware monitor	The number of times the following conditions have been detected by the controller: • CA BUS OUT PARITY-SELECT - The control unit channel adapter detected an equivalence error from the channel during a selection sequence. • CA BUS OUT PARITY-WRITE - The control unit channel adapter detected an equivalence error from the channel during a write operation. • CA INTERNAL PARITY-READ - The control unit channel adapter detected that it had transmitted bad parity on the channel bus-in during a read operation. • COMMAND REJECT - The control unit channel adapter received a command that was invalid or was not supported. • CONNECT PARAMETER ERROR - The connect was rejected because it specified an odd buffer length, or it specified an insufficient buffer size. • CONNECT RECEIVED - A connect request was received when the control unit was already connected. • CU INTERNAL PARITY-READ - The control unit detected an internal equivalence error during a read operation. • CU INTERNAL PARITY-WRITE - The control unit detected an internal equivalence error during a write operation. • DATA CHECK - The host's read command was not large enough to transfer all data from the control unit's buffer. • DATA LENGTH CHECK RECEIVED - The number of data bytes received from the channel does not match the data count field or was fewer than 4. • DATA LENGTH CHECK RU - The primary physical unit has sent a larger request/response unit (RU) than the secondary physical unit can accept. • DISCONNECT RECEIVED - A disconnect request was received when the PU was active. • INCORRECT SEQUENCE - An incorrect READ START 0/1 sequence has been issued by the host. • INTERNAL PARITY-CYCLE STEAL the control unit channel adapter detected an error during an internal channel adapter cycle-steal operation. • NOT INITIALIZED-CONTROL - An initial control command containing a valid connect order was not received. • NOT INITIALIZED-SENSE - A sense command was received when the control unit was no longer initialized.

Term	Component	Definition
TYPE OF COUNTER	hardware monitor	Contains a listing of the counters found in the input record. Abbreviations are: • D BIT - Delivery bit • I - Information • REJ - Reject • RNR - Receive not ready • RR -Receive ready.
US	hardware monitor	The unit status byte (4 byte) from the channel status word (CSW). It is two hexadecimal characters.
USER CAUSED	hardware monitor	A list of conditions for the problem which are the result of a user action.
VALUE	hardware monitor	This lists the value for each counter. N/A is displayed if it is not supported or is invalid.
VERSION	hardware monitor	The version of the program.
VOLSER	hardware monitor	The volume serial number of the disk or reel associated with the input record.
VR	session monitor	The number of the virtual route used by the session. The notation N/A may appear instead of the VR number. This means the network of the operator making the request is not authorized to view the specific configuration data of the network displayed, or the numbers were not supplied by VTAM in session awareness data.
VR POOL CURRENT	session monitor	The current count of inbound PIUS over the VR. The VR pool current value is displayed for PU type 4 (NCP) end points only.
VR POOL LIMIT	session monitor	The threshold of inbound PIUS allowed over the VR. The VR pool threshold is displayed for PU type 4 (NCP) end points only.
VR STATUS	session monitor	Based on analyses of the last two samples using "A" (ANALYZE VIRTUAL ROUTE CONDITION) on the VR Status Panel, this field describes the status of a virtual route you have specified for testing. The conclusions, which appear on lines 10 and 19 of the panel, are not displayed if only one sample has been taken. (See SENT and RECEIVED). See Appendix C for a list of status conclusions with explanations.
WINDOW SIZE CUR	session monitor	The current VR pacing window size.
WINDOW SIZE MAX	session monitor	The maximum VR pacing window size.
WINDOW SIZE MIN	session monitor	The minimum VR pacing window size.
WRITE M-BYTES	hardware monitor	The amount of data written, truncated to megabytes.

Term	Component	Definition
WRITE PERMS	hardware monitor	The count of permanent write errors.
WRITE TEMPS	hardware monitor	The count of temporary write errors.
WSNAME	4700 support facility	The name (WSNN) of the selected workstation.
XRF	session monitor	This stands for the extended recovery facility session type. The possible extended recovery facility session types are PRIMARY and BACKUP. This field and its associated heading are not displayed if the session is not an extended recovery facility session.
YOUR DOMAIN	hardware monitor	The name of the domain to which your terminal is attached.

Appendix C. Virtual Route Status Conclusions

This information is provided to give you a basis to judge fields on the session monitor Virtual Route Status panel. In this panel, as with all judgmental panels, good or normal information is green, marginal or warning information is yellow, and bad or error information is red.

The messages below can be found on lines 10 through 19 of the Virtual Route Status panel. An explanation for each message follows the message:

VR IS NOT BLOCKED

The virtual route is operating normally and no blockage is detected. This does not mean that the virtual route is never entering the blocked state. It only means that at the times of both samples the virtual route was not blocked.

TRANSIENT VR BLOCK

One of the two samples indicates that the sender is waiting for a virtual route pacing response (VRPRS) and data has been sent over the virtual route during the time between the two samples.

This is a transient condition; however, if nothing appears to be flowing over the virtual route after repeated analysis requests, there may be a problem in the origin node itself or with the first transmission group in the explicit route.

TRANSIENT VR BLOCK - AWAITING VRPRS

One of the two samples indicated that the sender is waiting for a virtual route pacing response and neither sample indicated that the receiving NCP was withholding a virtual route pacing response.

This is most likely a transient condition. If the condition occurs repeatedly, check the virtual route pacing window size. If it is at the maximum, you should consider increasing it. If it is at the minimum, some node along the explicit route may be congested; use Network Performance Monitor NPM to investigate this possibility.

TRANSIENT VR BLOCK - DEST. CONGESTED

One of the two samples indicated that NCP is withholding a virtual route pacing response due to a slowdown condition.

This is a transient condition that most likely will go away on its own. If the condition occurs repeatedly, the system programmer may want to tune the network so that the NCP does not go into slowdown so often.

TRANSIENT VR BLOCK - NO DATA SENT

One of the two samples indicates that the sender is waiting for a virtual route pacing response and that no data has been sent during the time between the two samples.

This is a transient condition; however, if nothing appears to be flowing over the virtual route after repeated analysis requests, there may be a problem in the origin node itself or with the first transmission group in the explicit route.

TRANSIENT VR BLOCK - VR CONGESTION

One of the two samples indicated that NCP is withholding a virtual route pacing response because the PIU buffer pool threshold has been exceeded.

This is a transient condition that most likely will go away on its own. If the condition occurs repeatedly, the system programmer may want to tune the network so that the PIU buffer pool threshold is not exceeded so often. The PIU buffer pool threshold cannot be changed.

EXPLICIT ROUTE IS CONGESTED

NCP is not withholding a virtual route pacing response and NCP has not received all the data that VTAM has sent. This may be caused by congestion along the explicit route between the sender and receiver of the virtual route (referred to as complex congestion). No data was received by NCP during the time between the two samples.

Further problem determination may be required to isolate the specific node that is blocking the traffic. Use NPM to do this problem determination task.

VR BLOCKED BY DEST. NODE CONGESTION

In configurations where NCP is the receiver, the NCP is withholding a virtual route pacing response and the PIU buffer pool threshold has not been exceeded. Since, at this point in the analysis, a virtual route can be blocked only by the PIU buffer pool threshold being exceeded or by the NCP being in slowdown, the NCP must be in slowdown if the virtual route is blocked and the PIU buffer pool threshold is *not* exceeded. This condition must also be stable across the two samples and data must not have flowed across the virtual route during the time between the two samples.

You should perform further problem determination to determine why the NCP is in slowdown and take some corrective action to insure that this condition does not occur again. Under normal circumstances, the NCP will eventually get itself out of slowdown, and the virtual route pacing response will be sent to unblock the virtual route. If this does not happen automatically, the NCP must be restarted.

In configurations where VTAM is the receiver, this condition is reached whenever the sender is waiting for a virtual route pacing response and all of the PIUs sent by the sender have been received at the receiver.

VR BLOCKED BY ER CONGESTION

Both samples indicate that the sender is waiting for a virtual route pacing response, the receiver has not received all the data sent by the sender, and data has *not* been sent during the time between the two samples.

Further problem determination may be required to isolate the specific node that is blocking the traffic. Use NPM to do this problem determination task.

VR BLOCKED BY MIXED TYPE CONGESTION

The virtual route is blocked and the reason is different on the two samples. The reason on the first sample is that the PIU buffer pool threshold is exceeded. On the second sample, the virtual route is still blocked, but the PIU buffer threshold is no longer exceeded. Instead, the NCP is in slowdown. These two conditions cannot occur in the reverse order. Data must not have flowed across the virtual route during the time between the two samples.

The fact that the cause of the blocked virtual route has changed between the two samples indicates that this is probably a temporary

condition. If the slowdown condition persists, further problem determination will be required to determine the cause of this condition.

VR BLOCKED BY VR CONGESTION

The NCP is withholding a virtual route pacing response and the PIU buffer pool threshold has been exceeded. This condition must be stable across the two samples and data must not have flowed across the virtual route during the time between the two samples.

The virtual route will be unblocked after enough of the data that was received over the virtual route is sent out of the NCP so that the PIU buffer pool threshold is no longer exceeded. If this does not happen automatically, do further problem determination to determine why the data is not leaving the NCP. In addition, the system programmer may need to alter the LOGMODE and COS definitions to map fewer sessions to the subject virtual route.

VR BLOCKED - DEST. NODE IN CWALL

A CWALL condition indicates that the NCP has a severe buffer shortage. No data will be received by the NCP until the CWALL condition is alleviated. A CWALL condition can be detected only if the condition occurs after the virtual route status data request (ROUTE-TEST) is received and before the virtual route status data reply (RSP(ROUTE-TEST)) is sent.

VR BLOCKED - SEQUENCE ERROR

A sequence error indicates that the NCP had discarded PIUs that have arrived with unexpected sequence numbers. This usually occurs when the PIU with the expected sequence number has been lost. Thus, the condition is not likely to go away on its own; deactivate the virtual route.

VR BLOCKED - UNABLE TO DETERMINE REASON

The virtual route status data indicates that an NCP is withholding a virtual route pacing response but the reason for this cannot be determined. This usually means that the data is inconsistent in some way, a condition that should not occur.

If this conclusion cannot be recreated by subsequent operator requests for virtual route analysis, it was probably caused by a timing condition and should be ignored. If the conclusion is reached repeatedly, there is an error in the data being returned to NLDM. Call IBM for help.

VR BLOCKED - VRPRS SENT BUT NOT RECEIVED

The sender indicates that the virtual route is blocked while waiting for a virtual route pacing response; however, the receiving NCP does not indicate that it is withholding a virtual route pacing response. You can only assume that a virtual route pacing response has been sent but not received. For this conclusion to be reached, data must not have been sent during the time between the two samples.

If this condition goes away with a subsequent analysis request, the virtual route is operating properly. If the condition persists, a virtual route pacing response has most likely been lost and the virtual route must be deactivated to recover.

Appendix D. National Receive Signal Levels

This information is provided to give you a basis to judge acceptable receive signal levels. This information on satisfactory transmission levels is given on the hardware monitor (NPDA) panels:

- Modem and Line Status
- Link Status and Test Results.

For switched lines, the acceptable signal levels are:

Germany	-6 to -46 dBm
Italy	0 to -43 dBm
New Zealand	-5 to -35 dBm.

For non-switched lines, the acceptable signal levels are:

Belgium	0 to -43 dBm
France	0 to -43 dBm
Germany	-40 dBm
Italy	-40 dBm
Japan	-40 dBm
Netherlands	-43 dBm
Spain	0 to -20 dBm
Switzerland	-40 dBm
United Kingdom	not greater than -60 dBm.

Appendix E. MVSHardware Monitor with Information/Management

The hardware monitor Information/Management link lets you send event data to Information/Management and lets you open problem records. From the hardware monitor Alerts-Static, Alerts-History, Most Recent Events, and Event Summary panels, you can transfer problem data directly into an Information/Management problem record. The NetView operator ID must be included in an Information/Management privilege class which has authority to update Information/Management records. The data transferred from hardware monitor (NPDA) to Information/Management is shown as follows:

NPDA Field Name	Length	V2 Info/Mgmt Field Name	Length
RESOURCE NAME (See Note)	8-40	RESOURCE NAMES	8-40
EV/AL DESC:PROB CAUSE	48	DESCRIPTION ABSTRACT	45*
DATE	8	DATE OCCURRED	8
TIME	5	TIME OCCURRED	5
NCCF OPER ID	8	REPORTED BY	8
CONSTANT (NPDA)	4	REPORTER DEPT	4
DOMAIN NAME	5	SYSTEM NAME	5
ACTION PANEL ID	8	ACTION PANEL ID	8
DETAIL EVENT DESC	1040	FREE FORM DESCRIPTION	1040
RECOMMENDED ACTION	1120	FREE FORM STATUS	1120
RESOURCE TYPE	4-20	RESOURCE TYPES	4-20

* indicates that this field may be truncated.

Note: The hardware monitor passes up to five resource names to define the failing resource. For example, an IBM 3710 Network Controller can send:

- NCP name
- LINE name
- PU name
- LINE name
- PU name.

The problem entry person can enter additional data about a specific problem into Information/Management.

Information/Management does not support the printing of Kanji characters. Unexpected results may occur.

Appendix F. PF Key Assignments by Component

The following chart lists the PF key defaults. Each component or function is listed with changes to the default PF keys. If an entry is left blank, the standard PF key function is used. If an entry contains N/A, the standard command associated with the PF key cannot be used in the component.

You can enter DISPFK for online information (in all components except the status monitor) on the default PF keys for that component. (Ask your lead operator if your default PF key settings are established.)

PF Key	Standard Function	Deviations							
		Status Monitor	Log Browse	HELP	Library Browse	Session Monitor	Hardware Monitor	4700 Support Facility	Command Facility
PF1	Help								
PF2	End								N/A
PF3	Return								
PF4	Top	Browse							N/A
PF5	Bottom	N/A						N/A	N/A
PF6	Roll								
PF7	Back								N/A
PF8	Forward								N/A
PF9	N/A	Refresh	Repeat Find		Repeat Find	NCCF	Copy Screen	Copy Screen	
PF10	DISPFK	VTAM	Left	N/A	N/A	Left			
PF11	N/A	CLIST	Right	Entry Point		Right	Hold Screen	Hold Screen	Hold Screen
PF12	Retrieve	Menu	All One	N/A	Position Cursor				

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

VM/SP Publications

VM/SP Distributed Data Processing Guide (SC24-5241)

VM/SP Operator's Guide (SC19-6202)

VM/SP System Programmer's Guide (SC19-6203)

Other Related Publications

VTAM Operator (SC23-0113)

MVS Operator's Guide

MVS Operator Communications Control Facility (GC24-5225)

Information/Management: User's Guide (SC34-2044)

Network Controller Host Guide (GA27-3428)

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.

ABEND. Abnormal end of task.

abnormal end of task (ABEND). Termination of a task before its completion because of an error condition that cannot be resolved by recovery facilities while the task is executing.

ACB. (1) In VTAM, application control block. (2) In NCP, adapter control block.

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*.

accept. For a VTAM application program, to establish a session with a logical unit (LU) in response to a CINIT request from a system services control point (SSCP). The session-initiation request may begin when a terminal user logs on, a VTAM application program issues a macro instruction, or a VTAM operator issues a command. See also *acquire (1)*.

access method. A technique for moving data between main storage and input/output devices.

accounting exit routine. In VTAM, an optional installation exit routine that collects statistics about session initiation and termination.

ACF. Advanced Communications Function.

ACF/NCP. Advanced Communications Function for the Network Control Program. Synonym for *NCP*.

acquire. (1) For a VTAM application program, to initiate and establish a session with another logical unit (LU). The acquire process begins when the application program issues a macro instruction. See also *accept*. (2) To take over resources that were formerly controlled by an access method in another domain, or to resume control of resources that were controlled by this domain but released. Contrast with *release*. See also *resource takeover*.

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.

active application. The application subsystem currently in an extended recovery facility (XRF) session with a terminal user. See *alternate application*.

adapter control block (ACB). In NCP, a control block that contains line control information and the states of I/O operations for BSC lines, start-stop lines, or SDLC links.

Advanced Communications Function (ACF). A group of IBM program products (principally VTAM, TCAM, NCP, and SSP) that use the concepts of Systems Network Architecture (SNA), including distribution of function and resource sharing.

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.

alias name. A name defined in a host used to represent a logical unit name, logon mode table name, or class of service name in another network. This name is defined to a name translation program when the alias name does not match the real name. The alias name translation program is used to associate the real and alias names.

alias name translation facility. A function for converting logical unit names, logon mode table names, and class of service names used in one network into equivalent names to be used in another network. Available with NetView or NCCF program products.

alternate application. The subsystem that is prepared to take over a particular active application's extended recovery facility (XRF) sessions with terminal users in case the application fails. See *active application*.

alternate path. (1) Another channel an operation can use after a failure. See also *alternate path retry (APR)*. (2) In CCP, one of two paths that can be defined for information flowing to and from physical units attached to the network by means of an IBM 3710 Network Controller. See *primary path*.

alternate path retry (APR). A facility that allows a failed I/O operation to be retried on another channel assigned to the device performing the I/O operation. It also provides the capability to establish other paths to an online or offline device.

API. Application program interface.

application control block (ACB). A control block that links an application program to VSAM or VTAM.

application program. (1) A program written for or by a user that applies to the user's work. (2) A program used to connect and communicate with stations in a network, enabling users to perform application-oriented activities.

application program interface (API). (1) The formally defined programming language interface between an IBM system control program or program product and its user. (2) The interface through which an application program interacts with an access method. In VTAM, it is the language structure used in control blocks so that application programs can reference them and be identified to VTAM.

APR. Alternate path retry.

authorization exit routine. In VTAM, an optional installation exit routine that approves or disapproves requests for session initiation.

authorized operator. In NetView, an operator who has been authorized to receive undeliverable messages and lost terminal messages.

automatic activation. In VTAM, the activation of links and link stations in adjacent subarea nodes as a result of channel device name or RNAME specifications related to an activation command that names a subarea node. See *direct activation*.

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.

automatic reactivation. In NetView, the activation of a node from the inactive state without any action by the network operator.

available. In VTAM, pertaining to a logical unit that is active, connected, enabled, and not at its session limit.

basic transmission unit (BTU). In SNA, the unit of data and control information passed between path control components. A BTU can consist of one or more path information units (PIUs). See also *blocking of PIUs*.

bidder. In SNA, the LU-LU half-session defined at session activation as having to request and receive permission from the other LU-LU half-session to begin a bracket. Contrast with *first speaker*. See also *bracket protocol*.

binary synchronous communication (BSC). (1) Communication using binary synchronous line discipline. (2) A uniform procedure, using a standardized set of control characters and control character sequences, for synchronous transmission of binary-coded data between stations.

binary synchronous transmission. Data transmission in which synchronization of characters is controlled by timing signals generated at the sending and receiving stations. See also *start-stop transmission* and *Synchronous Data Link Control*.

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)*.

bracket protocol. In SNA, a data flow control protocol in which exchanges between the two LU-LU half-sessions are achieved through the use of brackets, with one LU designated at session activation as the first speaker and the other as the bidder. The bracket protocol involves bracket initiation and termination rules. See also *bidder* and *first speaker*.

browse. A way of looking at a file that does not allow you to change it.

BSC. Binary synchronous communication.

BTU. Basic transmission unit.

buffer. A portion of storage for temporarily holding input or output data.

CCP. Configuration control program facility.

CDRM. Cross-domain resource manager.

CDRSC. Cross-domain resource.

channel adapter. A communication controller hardware unit used to attach the controller to a System/360 or a System/370 channel.

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*.

character-coded. Synonym for *unformatted*.

CICS. Customer Information Control System.

class of service (COS). In SNA, a designation of the path control network characteristics, such as path security, transmission priority, and bandwidth, that apply to a particular session. The end user designates class of service at session initiation by using a symbolic name that is mapped into a list of virtual routes, any one of which can be selected for the session to provide the requested level of service.

CLIST. Command list.

clocking. In CCP, the use of clock pulses to synchronize data and control characters sent on a line.

cluster controller. A device that can control the input/output operations of more than one device connected to it. A cluster controller may be controlled by a program stored and executed in the unit; for example, the IBM 3601 Finance Communication Controller. Or it may be controlled entirely by hardware; for example, the IBM 3272 Control Unit.

CMS. Conversational Monitor System.

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.

command processor. A program that performs an operation specified by a command.

communication adapter. An optional hardware feature, available on certain processors, that permits communication lines to be attached to the processors.

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.

communication scanner processor (CSP). A processor in the 3725 Communication Controller that contains a microprocessor with control code. The code controls transmission of data over links attached to the CSP.

compound command processor. A series of commands that appears to run as a single command. It can have interactions with other tasks or with tasks in other domains.

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.

Configuration control program (CCP) facility. An SSP interactive application program facility by which configuration definitions for the IBM 3710 Network Controller can be created, modified, and maintained.

configuration restart. In VTAM, the recovery facility that can be used after a failure or deactivation of a major node, VTAM, or the host processor to restore the domain to its status at the time of the failure or deactivation.

configuration services. In SNA, one of the types of network services in the system services control point (SSCP) and in the physical unit (PU); configuration services activate, deactivate, and maintain the status of physical units, links, and link stations. Configuration services also shut down and restart network elements and modify path control routing tables and address-translation tables. See also *maintenance services, management services, network services, session services,* and *system services control point.*

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 block. (ISO) A storage area used by a computer program to hold control information.

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.*

control statement. A statement in a command list that controls the processing sequence of the command list or allows the command list to send messages to the operator and receive input from the operator.

Conversational Monitor System (CMS). A VM application program for general interactive time sharing, problem solving, and program development.

COS. Class of service.

coupler. A hardware device that connects a modem to a public phone system in much the same way that a telephone does.

cross-domain. In SNA, pertaining to control of resources involving more than one domain.

cross-domain link. (1) A subarea link connecting two subareas that are in different domains. (2) A link physically connecting two domains.

cross-domain resource (CDRSC). A resource owned by a cross-domain resource manager (CDRM) in another domain but known by the CDRM in this domain by network name and associated CDRM.

cross-domain resource manager (CDRM). In VTAM, the function in the system services control point (SSCP) that controls initiation and termination of cross-domain sessions.

cross-network. In SNA, pertaining to control or resources involving more than one SNA network.

cross-subarea. In SNA, pertaining to control of resources involving more than one subarea node.

cross-subarea link. A link between two adjacent subarea nodes.

CSP. Communication scanner processor.

Customer Information Control System (CICS). A program product that enables transactions entered at remote terminals to be processed concurrently by user-written application programs. It also includes facilities for building, using, and maintaining data bases.

CWALL. An NCP threshold of buffer availability, below which the NCP will accept only high-priority path information units (PIUs).

DASD. Direct access storage device.

data check. An indication that a transmission is faulty. For example, in SDLC a frame check sequence (FCS) error.

data circuit-terminating equipment (DCE). (TC97) The equipment installed at the user's premises that provides all functions required to establish, maintain, and terminate a connection, and the signal conversion and coding between the data terminal equipment (DTE) and the line. The DCE may be separate equipment or an integral part of other equipment.

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 link control protocol. In SNA, a set of rules used by two nodes on a data link to accomplish an orderly exchange of information. Synonymous with *line control*.

data services task (DST). The NetView subtask that gathers, records, and manages data in a VSAM file that contains network management information.

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.

data types. In NetView, a concept to describe the organization of panels. Data types are defined as alerts, events, and statistics. Data types are combined with resource types and display types to describe NetView's display organization. See also *display types* and *resource types*.

DCE. Data circuit-terminating equipment.

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*.

definition statement. (1) In VTAM, the statement that describes an element of the network. (2) In NCP, a type of instruction that defines a resource to the NCP. See also *macro instruction*.

dial-out. Refers to the direction in which a switched connection is requested by a host or an NCP.

direct access storage device (DASD). A device in which the access time is effectively independent of the location of the data. For example, a disk.

direct activation. In VTAM, the activation of a resource as a result of an activation command specifically naming the resource. See *automatic activation*. Contrast with *indirect activation*.

disabled. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is temporarily not ready to establish LU-LU sessions. An initiate request for a session with a disabled logical unit (LU) can specify that the session be queued by the SSCP until the LU becomes enabled. The LU can separately indicate whether this applies to its ability to act as a primary logical unit (PLU) or a secondary logical unit (SLU). See also *enabled* and *inhibited*.

disconnection. The termination of a physical connection.

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*.

display levels. Synonym for *display types*.

display types. In NetView, a concept to describe the organization of panels. Display types are defined as total, most recent, user action, and detail. Display types are combined with resource types and data types to describe NetView's panel organization. See *data types* and *resource types*. Synonymous with *display levels*.

DLC. Data link control.

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).

downstream. In the direction of data flow from the host to the end user. Contrast with *upstream*.

DR. (1) In NCP and CCP, dynamic reconfiguration. (2) In SNA, definite response.

DRDS. Dynamic reconfiguration data set.

DST. Data services task.

DTE. Data terminal equipment.

dump. (1) Computer printout of storage. (2) To write the contents of all or part of storage to an external medium as a safeguard against errors or in connection with debugging. (3) (ISO) Data that have been dumped.

duplex. * In data communication, pertaining to a simultaneous two-way independent transmission in both directions. Synonymous with *full duplex*. Contrast with *half duplex*.

dynamic reconfiguration (DR). The process of changing the network configuration (peripheral PUs and LUs) without regenerating complete configuration tables.

dynamic reconfiguration data set (DRDS). In VTAM, a data set used for storing definition data that can be applied to a generated communication controller configuration at the operator's request. See also *dynamic reconfiguration*.

EBCDIC. * Extended binary-coded decimal interchange code. A coded character set consisting of 8-bit coded characters.

echo. The return of characters to the originating start-stop device to verify that a message was sent correctly.

ED. Enciphered data.

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*.

element address. In SNA, a value in the element address field of the network address identifying a specific resource within a subarea. See *subarea address*.

enabled. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is now ready to establish LU-LU sessions. The LU can separately indicate whether this prevents it from acting as a primary logical unit (PLU) or as a secondary logical unit (SLU). See also *disabled* and *inhibited*.

enciphered data (ED). Data whose meaning is concealed from unauthorized users.

end user. In SNA, the ultimate source or destination of application data flowing through an SNA network. An end user may be an application program or a terminal operator.

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.

ESTAE. Extended specify task abnormal exit.

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*.

EXEC. In a VM operating system, a user-written command file that contains CMS commands, other user-written commands, and execution control statements, such as branches.

exit routine. Any of several types of special-purpose user-written routines. See *accounting exit routine, authorization exit routine, logon-interpret routine, virtual route selection exit routine, EXLST exit routine*, and *RPL exit routine*.

EXLST exit routine. In VTAM, a routine whose address has been placed in an exit list (EXLST) control block. The addresses are placed there with the EXLST macro instruction, and the routines are named according to their corresponding operand; hence DFASY exit routine, TPEND exit routine, RELREQ exit routine, and so forth. All exit list routines are coded by the VTAM application programmer. Contrast with *RPL exit routine*.

explicit command. In NetView, using a direct command to start an operation or to request information instead of stepping through the panel hierarchy to do so.

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*.

extended recovery facility (XRF). Software designed to minimize the effect of failures in MVS, VTAM, the host processor, or IMS/VS on sessions between IMS/VS and designated terminals. It provides an alternate subsystem to take over failing sessions.

extended specify task abnormal exit (ESTAE). In VTAM, an MVS macro instruction that provides recovery capability and gives control to the user-specified exit routine for processing, diagnosing an ABEND, or specifying a retry address.

fanout. A modem feature that permits up to four controllers to be attached to one modem. See also *tailing*.

feature. A particular part of an IBM product that a customer can order separately.

FID. Format identification.

field-formatted. Pertaining to a request or response that is encoded into fields, each having a specified format such as binary codes, bit-significant flags, and symbolic names. Contrast with *character-coded*.

filter. In NetView, a function that limits the data that is to be recorded on the data base and displayed at the terminal. See *recording filter* and *viewing filter*.

first speaker. In SNA, the LU-LU half-session defined at session activation as: (1) able to begin a bracket without requesting permission from the other LU-LU half-session to do so, and (2) winning contention if both half-sessions attempt to begin a bracket simultaneously. Contrast with *bidder*. See also *bracket protocol*.

flow control. In SNA, the process of managing the rate at which data traffic passes between components of the network. The purpose of flow control is to optimize the rate of flow of message units, with minimum congestion in the network; that is, to neither overflow the buffers at the receiver or at intermediate routing nodes, nor leave the receiver waiting for more message units. See also *pacing, session-level pacing*, and *virtual route pacing*.

format identification (FID) field. In SNA, a field in each transmission header (TH) that indicates the format of the TH; that is, the presence or absence of certain fields. TH formats differ in accordance with the types of nodes between which they pass. The six FID types are:

FID0, used for traffic involving non-SNA devices between adjacent subarea nodes when either or both nodes do not support explicit route and virtual route protocols.

FID1, used for traffic between adjacent subarea nodes when either or both nodes do not support explicit route and virtual route protocols.

FID2, used for traffic between a subarea node and an adjacent PU type 2 peripheral node.

FID3, used for traffic between a subarea node and an adjacent PU type 1 peripheral node.

FID4, used for traffic between adjacent subarea nodes when both nodes support explicit route and virtual route protocols.

FIDF, used for certain commands (for example, for transmission group control) sent between adjacent subarea nodes when both nodes support explicit route and virtual route protocols.

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.

full duplex (FDX). Synonym for *duplex*.

full-screen mode. A form of panel presentation in NetView where the contents of an entire terminal screen can be displayed at once. Full-screen mode can be used for fill-in-the-blanks prompting. Contrast with *line mode*.

function management (FM) profile. In SNA, a specification of various data flow control protocols (such as RU chains and data flow control requests) and FMD options (such as use of FM headers, compression, and alternate codes) supported for a particular session. Each function management profile is identified by a number.

gateway. The combination of machines and programs that provide address translation, name translation, and system services control point (SSCP) rerouting between independent SNA networks to allow those networks to communicate. A gateway consists of one gateway NCP and at least one gateway SSCP.

gateway host. A host node that contains a gateway system services control point (SSCP).

gateway NCP. An NCP that performs address translation to allow cross-network session traffic. The gateway NCP connects two or more independent SNA networks.

gateway node. Synonym for *gateway NCP*.

GCS. Group control system.

generation. The process of assembling and link editing definition statements so that resources can be identified to all the necessary programs in a network.

generic bind. Synonym for *session activation request*.

generic unbind. Synonym for *session deactivation request*.

group control system (GCS). A component of VM that provides multi-programming and shared memory support to virtual machines. It is a saved system intended for use with SNA products.

half-duplex. * In data communication, pertaining to an alternate, one way at a time, independent transmission. Contrast with *duplex*.

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*.

hard copy. A printed copy of machine output in a visually readable form; for example, printed reports, listings, documents, summaries, or network logs.

hardware monitor. The component of NetView that helps identify network hardware problems from a central control point using interactive display techniques.

HCF. Host Command Facility.

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*.

High Performance Option (HPO). A program product that is an extension of VM/SP. It provides performance and operation enhancements for large system environments.

hierarchy. In NetView, the resource types, display types, and data types that make up the organization, or levels, in a network.

Host Command Facility (HCF). An IBM program product that enables a user at a System/370 terminal to access applications in systems such as the 8100 or System/36.

host processor. (1) (TC97) A processor that controls all or part of a user application network. (2) In a network, the processing unit in which the data communication access method resides. (3) In an SNA network, the processing unit that contains a system services control point (SSCP).

HPO. High Performance Option.

hung terminal. A terminal to which a session is disrupted and that cannot send or receive commands.

I-frame. An SDLC frame type for transmitting data. Other SDLC frame types are for control, status, and supervisory information.

immediate command. In NetView, a command (such as GO, CANCEL, or RESET) that can be executed while a regular command is being processed.

IMR. Intensive mode recording.

IMS. Information Management System/Virtual Storage.

IMS/VS. Information Management System/Virtual Storage. Synonym for *IMS*.

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*.

indirect activation. In VTAM, the activation of a lower-level resource of the resource hierarchy as a result of SCOPE or ISTATUS specifications related to an activation command naming a higher-level resource. Contrast with *direct activation*.

Information/Management. A feature of the Information/System program product that provides

interactive systems management applications for problem, change, and configuration management.

information management data base. A system management tool that helps collect, organize, and keep track of problems and their resolutions.

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.

inhibited. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is not ready to establish LU-LU sessions. An initiate request for a session with an inhibited LU will be rejected by the SSCP. The LU can separately indicate whether this applies to its ability to act as a primary logical unit (PLU) or as a secondary logical unit (SLU). See also *enabled* and *disabled*.

initiate. A network services request sent from a logical unit (LU) to a system services control point (SSCP) requesting that an LU-LU session be established.

INN. Deprecated term for *intermediate routing node (IRN)*.

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*.

intensive mode recording (IMR). An NCP function that forces recording of temporary errors for a specified resource.

interconnected networks. SNA networks connected by gateways.

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.

intermediate routing node (IRN). In SNA, a subarea node with intermediate routing function. A subarea node may be a boundary node, an intermediate routing node, both, or neither, depending on how it is used in the network.

IRN. Intermediate routing node.

ISTATUS. In VTAM and NCP, a definition specification method for indicating the initial status of resources. See also *indirect activation*.

item. In CCP, any of the components, such as communication controllers, lines, cluster controllers, and terminals, that comprise an IBM 3710 Network Controller configuration.

JCL. Job control language.

job control language (JCL). * A problem-oriented language designed to express statements in a job that are used to identify the job or describe its requirements to an operating system.

Kanji. A character set of symbols used in Japanese ideographic alphabets.

keyword. (1) * One of the predefined words of an artificial language. (2) One of the significant and informative words in a title or document that describes the content of that document. (3) A symbol that identifies a parameter. (4) A part of a command operand that consists of a specific character string (such as DSNAME=).

line. See *communication line*.

line mode. A form of screen presentation in which the information is presented a line at a time in the message area of the terminal screen. Contrast with *full-screen mode*.

line control. Synonym for *data link control protocol*.

line probe. A generic term for the IBM 3867 Link Diagnostic Unit, a device that provides the NetView user with line quality data and other link information.

line speed. The number of binary digits that can be sent over a telecommunication line in one second, expressed in bits per second (bps).

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 connection. In SNA, the physical equipment providing two-way communication between one link station and one or more other link stations; for example, a telecommunication line and data circuit terminating equipment (DCE).

link level 2 test. See *link test*.

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 station. (1) In SNA, the combination of hardware and software that allows a node to attach to and

provide control for a link. (2) In VTAM, a named resource within a subarea node that represents another subarea node that is attached by a cross-subarea link. In the resource hierarchy, the link station is subordinate to the cross-subarea link.

link status (LS). Information maintained by local and remote modems.

link test. In SNA, a test in which one link station returns data received from another link station without changing the data in order to test the operation of the link. Three tests can be made; they differ in the resources that are dedicated during the test.

link-attached. In VTAM, pertaining to devices that are physically connected by a telecommunication line. Synonymous with *remote*. Contrast with *channel-attached*.

load module. (ISO) A program unit that is suitable for loading into main storage for execution; it is usually the output of a linkage editor.

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*.

local SNA major node. In VTAM, a major node whose minor nodes are channel-attached peripheral nodes.

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 off. To request that a session be terminated.

logoff. In VTAM, an unformatted session termination request.

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*.

logon-interpret routine. In VTAM, an installation exit routine, associated with an interpret table entry, that translates logon information. It may also verify the logon.

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.

macro instruction. (1) * (ISO) An instruction in a source language that is to be replaced by a defined sequence of instructions in the same source language. The macro instruction may also specify values for parameters in the instructions that are to replace it. (2) In assembler programming, an assembler language statement that causes the assembler to process a predefined set of statements called a macro definition. The statements normally produced from the macro definition replace the macro instruction in the program. See also *definition statement*.

maintenance and operator subsystem (MOSS). A subsystem of the 3725 Communication Controller that contains a processor and operates independently of the rest of the controller. It loads and supervises the 3725,

runs problem determination procedures, and assists in maintaining both hardware and software.

maintenance services. In SNA, one of the types of network services in system services control points (SSCPs) and physical units (PUs). Maintenance services provide facilities for testing links and nodes and for collecting and recording error information. See also *configuration services, management services, network services*, and *session services*.

major node. In VTAM, a set of resources that can be activated and deactivated as a group. See *node* and *minor node*.

management services. In SNA, one of the types of network services in system services control points (SSCPs) and logical units (LUs). Management services forward requests for network data, such as error statistics, and deliver the data in reply. See also *configuration services, maintenance services, network services*, and *session services*.

message. In VTAM, the amount of FM data transferred to VTAM by the application program with one SEND request.

migration. Installing a new version or release of a program when an earlier version or release is already in place.

minidisk. Synonym for *virtual disk*.

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.

MOSS. Maintenance and operator subsystem.

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.

multipoint link. A link or circuit interconnecting several link stations. Synonymous with *multidrop line*. Contrast with *point-to-point link*.

multi-tailed. When a communication controller with an NCP is attached to more than one host processor. See *twin-tailed*. See also *fanout* and *tailing*.

MVS. Multiple Virtual Storage operating system.

MVS/XA. Multiple Virtual Storage for Extended Architecture operating system.

name translation. In SNA network interconnection, converting logical unit names, logon mode table names, and class of service names used in one network into equivalent names to be used in another network. This function can be provided through NetView and invoked by a gateway system services control point (SSCP) when necessary. See also *alias name*.

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).

NCP major node. In VTAM, a set of minor nodes representing resources, such as lines and peripheral nodes, controlled by a network control program. See *major node*.

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*.

negotiable BIND. In SNA, a capability that allows two LU-LU half-sessions to negotiate the parameters of a session when the session is being activated.

NetView. An IBM program product used to monitor a network, manage it, and diagnose its problems.

NetView-NetView task (NNT). The task under which a cross-domain NetView session runs.

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.

network controller. A concentrator and protocol converter used with SDLC links. By converting protocols, which manage the way data is sent and received, the IBM 3710 Network Controller allows the use of non-SNA devices with an SNA host processor.

network identifier (network ID). The network name defined to NCPs and hosts to indicate the name of the network in which they reside. It is unique across all communicating SNA networks.

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 Management Vector Transport (NMVT). A record that contains solicited or unsolicited data about alerts, line statistics, and error records and that is issued by certain SNA resources to the host system. It can also be used to send requests on Link Problem Determination Aid (LPDA) lines for certain actions such as configuration changes.

network manager. A program or group of programs that is used to monitor, manage, and diagnose the problems of a network.

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 Performance Monitor (NPM). An IBM program product that uses VTAM to record performance data collected for various devices in a network.

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.

network product support (NPS). The function of NetView that provides operations control for the IBM 3710 Network Controller and the NCP. NPS provides operator commands to run diagnostics for link problem determination and to change product operating parameters.

network services (NS). In SNA, the services within network addressable units (NAUs) that control network operation through SSCP-SSCP, SSCP-PU, and SSCP-LU sessions. See *configuration services, maintenance services, management services*, and *session services*.

Network Terminal Option (NTO). An IBM program product that allows certain non-SNA devices to participate in sessions with SNA application programs in the host processor. NTO converts non-SNA protocol to SNA protocol when data is sent to the host from a non-SNA device and reconverts SNA protocol to non-SNA protocol when data is sent back to the device.

NLDM. Network Logical Data Manager.

NMVT. Network Management Vector Transport.

NNT. NetView-NetView task.

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*.

node name. In VTAM, the symbolic name assigned to a specific major or minor node during network definition.

node type. In SNA, a designation of a node according to the protocols it supports and the network addressable units (NAUs) that it can contain. Four types are defined: 1, 2, 4, and 5. Type 1 and type 2 nodes are also referred to as peripheral nodes and type 4 and type 5 nodes are also referred to as subarea nodes. See also *physical unit type*.

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.

NPM. Network Performance Monitor.

NPS. Network product support.

NTO. Network Terminal Option.

OBR. Outboard record.

online. Stored in a computer and accessible from a terminal.

operator. A person who operates a machine. See *network operator*.

operator profile. In NetView, the resources and activities a network operator has control over. The statements defining these resources and activities are stored in a file that is activated when the operator logs on.

operator station task (OST). The NetView task that establishes and maintains the online session with the network operator. There is one operator station task for each network operator who logs on to NetView.

OST. Operator station task.

pacing. In SNA, a technique by which a receiving component controls the rate of transmission of a sending component to prevent overrun or congestion. See *session-level pacing, send pacing*, and *virtual route (VR) pacing*. See also *flow control*.

pacing group. In SNA, (1) The path information units (PIUs) that can be transmitted on a virtual route before a virtual-route pacing response is received, indicating that the virtual route receiver is ready to receive more PIUs on the route. Synonymous with *window*. (2) The requests that can be transmitted on the normal flow in one direction on a session before a session-level pacing response is received, indicating that the receiver is ready to accept the next group of requests.

pacing group size. In SNA, (1) The number of path information units (PIUs) in a virtual route pacing group. The pacing group size varies according to traffic congestion along the virtual route. Synonymous with *window size*. (2) The number of requests in a session-level pacing group.

pacing response. In SNA, an indicator that signifies a receiving component's readiness to accept another pacing group; the indicator is carried in a response header (RH) for session-level pacing, and in a transmission header (TH) for virtual route pacing.

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.

performance class. In NetView, a description of an objective or commitment of performance. It consists of a performance class name, boundary definitions, response time definition, response time ranges, and response time percentage objectives. Sessions may be assigned performance classes.

performance error. Synonym for *temporary error*.

peripheral LU. In SNA, a logical unit representing a peripheral node.

peripheral node. In SNA, a node that uses local addresses for routing and therefore is not affected by changes in network addresses. A peripheral node requires boundary function assistance from an adjacent subarea node. A peripheral node is a type 1 or type 2 node connected to a subarea node.

peripheral PU. In SNA, a physical unit representing a peripheral node.

permanent error. A resource error that cannot be resolved by error recovery programs. Contrast with *temporary error*.

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.

PMX. Programmable operator message exchange.

POI. Programmed operator interface.

point-to-point link. A link that connects a single remote link station to a node; it may be either switched or non-switched. Contrast with *multipoint link*.

polling. (1) * Interrogation of devices for purposes such as to avoid contention, to determine operational status, or to determine readiness to send or receive data. (2) (TC97) The process whereby stations are invited, one at a time, to transmit.

positive response. A response indicating that a request was received and processed. Contrast with *negative response*.

PPT. Primary POI task.

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)*.

primary path. (1) The channel an operation first uses. (2) In CCP, one of two paths defined for information flow to and from the physical units attached to the network by means of an IBM 3710 Network Controller. The primary path is the path that is normally used. See *alternate path*.

primary POI task (PPT). The NetView subtask that processes all unsolicited messages received from the VTAM program operator interface (POI) and delivers them to the controlling operator or to the command processor. The PPT also processes the initial command specified to execute when NetView is initialized and timer request commands scheduled to execute under the PPT.

primary session. An extended recovery facility (XRF) session between the active application subsystem and a terminal user.

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.

profile. In the Conversational Monitor System (CMS) or the group control system (GCS), the characteristics defined by a PROFILE EXEC file that executes automatically after the system is loaded into a virtual machine. See also *operator profile.*

programmed operator. A VTAM application program that is authorized to issue VTAM operator commands and receive VTAM operator awareness messages. See also *solicited messages* and *unsolicited messages.*

programmed operator interface (POI). A VTAM function that allows programs to perform VTAM operator functions.

programmable operator message exchange (PMX). The interface that gives the NetView operator the ability to communicate with the programmable operator facility.

program temporary fix (PTF). A temporary solution or bypass of a problem diagnosed by IBM in a current unaltered release of the program.

protocol. (1) (CCITT/ITU) A specification for the format and relative timing of information exchanged between communicating parties. (2) (TC97) The set of rules governing the operation of functional units of a communication system that must be followed if communication is to be achieved. (3) In SNA, the meanings of, and the sequencing rules for, requests and responses used for managing the network, transferring data, and synchronizing the states of network components. See also *bracket protocol.* Synonymous with *line control discipline* and *line discipline.* See also *link protocol.*

PTF. Program temporary fix.

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.

RDT. Resource definition table.

real name. The name by which a logical unit (LU), logon mode table, or class of service (COS) table is known within the SNA network in which it resides.

receive pacing. In SNA, the pacing of message units that the component is receiving. See also *send pacing.*

RECFMS. Record formatted maintenance statistics.

RECMS. Record maintenance statistics.

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.

record formatted maintenance statistics (RECFMS). In NetView, a statistical record built by an SNA controller and usually solicited by the host.

recording filter. In NetView, the function that determines which events, statistics, and alerts are stored on a data base.

record maintenance statistics (RECMS). In NetView, an SNA error event record built from an NCP or line error and sent unsolicited to the host.

release. For VTAM to relinquish control of resources (communication controllers or physical units). See also *resource takeover.* Contrast with *acquire (2).*

remote. Synonym for *link-attached.*

remote modem self-test (RST). A check on hardware to identify a field-replaceable unit that is failing.

REQMS. Request for maintenance statistics.

request for maintenance statistics (REQMS). A host solicitation to an SNA controller for a statistical data record.

request header (RH). In SNA, control information preceding a request unit (RU). See also *request/response header (RH).*

request unit (RU). In SNA, a message unit that contains control information such as a request code or FM headers, end-user data, or both.

request/response header (RH). In SNA, control information, preceding a request/response unit (RU), that specifies the type of RU (request unit or response unit) and contains control information associated with that RU.

request/response unit (RU). In SNA, a generic term for a request unit or a response unit. See also *request unit (RU)* and *response unit*.

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.

resource definition table (RDT). In VTAM, a table that describes the characteristics of each node available to VTAM and associates each node with a network address. This is the main VTAM network configuration table.

resource takeover. In VTAM, action initiated by a network operator to transfer control of resources from one domain to another. See also *acquire (2)* and *release*. See *takeover*.

resource types. In NetView, a concept to describe the organization of panels. Resource types are defined as central processing unit, channel, control unit, and I/O device for one category; and communication controller, adapter, link, cluster controller, and terminal for another category. Resource types are combined with data types and display types to describe display organization. See also *data types* and *display types*.

response header (RH). In SNA, a header, optionally followed by a response unit (RU), that indicates whether the response is positive or negative and that may contain a pacing response. See also *negative response, pacing response*, and *positive response*.

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.

response time monitor (RTM). A feature available with the 3274 control unit to measure response times, which may be collected and displayed by NetView.

response unit (RU). In SNA, a message unit that acknowledges a request unit; it may contain prefix information received in a request unit. If positive, the response unit may contain additional information (such as session parameters in response to Bind Session), or if negative, contains sense data defining the exception condition.

return code. * A code [returned from a program] used to influence the execution of succeeding instructions.

RH. Request/response header.

ring. A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path.

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)*.

RPL exit routine. In VTAM, an application program exit routine whose address has been placed in the EXIT field of a request parameter list (RPL). VTAM invokes the routine to indicate that an asynchronous request has been completed. See *EXLST exit routine*.

RST. Remote modem self-test.

RTM. Response time monitor.

RU. Request/response unit.

SA. Subarea.

scope of commands. In NetView, the facility that provides the ability to assign different responsibilities to various operators.

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)*.

SCS. SNA character string.

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.

send pacing. In SNA, pacing of message units that a component is sending. See also *receive pacing*.

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 awareness (SAW) data. Data collected by NetView about a session that includes the session type, the names of session partners, and information about the session activation status. It is collected for LU-LU, SSCP-LU, SSCP-PU, and SSCP-SSCP sessions and for non-SNA terminals not supported by NTO. It can be displayed in various forms, such as most recent sessions lists.

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 unrecoverable 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 data. Data about a session, collected by NetView, that consists of session awareness data and session trace data.

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 partner. In SNA, one of the two network addressable units (NAUs) having an active session.

session services. In SNA, one of the types of network services in the system services control point (SSCP) and in the logical unit (LU). These services provide facilities for an LU or a network operator to request that the SSCP initiate or terminate sessions between logical units. See *configuration services* and *maintenance services*.

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-level pacing. In SNA, a flow control technique that permits a receiving connection point manager to control the data transfer rate (the rate at which it receives request units) on the normal flow. It is used to prevent overloading a receiver with unprocessed requests when the sender can generate requests faster than the receiver can process them. See also *pacing* and *virtual route pacing*.

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.

SMF. System management facility.

SNA. Systems Network Architecture.

SNA character string (SCS). A character string composed of EBCDIC controls, optionally intermixed with end-user data, that is carried within a request/response unit.

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 con-

trolling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

SNA terminal. A terminal that supports Systems Network Architecture protocols.

SNBU. Switched network backup.

solicited message. A response from VTAM to a command entered by a program operator. Contrast with *unsolicited message.*

span. In NetView, a user-defined group of network resources within a single domain. Each major or minor node is defined as belonging to one or more spans. See also *span of control.*

span of control. The total network resources over which a particular network operator has control. All the network resources listed in spans associated through profile definition with a particular network operator are within that operator's span of control.

SSCP. System services control point.

SSCP ID. In SNA, a number that uniquely identifies a system services control point (SSCP). The SSCP ID is used in session activation requests sent to physical units (PUs) and other SSCPs.

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.

start option. In VTAM, a user-specified or IBM-supplied option that determines certain conditions that are to exist during the time a VTAM system is operating. Start options can be predefined or specified when VTAM is started.

start-stop transmission. (1) (TC97) Asynchronous transmission such that a group of signals representing a character is preceded by a start element and is followed by a stop element. (2) Asynchronous transmission in which a group of bits is preceded by a start bit that prepares the receiving mechanism for the reception and registration of a character and is followed by at least one stop bit that enables the receiving mechanism to come to an idle condition pending the reception of the next character. See also *binary synchronous transmission* and *synchronous data link control.*

station. (1) One of the input or output points of a network that uses communication facilities; for example, the telephone set in the telephone system or the point where the business machine interfaces with the channel on a leased private line. (2) One or more computers, terminals, or devices at a particular location.

statistic. In NetView, a resource-generated data base record that contains recoverable error counts, traffic, and other significant data about a resource.

status code. In VTAM, information on the status of a resource as shown in a 10-character state code; for example, STATEACTIV for active.

status modifier. In VTAM, a specific character appearing in specific positions of the status code; for example, B in the 10th position indicates a backup.

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 address. In SNA, a value in the subarea field of the network address that identifies a particular subarea. See also *element address.*

subarea link. In SNA, a link that connects two subarea nodes.

subarea node. In SNA, a node that uses network addresses for routing and whose routing tables are therefore affected by changes in the configuration of the network. Subarea nodes can provide boundary function support for peripheral nodes. Type 4 and type 5 nodes are subarea nodes. See also *intermediate routing node, peripheral node,* and *node type.*

subarea PU. In SNA, a physical unit (PU) in a subarea node.

subsystem. A secondary or subordinate system, usually capable of operating independent of, or asynchronously with, a controlling system.

supervisor. The part of a control program that coordinates the use of resources and maintains the flow of processing unit operations.

supervisor call (SVC). A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system from inappropriate user entry. All operating system requests must be handled by SVCs.

supervisor call (SVC) instruction. An instruction that interrupts the program being executed and passes control to the supervisor so that it can perform a specific service indicated by the instruction.

suppression character. In NetView, a user-defined character that is coded at the beginning of a command list statement or a command to prevent the statement or command from appearing on the operator's terminal screen or in the network log.

SVC. (1) Supervisor call. (2) With X.25 NPSI, switched virtual circuit.

switched line. A communication line in which the connection between the communication controller and a remote link station is established by dialing.

switched network backup (SNBU). In VTAM, an optional facility that allows a user to specify, for certain types of PUs, a switched line to be used as an alternate path if the primary line becomes unavailable or unusable.

switched virtual circuit (SVC). An X.25 NPSI circuit that is dynamically established when needed. The X.25 equivalent of a switched line.

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 management facility (SMF). A standard feature of MVS that collects and records a variety of system and job-related information.

system monitor. The portion of the configuration image in a 3601 Finance Communication Controller that handles communications with control operators and records error statistics and other operational data.

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.

TAF. Terminal access facility.

tailing. A feature on a multi-channel modem that allows another modem link to be attached to one of the channels. See *multi-tailed* and *twin-tailed*. See also *fanout*.

takeover. The process by which the failing active subsystem is released from its extended recovery facility (XRF) sessions with terminal users and replaced by an alternate subsystem. See *resource takeover*.

task. A basic unit of work to be accomplished by a computer. The task is usually specified to a control program in a multiprogramming or multiprocessing environment.

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*.

TC. Transmission control.

TCU. Transmission control unit.

telecommunication line. Any physical medium such as a wire or microwave beam, that is used to transmit data. Synonymous with *transmission line*.

temporary error. A resource failure that can be resolved by error recovery programs. Synonymous with *performance error*. Contrast with *permanent error*.

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.

terminal access facility (TAF). In NetView, a facility that allows a network operator to control a number of subsystems. In a full-screen or operator control session, operators can control any combination of such subsystems simultaneously.

terminate. In SNA, a request unit that is sent by a logical unit (LU) to its system services control point (SSCP) to cause the SSCP to start a procedure to end one or more designated LU-LU sessions.

TG. Transmission group.

TH. Transmission header.

threshold. In NetView, refers to a percentage value set for a resource and compared to a calculated error-to-traffic ratio.

time sharing option (TSO). An optional configuration of the operating system that provides conversational time sharing from remote stations.

token. A sequence of bits passed from one device to another along the network. When the token has data appended to it, it becomes a frame.

token ring. A network, having a ring topology, that passes tokens from one attaching device to another. For example, the IBM Token-Ring Network.

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 control unit (TCU). A communication control unit whose operations are controlled solely by programmed instructions from the computing system to which the unit is attached; no program is stored or executed in the unit. Examples are the IBM 2702 and 2703 Transmission Controls. Contrast with *communication controller.*

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.*

transmission priority. In SNA, a rank assigned to a path information unit (PIU) that determines its precedence for being selected by the transmission group control component of path control for forwarding to the next subarea node of the route used by the PIU.

TSO. Time sharing option.

tutorial. Online information presented in a teaching format.

twin-tailed. When a communication controller with an NCP is attached to two host processors. See *multi-tailed.* See also *fanout* and *tailing.*

unbind. In SNA, a request to deactivate a session between two logical units (LUs). See also *session deactivation request.* Contrast with *BIND.*

unformatted. In VTAM, pertaining to commands (such as LOGON or LOGOFF) entered by an end user and sent by a logical unit in character form. The character-coded command must be in the syntax defined in the user's unformatted system services definition table. Synonymous with *character-coded.* Contrast with *field-formatted.*

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.

unsolicited message. A message, from VTAM to a program operator, that is unrelated to any command entered by the program operator. Contrast with *solicited message.*

upstream. In the direction of data flow from the end user to the host. Contrast with *downstream.*

user. Anyone who requires the services of a computing system.

user exit. A point in an IBM-supplied program at which a user exit routine may be given control.

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.*

using node. An NCP or modem directly attached to a host. For the command facility of NetView and for NCCF, the ID parameter of certain commands refers to the using node.

variable. In NetView, a character string beginning with & that is coded in a command list and is assigned a value during execution of the command list.

viewing filter. In NetView, the function that allows a user to select the data to be displayed on a terminal. All other stored data is blocked.

virtual disk. (1) A logical subdivision (or all) of a physical disk pack in the VM operating system that has its own virtual device address, consecutive virtual cylinders, and a volume table of contents (VTOC) or disk label identifier. (2) Synonymous with *minidisk*.

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 route pacing response (VRPRS). A non-sequenced, supervisory path information unit (PIU) that flows at network priority. It may overtake VR-sequenced PIUs and consists of a transmission header with no basic information unit (BIU) data.

virtual route selection exit routine. In VTAM, an optional installation exit routine that modifies the list of virtual routes associated with a particular class of service before a route is selected for a requested LU-LU session.

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 Storage Access Method (VSAM). An access method for direct or sequential processing of fixed and variable-length records on direct access devices. The records in a VSAM data set or file can be organized in logical sequence by a key field (key sequence), in the physical sequence in which they are written on the data set or file (entry-sequence), or by relative-record number.

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.

VM/SP. Virtual Machine/System Product operating system. Synonym for *VM*.

VR. Virtual route.

VRPRS. Virtual route pacing response.

VSAM. Virtual Storage Access Method.

VTAM. Virtual Telecommunications Access Method (IBM program product). Its full name is Advanced Communications Function for the Virtual Telecommunications Access Method.

VTAM application program. A program that has opened an ACB to identify itself to VTAM and can now issue VTAM macro instructions.

VTAM internal trace (VIT). A trace used in VTAM to collect data on channel I/O, use of locks, and storage management services.

VTAM operator command. A command used to monitor or control a VTAM domain.

window. (1) In SNA, synonym for *pacing group*. (2) A small amount of information in a framed-in area on a panel that overlays part of the panel.

window size. In SNA, synonym for *pacing group size*.

wrap. The continuation of an operation from the maximum addressable location in storage to the first addressable location.

wrap count. In NetView, the number of events that can be retained on the data base for a specific resource.

XRF. Extended recovery facility.

X.21. See *Recommendation X.21 (Geneva 1980)*.

X.25. See *Recommendation X.25 (Geneva 1980)*.

2-wire. A type of coupler that has two wires attached to it. These two wires connect to one telephone line.

4-wire. A type of coupler that has four wires attached to it. These four wires connect to two telephone lines.

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Release 2

Publication No. SC30-3364-1

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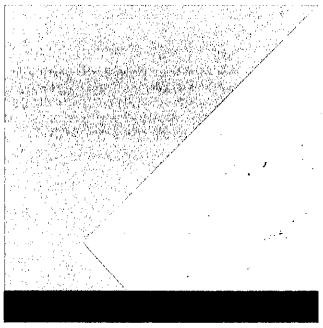
IBM®

Publication Number
SC30-3364-1

File Number
S370/4300/30XX-50

Program Numbers
5665-361 (MVS/370)
5665-362 (MVS/XA)
5664-204 (VM)

Printed in USA



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