

Tivoli® NetView® for z/OS™



# Automated Operations Network User's Guide

*Version 5 Release 1*



Tivoli® NetView® for z/OS™



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*Version 5 Release 1*

## Tivoli NetView for z/OS Automated Operations Network User's Guide

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### Programming Interfaces

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

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## Preface

This document describes how to use the NetView<sup>®</sup> automation functions to improve system and network efficiency.

NetView automation also eliminates or simplifies much of the routine work that operators perform.

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## Who Should Read This Document

This document is for those who use Automated Operations Network (AON) to perform network automation. The book is intended for those who are new to automation and for network operators who need to control and to manage the NetView network automation policy and functions.

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## What This Document Contains

This book includes the following parts, which contain chapters, and appendixes:

- “Part 1. Introducing Automated Operations Network” on page 1 contains background material that you should know before planning an automation environment.  
Many benefits result from automating network operations. The chapters in this part of the book provide introductory information about using the NetView program and associated products to automate systems and networks.
- “Part 2. Using AON/SNA” on page 87 describes how you can use AON in a Systems Network Architecture (SNA) network.
- “Part 3. Using AON with TCP/IP” on page 141 describes how to automate tasks in a TCP/IP network.
- “Appendix A. Implementing X.25 Monitoring Support” on page 209 describes how X.25 monitoring support can help in problem determination.
- “Appendix B. Using the Browse Facility” on page 215 explains about browsing logs.
- “Appendix C. AON Command Synonyms” on page 217 contains AON command synonyms, which are used for automation.

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## Publications

This section lists prerequisite and related documents. It also describes how to access Tivoli<sup>®</sup> publications online, how to order Tivoli publications, and how to make comments on Tivoli publications.

### Prerequisite and Related Documents

To read about the new functions offered in this release, refer to the *Tivoli NetView for z/OS<sup>™</sup> Installation: Migration Guide*.

You can find additional product information on these Internet sites:

Table 1. Resource Web sites

IBM <sup>®</sup>	<a href="http://www.ibm.com/">http://www.ibm.com/</a>
Tivoli Systems	<a href="http://www.tivoli.com/">http://www.tivoli.com/</a>

## Preface

Table 1. Resource Web sites (continued)

Tivoli NetView for z/OS	<a href="http://www.tivoli.com/nv390">http://www.tivoli.com/nv390</a>
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The Tivoli NetView for z/OS Web site offers demonstrations of the NetView product, related products, and several free NetView applications you can download. These applications can help you with tasks such as:

- Getting statistics for your automation table and merging the statistics with a listing of the automation table
- Displaying the status of a JES job or cancelling a specified JES job
- Sending alerts to the NetView program using the program-to-program interface (PPI)
- Sending and receiving MVS™ commands using the PPI
- Sending TSO commands and receiving responses

## Accessing Publications Online

You can access many Tivoli publications online using the Tivoli Information Center, which is available on the Tivoli Customer Support Web site:

<http://www.tivoli.com/support/documents/>

These publications are available in PDF format. Translated documents are also available for some products.

## Ordering Publications

You can order many Tivoli publications online at the following Web site:

<http://www.ibm.com/shop/publications/order>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968
- In other countries, for a list of telephone numbers, see the following Web site:  
[http://www.tivoli.com/inside/store/lit\\_order.html](http://www.tivoli.com/inside/store/lit_order.html)

## Providing Feedback about Publications

We are very interested in hearing about your experience with Tivoli products and documentation, and we welcome your suggestions for improvements. If you have comments or suggestions about our products and documentation, contact us in one of the following ways:

- Send an e-mail to [pubs@tivoli.com](mailto:pubs@tivoli.com).
- Complete our customer feedback survey at the following Web site:  
<http://www.tivoli.com/support/survey/>

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## Contacting Customer Support

If you have a problem with any Tivoli product, you can contact Tivoli Customer Support. See the *Tivoli Customer Support Handbook* at the following Web site:

<http://www.tivoli.com/support/handbook/>

The handbook provides information about how to contact Tivoli Customer Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country you are in
- What information you should gather before contacting support

**Note:** Additional support for Tivoli NetView for z/OS is available at the NetView for z/OS Web site:

<http://www.tivoli.com/nv390>

Under Related Documents, select **Other Online Sources**.

The page displayed contains a list of newsgroups, forums, and bulletin boards.

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## Accessibility Information

Refer to *Tivoli NetView for z/OS User's Guide* for information about accessibility.

## Keyboard Access

Standard shortcut and accelerator keys are used by the product and are documented by the operating system. Refer to the documentation provided by your operating system for more information.

Refer to *Tivoli NetView for z/OS User's Guide* for more information about keyboard access.

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## Conventions Used in This Document

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

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

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## Platform-specific Information

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

# Terminology

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For a list of Tivoli NetView for z/OS terms and definitions, refer to:

<http://www.networking.ibm.com/nsg/nsgmain.htm>

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

### **NetView**

- Tivoli NetView for z/OS Version 5 Release 1
- Tivoli NetView for OS/390<sup>®</sup> Version 1 Release 4
- Tivoli NetView for OS/390 Version 1 Release 3
- TME 10<sup>™</sup> NetView for OS/390 Version 1 Release 2
- TME 10 NetView for OS/390 Version 1 Release 1
- IBM NetView for MVS Version 3
- IBM NetView for MVS Version 2 Release 4
- IBM NetView Version 2 Release 3

**MVS** OS/390 or z/OS operating systems.

### **RACF<sup>®</sup>**

RACF is a component of the SecureWay<sup>®</sup> Security Server for z/OS and OS/390, providing the functions of authentication and access control for OS/390 and z/OS resources and data, including the ability to control access to DB2<sup>®</sup> objects using RACF profiles. Refer to:

<http://www-1.ibm.com/servers/eserver/zseries/zos/security/racfss.html>

### **Tivoli Enterprise<sup>™</sup> software**

Tivoli software that manages large business networks.

### **Tivoli environment**

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

### **TME 10**

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

### **V and R**

Specifies the version and release.

### **VTAM<sup>®</sup> and TCP/IP**

VTAM and TCP/IP are included in the IBM Communications Server element of the OS/390 and z/OS operating systems. Refer to

<http://www.ibm.com/software/network/commserver/about/>.

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

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

## Reading Syntax Diagrams

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

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

Table 2. How the Position of Syntax Diagram Elements Is Used

Element Position	Meaning
On the command line	Required
Above the command line	Default
Below the command line	Optional

### Required Syntax

The command name, required keywords, variables, and operands are always on the main syntax line. Figure 1 specifies that the *resname* variable must be used for the CCPLOADF command.

#### CCPLOADF

▶▶—CCPLOADF *resname*—————▶▶

Figure 1. Required Syntax Elements

Keywords and operands are written in uppercase letters. Lowercase letters indicate variables such as values or names that you supply. In Figure 2, MEMBER is an operand and *membername* is a variable that defines the name of the data set member for that operand.

#### TRANSMMSG

▶▶—TRANSMMSG MEMBER=*membername*—————▶▶

Figure 2. Syntax for Variables

### Optional Keywords and Variables

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

#### DISPREG

▶▶—DISPREG  
           └─ ID=*resname* ─┘—————▶▶

Figure 3. Optional Syntax Elements

## Preface

### Default Values

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

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

Figure 4 shows the default keyword `STEP` above the main line and the rest of the optional keywords below the main line. It also shows the default values for operands `MODNAME=*` and `OPTION=*` above and below the main line.

#### RID

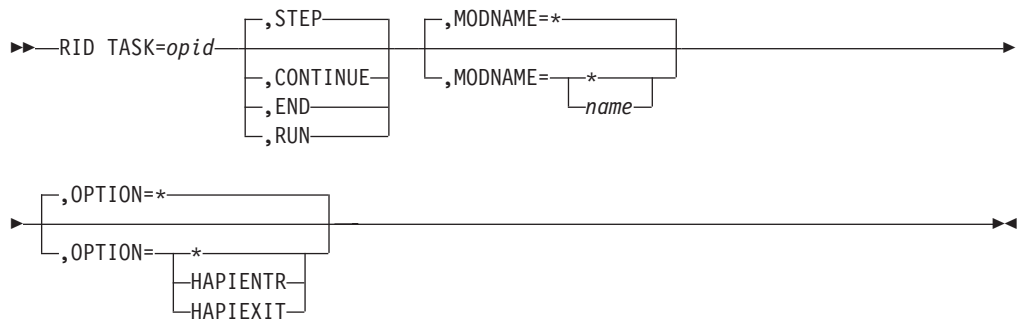


Figure 4. Sample of Defaults Syntax

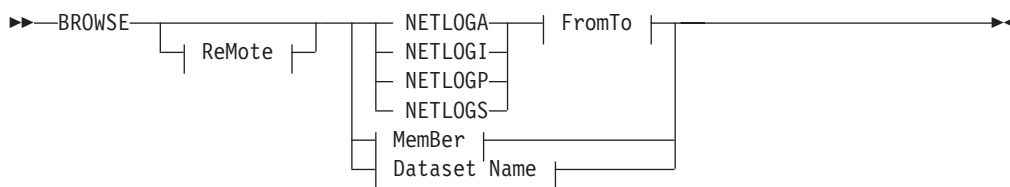
### Long Syntax Diagrams

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

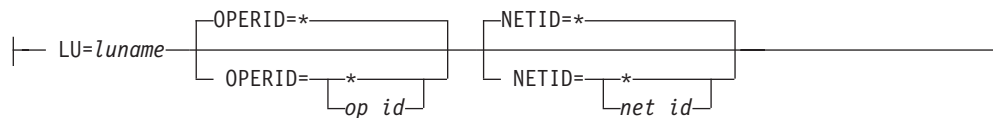
### Syntax Fragments

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

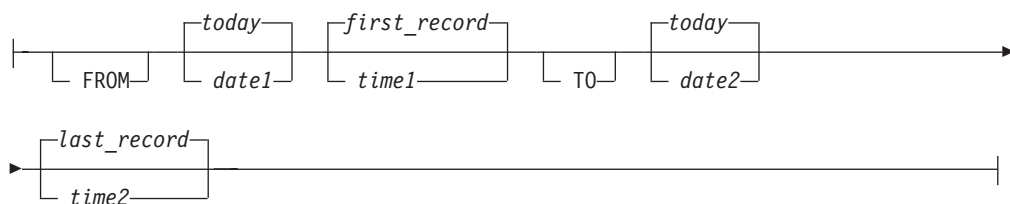
**BROWSE**



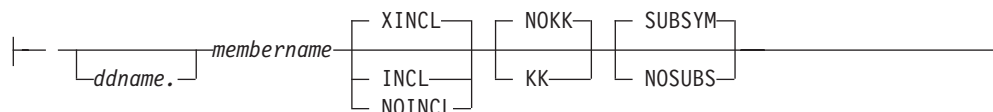
**ReMote:**



**FromTo:**



**MemBer:**



**Dataset Name:**



Figure 5. Sample Syntax Diagram with Fragments

**Commas and Parentheses**

Required commas and parentheses are included in the syntax diagram. When an operand has more than one value, the values are typically enclosed in parentheses and separated by commas. In Figure 6 on page xiv, the OP operand, for example, contains commas to indicate that you can specify multiple values for the *testop* variable.

## Preface

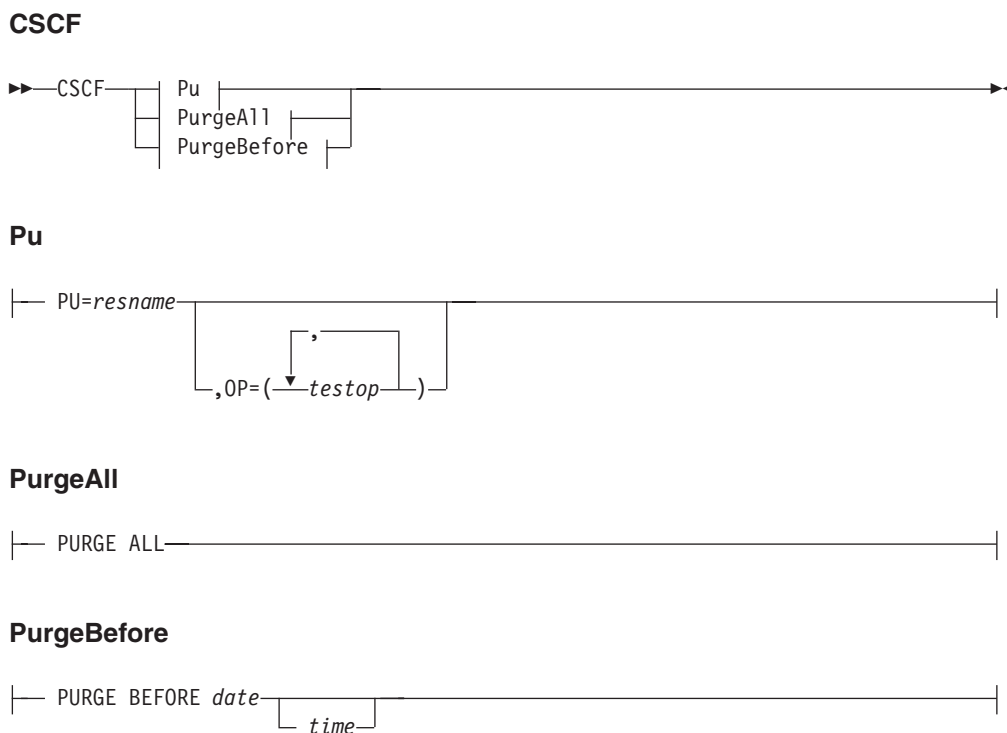


Figure 6. Sample Syntax Diagram with Commas

If a command requires positional commas to separate keywords and variables, the commas are shown before the keyword or variable, as in Figure 4 on page xii.

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

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

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

## Highlighting, Brackets, and Braces

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

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

Table 3. Syntax Elements Examples

This element...	Looks like this...
Keyword	CCPLOADF
Variable	<i>resname</i>
Operand	MEMBER= <i>membername</i>
Default	<u>today</u> or INCL



## Abbreviations

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



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---

## Chapter 1. Introducing Automated Operation Network (AON)

This chapter describes how to use the Automated Operations Network (AON) component of NetView by showing you how to display and use its panels. Many of the AON functions can be accessed without displaying a panel if you provide all the parameters with the command and function. For a list of these commands, refer to the *Tivoli NetView for z/OS Command Reference*.

The AON operator interface enables you to use operator functions to view color-coded status displays, change automation settings, receive messages, issue commands, and perform many other functions that control automation and resources.

To use the operator interface, log on to NetView. If you log on as a NetView-NetView task (NNT), the operator interface is bypassed; however, you can use AON by issuing commands from the command line.

---

### Displaying the AON: Operator Commands Main Menu

You can display the operator interface from any command line within NetView. The main panel of the AON operator interface is the AON: Operator Commands Main Menu panel.

To display the AON: Operator Commands Main Menu panel:

1. Type **AON** on the command line.
2. Press **Enter**.

The AON: Operator Commands Main Menu panel shown in Figure 7 is displayed.

```
EZLK0000          AON: Operator Commands Main Menu          CNM01

Select an option

  0.  Tutorial
  1.  AON Base Functions
  2.  SNA Automation
  3.  TCP/IP Automation

Command ==>
F1=Help      F2=End      F3=Return      F6=Roll
              F12=Cancel
```

Figure 7. AON: Operator Commands Main Menu Panel

If an automation component is not enabled, the menu option for that component is displayed in a different, dimmer color from that of the installed options.

If you use the AON functions to disable all or part of AON automation, the option on the main menu panel for the disabled component is displayed in the dimmer color. The main menu panel enables you to access base AON, SNA, and TCP/IP automation functions.

---

## Displaying the AON Base Functions Panel

To access AON functions, use the AON Base Functions panel:

1. Display the **AON: Operator Commands Main Menu** panel.

**Note:** To display the AON: Operator Commands Main Menu panel, see “Displaying the AON: Operator Commands Main Menu” on page 3.

2. On the AON: Operator Commands Main Menu panel, type **1** in the entry field.
3. Press **Enter**.

The AON: Base Functions panel shown in Figure 8 is displayed.

**Note:** You can also display the AON: Base Functions panel by typing **AON 1** on any command line. The following chapters explain how to use several of the options on this panel.

```
EZLK0100          AON: Base Functions          CNM01

Select an option

  _ 0. Tutorial
    1. Help Desk
    2. AutoView
    3. DDF
    4. Automation Settings
    5. Cross Domain Functions
    6. Timer
    7. Task and Log Maintenance
    8. Support Functions
    9. Display the Inform Log

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

*Figure 8. AON: Base Functions Panel*

---

## Understanding How a Panel Is Organized

This section describes using the AON operator interface panels. The panels have a similar structure. Each panel has a heading at the top that displays basic information about the panel. Under the heading, many panels display lists or rows of data, as well as interactive entry fields, such as menus and data entry fields.

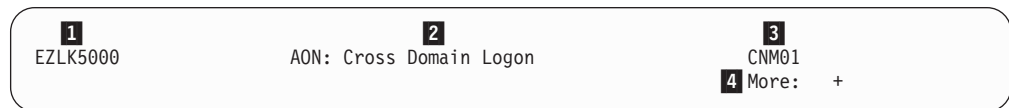
Some panels display pop-up command windows, providing additional entry fields for issuing commands. Some panels support selection lists from which you can select previously defined entries. Some panels support the use of wildcard characters.

Finally, each panel has an area near the bottom where messages are displayed in response to actions you issue on the panel. At the bottom of each panel, a set of function keys is available for navigating through the interface.

Each of these panel parts is described in detail in the following subsections.

### Headings

The heading is located at the top of a panel, as shown in Figure 9, and provides information about the panel.



*Figure 9. Example of a Panel Heading*

- 1** The panel ID.
- 2** The name of the panel.
- 3** The domain name. (The name is not displayed on all panels.)
- 4** If there is more information for this panel, you can display the information by scrolling the panel. (This field is not displayed on all panels.)

**Note:** When applicable, the time of day is also displayed on panels.

### Entry Fields

Most panels have menu choices or data entry fields, as shown in Figure 10 on page 6, in which you can type data to be processed. Menu choices and data entry fields differ from panel to panel.

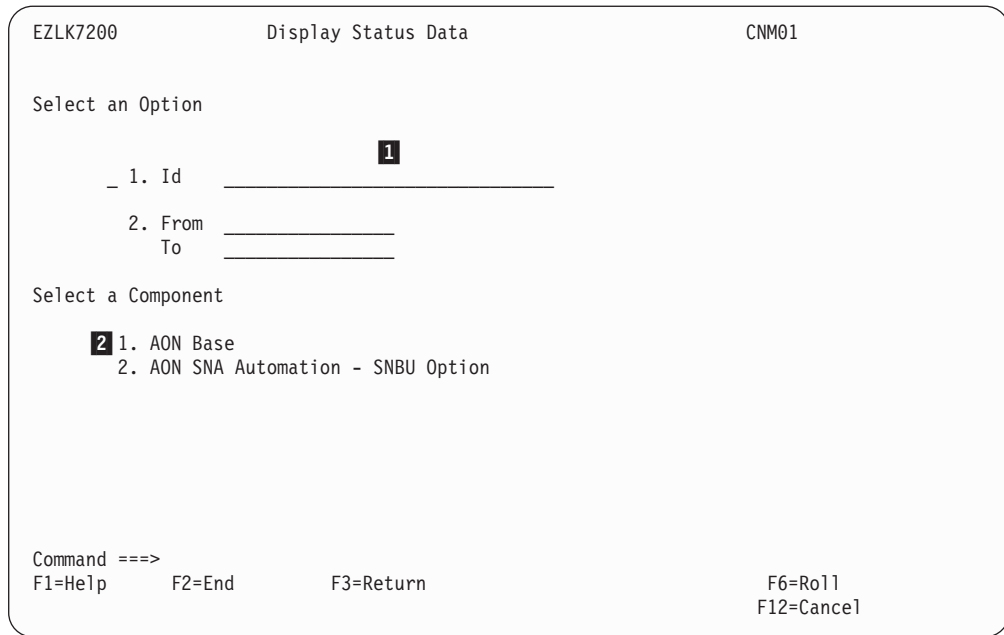


Figure 10. Example of a Panel with Entry Fields and Menu Options

- 1** An example of a data entry field
- 2** An example of a menu choice entry field

## Data Panels

Some panels display data arranged in columns or rows for informational purposes. The Domain, Status, Operator, Type, Init, and Description columns shown in Figure 11 are examples. The data that is displayed on a particular panel differs from panel to panel.

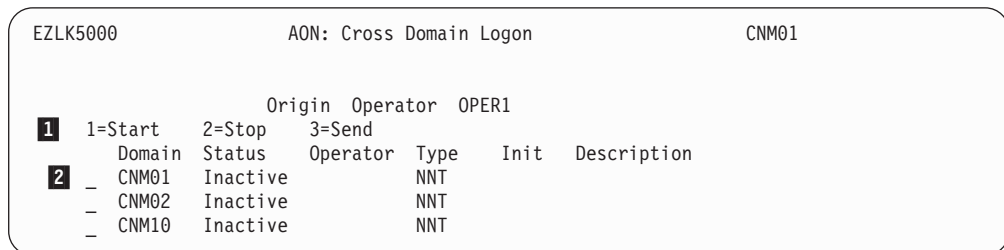


Figure 11. Example of Information Displays

- 1** Action codes
- 2** Entry fields

## Pop-up Command Windows

On some panels, the F4 key is activated. When you press the F4 key, a pop-up window is displayed that lists commands that you can issue against a resource. The commands that are displayed in the pop-up window depend on the type of



resource that has been selected. Figure 12 shows an example of a pop-up command window.

```

EZLK5100                AON: Cross Domain Logon                CNM01

                                Origin Operator OPER1
                                1=Start  2=Stop  3=Send
Domain  Status  Operator  Type      : Select an Action      :
- AON01  Inactive      NNT      :                          :
- AON02  Inactive      NNT      : To act on a single session: :
- AOC10  Inactive      NNT      : 1. Start CNM01 Session   :
- CNM10  Inactive      NNT      : 2. Stop CNM01 Session    :
- AOF10  Inactive      NNT      : 3. Send to CNM01         :
- AOC06  Inactive      NNT      : 4. Start New RMTCMD Session :
- CNM06  Inactive      NNT      : 5. View Start Error Message :
- AOC05  Inactive      NNT      : To act on all defined sessions: :
- CNM05  Inactive      NNT      : 6. Start All Sessions    :
- CNM01  Inactive      RMTCMD   : 7. Stop All Sessions     :
                                :                          :
                                :                          :
                                : F1=Help                  F12=Cancel:
                                :                          :
To issue commands, tab to the Domain and press F4.

Command ==>>>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward  F8=Forward

```

Figure 12. Pop-up Command Window

From this pop-up command window, you can choose any of the seven actions.

## Message Display Area

AON frequently displays messages on the panels of the operator interface in response to actions. These messages are displayed in the lower portion of a panel, where the message EZL910I ENTER A SELECTION is displayed in Figure 13.

```

EZL910I ENTER A SELECTION
Command ==>>>
F1=Help      F2=Main Menu  F3=Return  F5=Refresh  F6=Roll
F7=Backward  F8=Forward    F12=Cancel

```

Figure 13. Message Displayed in Message Area

These messages can be of various types. Some tell you whether a function completed successfully, and others tell you what further actions you need to take, why a function failed, and other useful information.

**Note:** Some functions use the NetView command facility to display messages. For example, if you are defined as a notification operator for a resource, AON optionally sends messages to you when there are problems with that resource. Those messages are displayed on your NetView command facility and stay there until you clear them. You can use the DM command to clear them.

Online help for AON messages is available. To view message help:

1. Type **HELP** *messagenumber*.

2. Press **Enter**.

For more information about AON messages, refer to the *Tivoli NetView for z/OS Messages and Codes*.

## Function Keys (F Keys)

The function keys are displayed at the bottom of each panel (except tutorials), as shown in Figure 14. Use the function keys to perform functions on the interface.

F1=Help	F2=Main Menu	F3=Return	F4=Commands	F5=Refresh	F6=Roll
F7=Forward	F8=Backward		F10=Left	F11=Right	F12=Cancel

Figure 14. Function Keys

The keys used on each panel vary according to the functions required. The following keys usually have these functions:

- F1** Displays contextual help. Detailed help for the entire AON product, the AON base, or the specialized automation components is included in the tutorials. The Help key shows you only the instructions you need for using the panel currently displayed.
- F2** Displays the AON: Operator Commands Main Menu panel.
- F3** Displays the previous panel.
- F4** Displays a pop-up command window.
- F5** Updates the information on the panel.
- F6** Rolls the display among the various active functions.
- F7** Moves the interface backward one panel if MORE is indicated.
- F8** Moves the interface forward one panel if MORE is indicated.
- F10** Scrolls the panel to the left.
- F11** Scrolls the panel to the right.
- F12** Cancels the current function.

## Selection Lists

Some of the panels of the AON interface display the following prompt beside an entry field:

(Type ? for a selection list)

Use selection lists to see a complete list of the available responses.

## Using the Wildcard Function

Some of the fields of the AON interface require that you fill in information and specify search parameters. When you want to locate all instances of a certain resource you can define your search parameters with a *wildcard* character. AON enables you to use two different wildcard characters:

- &** Multiple character wildcard
- %** Single character wildcard

For example, both PU0& and PU%% are matches for PU01. ENTRY=ENVI\* searches for all entries starting with ENVI.

---

## Navigating through AON Panels

You can navigate through the panels of the AON operator interface by using several methods:

- Selecting menu choices
- Using fast path commands
- Using AON command synonyms

Selecting menu choices enables new AON operator interface users to navigate through the panels. Users experienced with the arrangement of the panels throughout the interface can use the fast path method or command synonyms to navigate through the panels more quickly. Each of these methods of navigation is described in the following subsections.

### Selecting Menu Options

One way to navigate the AON operator interface is by selecting menu choices. The following example shows how you use menu choices to display the comprehensive AON tutorial:

1. Display the AON: Operator Commands Main Menu panel shown in Figure 7 on page 3.

**Note:** To display the AON: Operator Commands Main Menu panel, see “Displaying the AON: Operator Commands Main Menu” on page 3.

2. Type **0** for Tutorial in the Select an option entry field.
3. Press **Enter**.

The AON tutorial shown in Figure 15 is displayed:

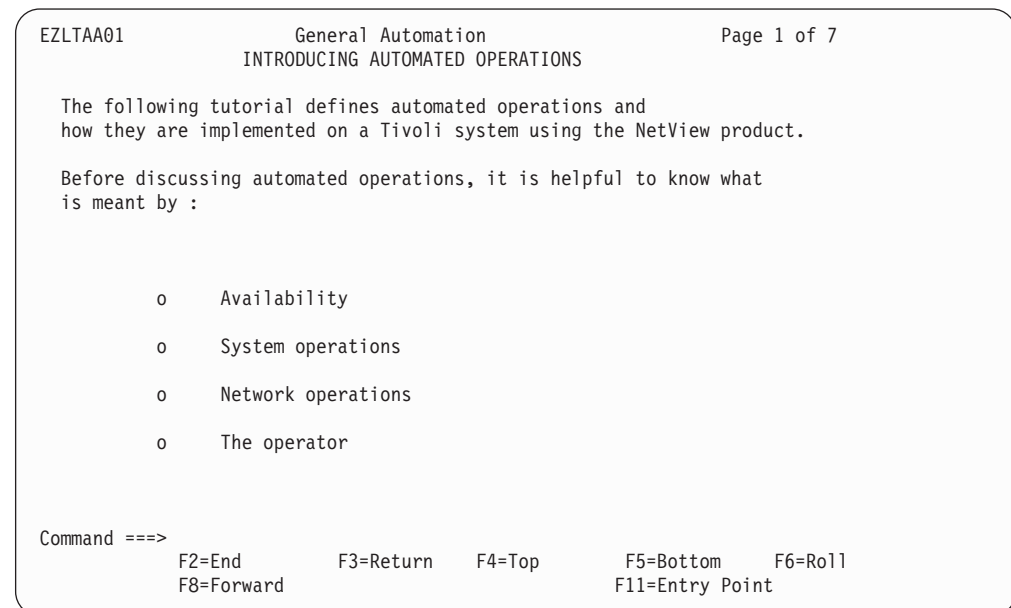


Figure 15. AON Tutorial

## Using Fast Path Commands

Fast path commands enable you to display a panel directly from a panel that is not adjacent without displaying intervening panels. You can use the fast path from the NetView command facility or from any command line in the AON operator interface.

For example, to use the fast path method to display the tutorial shown in Figure 15 on page 9:

1. Type **AON 0** on any command line.
2. Press **Enter**.

You can use the fast path method to reach a panel that is up to three levels away from the AON: Operator Commands Main Menu.

For example, the Reinitialize Automation panel is three levels below the AON: Operator Commands Main Menu panel. To display that panel by using the fast path method:

1. Type **AON 1.8.2** on any command line.
2. Press **Enter**.

The AON: Reinitialize Automation panel is displayed:

```
EZLK8200          AON: Reinitialize Automation          CNM01

Select Confirmation Option . . _ 1. Confirm
                               2. Cancel

Reload with Automation Table . . DSITBL01
Generate Listing File      . . LISTNAME

Reload with Control File   . . NVPOLICY

Trace Setting              . . OFF

Command ==>
F1=Help      F2=Main Menu  F3=Return

                               F6=Roll
                               F12=Cancel
```

Figure 16. AON: Reinitialize Automation Panel

## Using AON Command Synonyms

You can also display specific panels by using AON command synonyms. AON command synonyms are commands you type on the command line to display another panel.

**Note:** If you issue a command from a panel and you select an option or fill in an input field at the same time, the command takes precedence over the panel entries. AON does not process any of the panel entries.

As an example, use the command synonym AONINFO to display the AON tutorial in Figure 15 on page 9.

1. Type **AONINFO** on any NetView or AON command line.
2. Press **Enter**.

The AON tutorial shown in Figure 15 on page 9 is displayed.

You can use command synonyms to reach a panel that is up to three levels away from the AON: Operator Commands Main Menu.

For example, the Reinitialize Automation panel is three levels below the AON: Operator Commands Main Menu panel. To display that panel by using the command synonym:

1. Type **AONINIT** on any command line.
2. Press **Enter**.

The AON: Reinitialize Automation panel shown in Figure 16 on page 10 is displayed.

---

## Using AON Commands

You can issue AON commands from any NetView command line.

For most AON functions, you can bypass the operator interface completely by using these commands. This enables you to use the automation functions from within your own user-written programs. To issue commands, type the command and its parameters. If you issue the command with all of the required parameters entered correctly, AON processes the command without going through the operator interface. If you enter the command name without any parameters or with the parameters entered incorrectly, AON displays the appropriate operator interface panel.

**Note:** If you issue a command from a panel and you select an option or fill in an input field at the same time, the command takes precedence over the panel entries. AON does not process any of the panel entries.

---

## Getting Help

To access help for AON, use the extensive online help facilities that come with the program. AON offers online tutorials, which answer basic questions about how AON works, and contextual help, which answers questions about the fields of a particular panel.

### Displaying the AON Tutorial

The AON comprehensive tutorial is one of several help facilities that come with the AON program. This tutorial explains how the AON program works by defining automated operations and how they are implemented on a Tivoli system using AON.

To display the main AON tutorial:

1. Display the **AON: Operator Commands Main Menu** panel.

**Note:** To display the AON: Operator Commands Main Menu panel, see “Displaying the AON: Operator Commands Main Menu” on page 3.

2. On the AON: Operator Commands Main Menu panel, type **0** in the entry field.

3. Press **Enter**. The following panel is displayed:

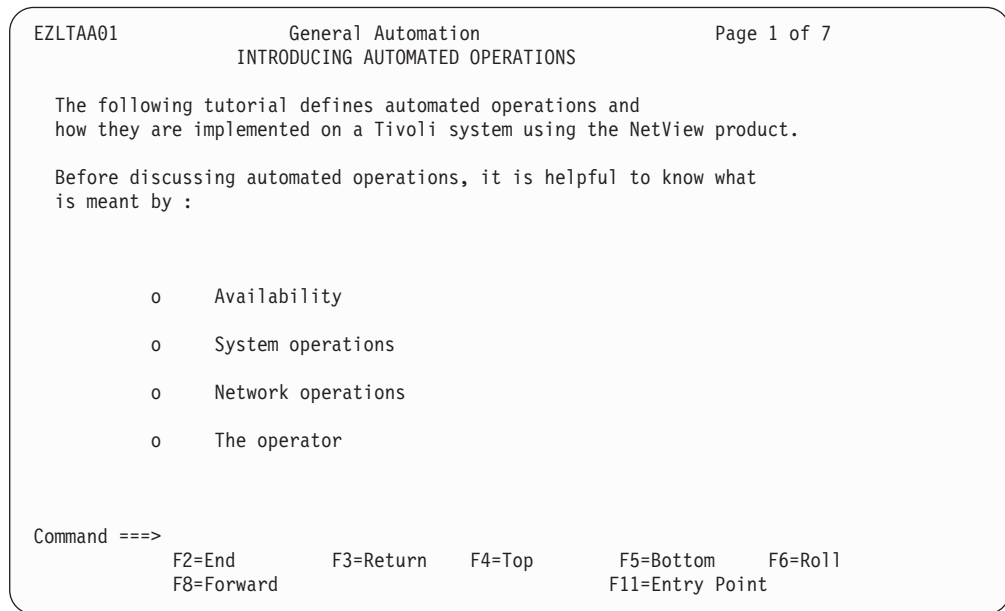


Figure 17. AON Tutorial

As you can see in the top right corner of the panel, the first AON tutorial consists of seven panels. Use the function keys at the bottom of the panel to scroll through the panels.

## Using Contextual Help

In addition to extensive online tutorials, AON provides contextual help for each of the panels of the operator interface. Press **F1** to display help for a panel and the entry fields on it.

## Using Message Help

You can get online help for any of the messages you receive. To see the message help:

1. Type **HELP** *message number*.
2. Press **Enter**.

A help panel is displayed that explains the message.

For more information about AON messages, refer to the *Tivoli NetView for z/OS Messages and Codes*.

## Using Command Help

You can get online help for most of the AON commands. If the command takes you to a panel, you can display online help for that panel. If the command performs other functions, you can display a help panel that explains what you can do with the command.

To see the online help for a command:

1. Type **HELP** *command name* on the command line of any panel.
2. Press **Enter**.

A help panel is displayed for the command.





---

## Chapter 2. Solving Network Problems with Help Desks

You can solve problems on the network by using automated help desks. You use the AON: Help Desk panel to display all of the help desks that are available to you. The help desks for all of the components function similarly, but the displays and options vary according to the needs of the type of network.

Any automation component that has a defined help desk is displayed as an option on the AON: Help Desk panel. You can use help desks to display color-coded pictures of how resources are connected to networks, stop and start resources, perform problem determination, and issue commands to solve network problems.

This chapter describes how to use the AON: Help Desk panel. “Using the SNA Help Desk” on page 17 provides an overview of the SNA Help Desk.

---

### Displaying the AON Help Desk

To display the AON Help Desk panel:

1. Display the Base Functions panel.

**Note:** To display the Base Functions panel, see “Displaying the AON Base Functions Panel” on page 4.

2. Type **1** in the entry field.
3. Press **Enter**.

The AON: Help Desk panel shown in Figure 18 is displayed.

**Note:** You can also display the AON: Help Desk panel by entering **AON 1.1** or **AONHD** on any command line.

```
EZLK1000          AON: Help Desk          CNM01

Resource Name _____

Resource Type _____ (Optional)

Select an Option - n displays the NetView HelpDesk

(Optional) _ 0. All
              1. SNA

TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
```

Figure 18. AON: Help Desk Panel

The AON: Help Desk panel displays the following entry fields and options:

**Resource Name**

Enables you to specify the resource that is having a problem. The resource name is required.

**Resource Type**

Enables you to specify the type of resource. For example, resource types in the SNA environment include physical unit (PU), logical unit (LU), Network Control Program (NCP), and application (APPL). The resource type is optional.

**Select an Option**

Enables you to specify the help desk for the kind of network on which the specified resource is located. You can select one of the following options:

**All** Searches all of the automation components listed on the panel for the resource and displays the resource on its help desk.

**SNA** Searches the SNA automation component for the resource.

If you leave this field blank, AON searches all of the automation components for the resource.

The following sections explain how to use each option.

---

## Searching AON Components for a Resource

To search all AON components listed on the AON: Help Desk panel for a resource and display the resource in each of the help desks:

1. Display the AON: Help Desk panel.

**Note:** To display the AON: Help Desk panel, see “Displaying the AON Help Desk” on page 15.

2. Type the name of the resource in the Resource Name field on the AON Help Desk panel.
3. Optionally, type the resource type in the Resource Type field.
4. Leave the Select an Option entry field blank.
5. Press **Enter**.

If the resource is defined to more than one automation component, the AON: Component Selection panel shown in Figure 19 on page 17 lists each occurrence of the resource.



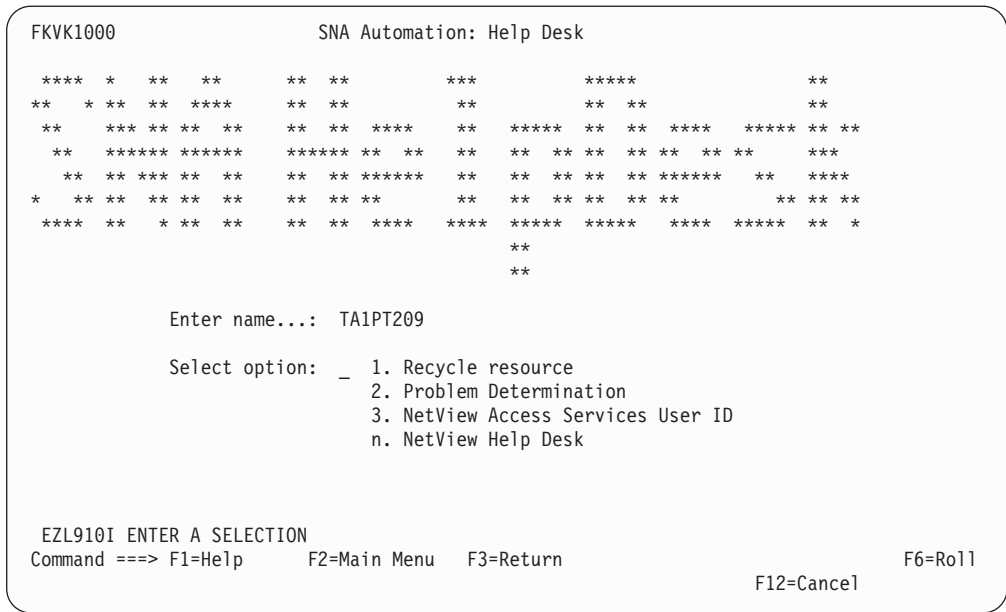


Figure 20. SNA Automation: Help Desk Panel

6. To search for a different resource than is displayed in the Enter Name field, type over the existing resource name.
7. Type the option you want in the Select Option entry field. You can select one of the following options:
  - Recycle resource**  
Forces the resource inactive then activates it again. If AON/SNA could not recycle the resource, it displays additional panels with further options.
  - Problem Determination**  
Displays the current status of the resource. You can perform additional queries and tests on the resource.
  - NetView Access Services User ID**  
Works with user IDs that are logged on NetView Access Services and their applications on the same VTAM where AON/SNA resides.
  - NetView Help Desk**  
This option takes you to the main NetView Help Desk facility.
8. Press **Enter**.

---

## Chapter 3. Displaying Resource Information with AutoView

The AutoView function works with more than one setting for a single resource. The AutoView function displays all known data for the resource and tries to determine which automation components are interested in the resource.

---

### Displaying the AON: AutoView Panel

To display the AON: AutoView panel:

1. Display the Base Functions panel.
2. Type **2** in the entry field.
3. Press **Enter**.

The AON: AutoView panel shown in Figure 21 is displayed.

**Note:** You can also display the AON: AutoView panel by entering **AON 1.2** or **AUTOVIEW** on any command line.

The screenshot shows a terminal window with the following content:

```
EZLK2000          AON: AutoView          NTVE1

Resource Name _____

Resource Type _____ (Optional)

Select an Option

(Optional) _ 1. TCPIP
              2. APPN
              3. SNBU
              4. SNA

Command ==>
F1=Help      F2=Main Menu  F3=Return

                          F6=Roll
                          F12=Cancel
```

Figure 21. AON: AutoView Panel

The AON: AutoView panel displays the following entry fields and options:

**Resource Name**

Enables you to specify a resource for which you want to display current information or change settings.

**Resource Type**

Enables you to specify the resource type.

**Select an Option**

Specifies the component to which the resource is defined. Each component has predefined information that it displays about the resource. Each component has commands that you can use to get

further information about the resource or set and change automation settings. The list of options varies, depending on which components have the resource defined. The following components are provided:

- APPN** Looks for the resource as an Advanced Peer-to-Peer Networking® (APPN®) network resource.
- SNBU** Looks for the resource as a switched network backup (SNBU) network resource.
- TCPIP** Looks for the resource as a Tivoli NetView for UNIX® or z/OS Communication Server IP resource.
- SNA** Looks for the resource as a SNA network resource.

**Note:** These options might appear in a different order on your panels, because the panel changes depending on the configuration of your site.

The following sections provide an example of how AutoView works for a SNA resource.

#### Usage Notes:

- The AutoView function utilizes UNIX System Services to monitor and display IP resource status through TCP autotasks. These autotasks are defined in the control file and must be authorized to access UNIX System Services.
- The AutoView function queries SNMP MIB variables to determine the status of IP resources. The SNMP Community name defined in the control file for each TCP390 stack must match the one configured by the z/OS communication server for each stack. The Community name can be dynamically updated by using the IP Resource Manager function.

For more information about UNIX System Services authorization and the SNMP Community name, refer to the *Tivoli NetView for z/OS Security Reference*. The Community name definition is described in the TCP390 definition in the *Tivoli NetView for z/OS Administration Reference*.

---

## Displaying Resource Information (A SNA Example)

To display information about a SNA resource:

1. Display the AON: AutoView panel.

**Note:** To display the AON: AutoView panel, see “Displaying the AON: AutoView Panel” on page 19.

2. Type the name of a SNA resource in the Resource Name field. This example uses resource TA1P523A.
3. Optionally, type the resource type in the Resource Type field. Resource types are LU, PU, NCP, or APPL.
4. Optionally, to select SNA, type the number for SNA in the Select an Option entry field.
5. Press **Enter**.

If you selected SNA, or left the option blank, and the resource is defined to a SNA network, the panel in Figure 23 on page 22 is displayed. Proceed to Step 6 on page 23.

If you left the option blank and the resource is defined to more than one type of network, the AON: Component Selection panel shown in Figure 22 is displayed. Proceed to Step 5a.

```
EZLK2000          AON: AutoView          CNM01

Resource Name _____

Resource Type _____ (Optional)

Select an Option

(Optional) _ 1. TCPIP
              2. APPN
              3. SNBU
              4. SNA

Command ==>
F1=Help      F2=Main Menu  F3=Return

                          F6=Roll
                          F12=Cancel
```

*Figure 22. AON: Component Selection Panel*

On the AON: Component Selection panel, follow these steps:

- a. Type **1** in the select an option field.
- b. Press **Enter**.

The following panel is displayed:

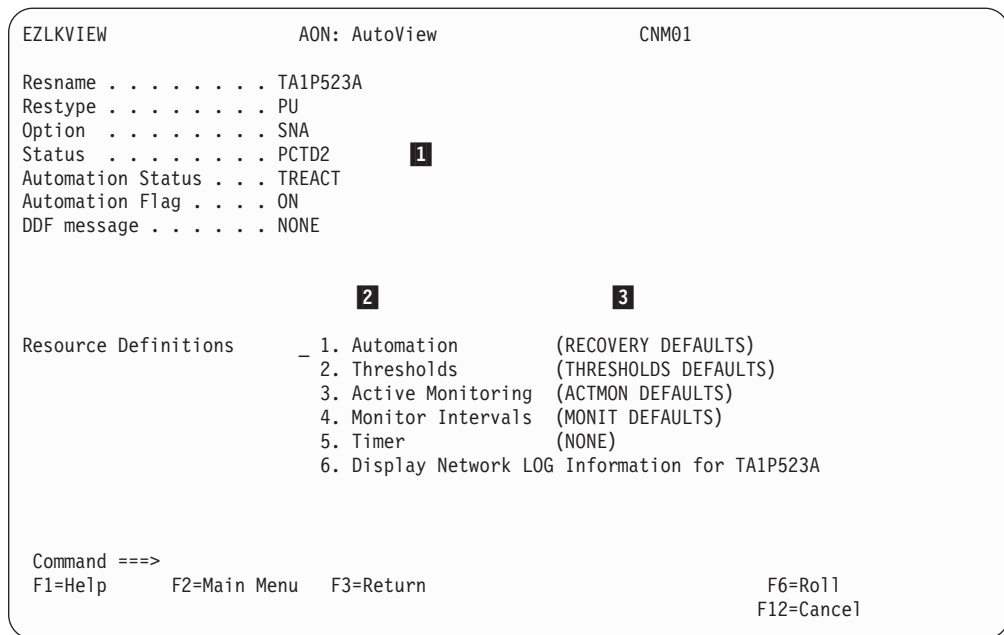


Figure 23. AON: AutoView Panel

Although the appearance of the AON: AutoView panel differs among automation components, the panel in Figure 23 displays the following information and options:

**1** Summarizes information about the resource including the resource name, resource type, status, automation settings for the resource, DDF message for the resource (if any) and other information, depending on the automation component.

**2** Displays a list you can use for the resource. The following actions are supported:

**Automation**

Sets the RECOVERY flags for the resource. If none are found, DEFAULTS is displayed. For detailed information about Automation settings, see “Displaying the Recovery Settings Panel” on page 27.

**Thresholds**

Sets the THRESHOLDS processing for errors received on this resource. The default is DEFAULTS if none is defined. For detailed information about setting thresholds, see “Displaying Thresholds” on page 32.

**Active Monitoring**

Sets the ACTMON entry for this resource. If none are found, the DEFAULTS value is used. For detailed information about setting active monitoring, see “Displaying the Active Monitor Settings Panel” on page 37.

**Monitor Intervals**

Sets the MONIT intervals for the resource, defaulting to the type of resource if intervals are defined for that type. Otherwise, DEFAULTS are used if no intervals are found. For



detailed information about setting monitor intervals, see “Displaying the Monitor Intervals Panel” on page 35.

**Timer** Sets a timer command for the resource. For detailed information about setting timers, refer to the information on timer commands in the *Tivoli NetView for z/OS User's Guide*.

### Display Network LOG Information

Displays only the Netlog information for the resource using the NetView BLOG command.

**3** Displays which control file entry is currently defining the settings for the commands listed in the second group. For example, in Figure 23 on page 22, the settings for option 1 (Automation) are defined in the RECOVERY DEFAULTS control file entry.

For commands that do not have a corresponding control file entry, such as option 5 (Timer), the information in parentheses tells you if any settings exist. In Figure 23 on page 22, no timers are set for the resource TA1P523A.

6. To continue with the example, type 6 for Display Network LOG Information in the Resource Definitions field.

7. Press **Enter**.

The NetView Log shown in Figure 24 is displayed with the resource you specified.

```
STATMON.BROWSE      ACTP NETWORK LOG FOR 04/29/00 (96120) COLS 017 096 15:20
HOST: HOST1          *1*  *2*  *3*  *4*                               SCROLL: CSR
---2---+---3---+---4---+---5---+---6---+---7---+---8---+---9---
CNM01 P% 11:49:06   IST259I  INOP RECEIVED FOR TA1P523A CODE = 01
CNM01 P% 11:49:06   IST619I  ID = TA1P523A FAILED - RECOVERY IN PROGRESS
CNM01 % 11:49:08   CNM094I STATUS UPDATE FOR RESOURCE = TA1P523A IN NETWORK =
CNM01 % 11:49:20   CNM094I STATUS UPDATE FOR RESOURCE = TA1P523A IN NETWORK =
CNM01 P% 11:49:20   IST621I  RECOVERY SUCCESSFUL   FOR NETWORK NODE TA1P523A
CNM01 % 11:49:20   CNM094I STATUS UPDATE FOR RESOURCE = TA1P523A IN NETWORK =
CNM01 14:42:25     EZL112I ACTIVE TYPE= TA1P523A

CMD==>
1=HLP 2=END 3=RET 4=TOP 5=BOT 6=ROL 7=BCK 8=FWD 9=RPF 10=LFT 11=RGT 12=ALL
```

Figure 24. NetView Log Panel Displaying One Resource

8. Browse the log as needed.

**Note:** This option uses the NetView BLOG sample. If there are no entries in the log for the resource you are using, no action is taken and no message is displayed.



---

## Chapter 4. Specifying Automation Policy Settings

Specify automation policy settings using the AON: Automation Settings panel and the subordinate panels. Use these panels to add, display, change, and delete automation policy settings that control various parts of the network.

When NetView initializes, it loads a copy of the automation policy into storage. When you use the AON: Automation Settings panels to change automation settings, you change the in-storage copy of the policy without altering the original. When the policy is reloaded into storage, the changes you made to the automation settings are reset.

If you need to make permanent changes to the policy, your system programmer can edit and reload it so that the changes are available the next time AON initializes.

**Note:** The AON: Automation Settings panel lists settings for all network resources. However, to view and change numerous settings for a single resource, use the AutoView panel. The AutoView panel consolidates commands for automation settings onto a single menu. The AutoView function displays settings panels that apply only to a single resource.

---

### Displaying the AON: Automation Settings Panel

To display the AON: Automation Settings panel:

1. Display the Base Functions panel.

**Note:** To display the Base Functions panel, see “Displaying the AON Base Functions Panel” on page 4.

2. On the Base Functions panel, type **4** in the entry field.
3. Press **Enter**.

The AON: Automation Settings panel shown in Figure 25 on page 26 is displayed.

**Note:** You can also display the AON: Automation Settings panel by entering **AON 1.4** on any command line.



**Note:** A RECOVERY DEFAULTS policy definition is required. The DEFAULTS entry is used during recovery processing and a specific resource name or type is not coded. The DEFAULTS entry cannot be deleted.

## Displaying the Recovery Settings Panel

To display the Recovery Settings panel:

1. Display the AON: Automation Settings panel.

**Note:** To display the AON: Automation Settings panel, see “Displaying the AON: Automation Settings Panel” on page 25.

2. Type **1** in the entry field on the AON: Automation Settings panel.
3. Press **Enter**.

The Recovery Settings panel shown in Figure 26 is displayed.

**Note:** You can also display the Recovery Settings panel by entering **AON 1.4.1, SETAUTO, DISAUTO, or DELAUTO** on any command line.

```

EZLK4100          Recovery Settings          CNM01

Select one of the following. Then press enter.
1=Add 2=Display/Change 3=Delete

      Type                Automation      Scheduled Recovery
-  AOF01*                OFF
-  APPL                  OFF
-  CNM01*                OFF
-  DEFAULTS              ON
-  LINKSTA                ON
-  TAF*                  OFF
-  TSO*                  OFF

Command ==>
F1=Help   F2=Main Menu   F3=Return          F5=Refresh   F6==Roll
F7=Backward F8=Forward          F12==Cancel

```

Figure 26. Recovery Settings Panel

The Recovery Settings panel displays three columns of data:

**Type** Lists all the resources that have recovery settings defined.

### Automation

Indicates whether automation is set on or off for the resources by looking at the AUTO= parameter in the control file setting.

### Scheduled Recovery

Looks at the NOAUTO= parameter. For resources that have intervals scheduled when automation does *not* occur, this field has one of the following values:

**ON** When the current time is outside the times defined with the NOAUTO= parameter.

**OFF** When the current time is within one of the times specified with the NOAUTO= parameter.

If you leave the field blank, scheduled recovery is not in place for the resource.

Scheduled recovery intervals are optional. If no such intervals are coded, automation is either on all the time or off all the time depending on the setting in the Automation column. The Scheduled Recovery column is blank if no scheduled intervals are specified for the resource.

**Note:** Scheduled Recovery settings, if any, and automation must be set to ON for automation to occur on the resource.

Use the Recovery Settings panel to add, display or change, and delete recovery settings. The following sections explain how to perform these actions.

## Displaying or Changing Recovery Settings

To display or change an existing recovery setting:

1. Display the Recovery Settings panel.

**Note:** To display the Recovery Settings panel, see “Displaying the Recovery Settings Panel” on page 27.

2. Type 2 in the entry field next to the resource, the settings for which you want to change, on the Recovery Settings panel.
3. Press **Enter**.

The Display/Change Recovery Setting panel shown in Figure 27 is displayed.

EZLK4120	Recovery Settings	NTV70
Display/Change Automation Recovery Settings		
..... Valid Days .....		
Fill in the fields below, then press PF10 to change.	: 1 = MONday	2 = TUEsday :
Type : PU	: 3 = WEDnesday	4 = THURsday :
Auto : 1 (1=Y 2=N 3=YA 4=NA)	: 5 = FRIday	6 = SATurday :
	: 7 = SUNday	8 = WEEKDAY :
	: 9 = WEEKEND	* = everyday :
	: 0 = calendar day or date	:
	: - = delete a NOAUTO window	:
	.....	
NoAuto Day :	Start Time	End Time
	Hour Minute	Hour Minute
* * _____	18 : 00	23 : 59
- _____	00 : 00	00 : 00
- _____	00 : 00	00 : 00
- _____	00 : 00	00 : 00
- _____	00 : 00	00 : 00
Command ==>		
F1=Help	F2=Main Menu	F3=Return
F7=Backward	F8=Forward	F10=Update
	F5=Refresh	F6=Roll
		F12=Cancel

Figure 27. Display/Change Recovery Settings Panel with Valid Days Pop-up Window

4. Type over the values you want to change on the Display/Change Recovery Setting panel. The values are displayed in one color (the default color is green). You cannot change the entry displayed in the Type field.

5. Press **Enter**.

If the entries are specified correctly, AON displays this confirmation message on the panel:

```
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED
```

To set automation to on or off, type the number for one of the following actions in the Auto field:

**1=Y** Sets recovery on.

**2=N** Sets recovery off.

**3=YA** Sets recovery on for the specified resource and its lower nodes.

**4=NA** Sets recovery off for the specified resource and its lower nodes.

**Note:** YA and NA are valid only for SNA resources that do not contain wildcard characters (\* and %).

You can specify the times when you do not want automation to operate in the NoAuto field. The NoAuto setting enables you to define exactly when you want automation to be active for the resource. The following are the values for the NoAuto setting columns.

**Day**

Specifies the days when recovery is set off, as follows:

<b>0</b>	Any special day defined in DSISCHED, for example, HOLIDAY
<b>1</b>	MONday
<b>2</b>	TUEsday
<b>3</b>	WEDnesday
<b>4</b>	THUrsday
<b>5</b>	FRIday
<b>6</b>	SATurday
<b>7</b>	SUNday
<b>8</b>	WEEKDAY
<b>9</b>	WEEKEND
<b>*</b>	everyday
<b>0</b>	calendar day or date as defined in DSISCHED
<b>-</b>	delete a NOAUTO window

**Note:** The example in Figure 27 on page 28 shows an asterisk (\*) to represent that everyday is selected. You can also specify the valid days by typing the capital letters shown in the Valid Days pop-up window, in the second column text field under Day.

**Start Time**

Sets automation off starting at this time. Specify the time in the *hh:mm* format, where *hh* is a number in the range of 00–23 and *mm* is a number in the range of 00–59.

**End Time**

Determines the end of the interval when automation is not active for the resource. Specify the time in the *hh:mm* format, where *hh* is a number in the range of 00–23 and *mm* is a number in the range of 00–59.

**Note:** The ending time must be later in the day than the starting time *except* when you specify \* (every day).

## Specifying Notification Operators

Use the Notification Operators panel to:

- add new notification operators
- display or change the settings for existing operators
- delete settings for existing operators

Notification operators are operators who receive messages from AON and its components when automation events occur. These values are retrieved from the NTFYOP control file entry.

## Displaying the Notification Operators Panel

To display the Notification Operators panel:

1. Display the AON: Automation Settings panel.

**Note:** To display the AON: Automation Settings panel, see “Displaying the AON: Automation Settings Panel” on page 25.

2. Type **2** in the entry field.

3. Press **Enter**.

The Notification Operators panel is displayed in Figure 28.

**Note:** You can also display the Notification Operators panel by entering **AON 1.4.2, SETNTFY, DISNTFY, or DELNTFY** on any command line.

```
EZLK4200          Notification Operators          CNM01
Select one of the following. Then press Enter.          More:  +
1=Add 2=Display/Change 3=Delete
      Operator      Notify      Logged      Description
- OPER1             Y             N           'Operator One'
- OPER2             Y             N           'Operator Two'
- OPER3             Y             Y           'Operator Three'
- OPER4             Y             Y           'Operator Four'
- OPER5             Y             N           'Operator Five'
- OPER6             Y             N           'Operator Six'
- OPER7             Y             N           'Operator Seven'
- NISTMP1           Y             N           'Test Operator One'
- NISTMP2           Y             N           'Test Operator Two'
- NISTMP3           Y             N           'Test Operator Three'
- NISTMP4           Y             Y           'Test Operator Four'
- NISTMP5           Y             N           'Test Operator Five'
- NISTMP6           Y             N           'Test Operator Six'
- NISTMP7           Y             N           'Test Operator Seven'

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Ro11
F7=Backward  F8=Forward
```

Figure 28. Notification Operators Panel

The Notification Operators panel lists the following columns of data:

### Operator

The operator ID of the notification operator.

### Notify Flag

Indicates if messages are sent to the notification operator. Use this flag to



temporarily stop the notification messages without removing the operator from the list of valid notification operators. The data is taken from the NOTIFY= parameter in the NTFYOP control file entry.

### Logged On

Indicates if this notification operator is currently logged on to the system.

If the operator is logged on and the Notify Flag is set to Yes (Y), then the operator is receiving messages as defined by the notification settings.

### Description

Describes the notification operator, usually, the name of the operator (optional).

## Adding a Notification Operator

To add an operator ID to the list of valid notification operators:

1. Display the Notification Operators panel.

**Note:** To display the Notification Operators panel, see “Displaying the Notification Operators Panel” on page 30.

2. Type **1** in the field next to an existing notification operator.
3. Press **Enter**. A pop-up window shown in Figure 29 is displayed.

```

EZLK4210          Notification Operators          CNM01
Select one of the following. Then press Enter.          More:  +
1=Add 2=Display/Change 3=Delete
      Notify      Logged
      Flag        On      Description
1 OPER1          Y        N      'Operator One'
- OPER2          : Operator :
- OPER3          : Description :
- OPER4          : Classes   :
- OPER5          : Messages  :
- OPER6          :           :
- OPER7          :           :
- NISTMP1        :           :
- NISTMP2        :           :
- NISTMP3        : Notify    : (1=Yes 2=No)
- NISTMP4        :           :
- NISTMP5        : F1=Help   : F12=Cancel
- NISTMP6        :           :
- NISTMP7        :           :
      Y          N          'Test Operator Seven'

Command ==>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh    F6=Roll
F7=Backward  F8=Forward      F12=Cancel

```

Figure 29. Notification Operators Panel

4. Type the operator ID in the Operator field. This is the only required field.
5. Type a brief description for the operator in the Description field.
6. Type the numbers for the message classes in the Classes field. The default message class is 10. The data is taken from the CLASS= parameter in the NTFYOP control file entry.

**Note:** Refer to the *Tivoli NetView for z/OS Messages and Codes* for more information about message classes.

7. In the Messages fields, type any character in the field for each message type that should be held on the command facility until the notification operator clears it. The data is taken from the HELDMSG= parameter in the NOTFYOP control file entry. The message types are:
  - I or INFO**  
Informational messages
  - W or WARN**  
Warning messages
  - E or ERROR**  
Error messages
  - A or ACTION**  
Action messages
8. Type **1** to set notifications on for the operator or **2** to suppress the notification messages in the Notify field. You can also leave this field blank. By default, the notification operator receives the messages in the message classes assigned.
9. Press **Enter**.  
If the information is entered correctly, AON displays this confirmation message on the panel:  
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED
10. Press **F3** to return to the Notification Operators panel.  
The new notification operator is displayed in the alphabetized list on the updated Notification Operators panel.

---

## Setting Automation Thresholds

To add, change, or delete threshold settings use the Thresholds panel. Threshold settings trigger notifications to operators when the thresholds are reached. An event is defined as an alert generated by the system. Thresholds are set for the resources in the network. These values are retrieved from the THRESHOLDS control file entry.

The threshold settings should be defined so that each threshold type is unique for the resource being monitored. Critical thresholds should have the smallest interval or highest occurrence frequency, followed by frequent, then infrequent.

## Displaying Thresholds

To display the Thresholds panel:

1. Display the AON: Automation Settings panel.

**Note:** To display the AON: Automation Settings panel, see “Displaying the AON: Automation Settings Panel” on page 25.

2. Type **3** in the entry field.
3. Press **Enter**.

The Thresholds panel shown in Figure 30 on page 33 is displayed.

**Note:** You can also display the Thresholds panel by entering **AON 1.4.3, SETTHRES, DISTHRES, or DELTHRES** on any command line.

```

EZLK4300          Thresholds                      CNM01
Select one of the following.  Then press Enter.    More:  +
1=Add 2=Change 3=Delete

Type
- DEFAULTS
  Infrequent: 05  Errors in 24  Hours 00  Minutes
  Frequent: 04  Errors in 01  Hours 00  Minutes
  Critical: 04  Errors in 00  Hours 12  Minutes  Notify 1

- HOST
  Infrequent: 00  Errors in 00  Hours 00  Minutes
  Frequent: 00  Errors in 00  Hours 00  Minutes
  Critical: 10  Errors in 00  Hours 10  Minutes  Notify 1

- INFC
  Infrequent: 00  Errors in 00  Hours 00  Minutes
  Frequent: 00  Errors in 00  Hours 00  Minutes
  Critical: 10  Errors in 00  Hours 10  Minutes  Notify 1

Command ==>
F1=Help      F2=Main Menu  F3=Return
F7=Backward  F8=Forward
F5=Refresh   F6=Roll
F12=Cancel

```

Figure 30. Thresholds Panel

The threshold types are defined as:

**Infrequent**

The minimum number of events needed within a defined period of time to trigger notification to an operator. This data is taken from the INFR= keyword of the THRESHOLDS control file entry.

**Frequent**

The number of events needed to indicate that the resource may be having some trouble. Notification is sent to an operator. This data is taken from the FREQ= keyword of the THRESHOLDS control file entry.

**Critical**

Specifies the number of events needed to define a situation as critical. Normally, recovery stops when a situation reaches critical state. This data is taken from the CRIT= keyword of the THRESHOLDS control file entry.

**Notify** If Notify is 1, the notification policy is driven when the critical threshold is exceeded.

**Note:** A THRESHOLD DEFAULTS policy definition is required. The DEFAULTS entry is used when there is threshold processing and a specific resource name or type is not specified. You cannot delete the DEFAULTS entry.

Each threshold setting follows the same syntax. Two settings are entered to set the threshold:

*number*

The number of events that cause the threshold to be exceeded. The valid range is 0–10.

*interval*

The time span, in hours and minutes, in which the number of events must occur for the threshold to be exceeded. The valid range is 00:00–99:59.

You can use the Thresholds panel to add, change, and delete threshold settings. The following sections explain how to perform these actions in detail.

## Adding a Threshold

To add a threshold:

1. Display the **Thresholds** panel.

**Note:** To display the Thresholds panel, see “Displaying Thresholds” on page 32.

2. Type **1** in entry field on the Thresholds panel.
3. Press **Enter**.

A pop-up window shown in Figure 31 is displayed.

```

EZLK4310          Thresholds                               CNM01
Select one of the following. Then press Enter.           More:  +
1=Add 2=Change 3=Delete

Type
- DEFAULTS
  Infrequent: 05   Errors in 24   Hours 00   Minutes
  Fr .....:
  Cr :
  : Type: _____ :
1 HOST :
  In :   Infrequent: 00 Errors in 00 : 00   : Minutes
  Fr :   Frequent: 00 Errors in 00 : 00   : Minutes
  Cr :   Critical: 00 Errors in 00 : 00   : Minutes
  :   Notify: 1 :
- INFC : F1=Help          F12=Cancel :
  In .....: Minutes
  Frequent: 00   Errors in 00   Hours 00   Minutes
  Critical: 10   Errors in 00   Hours 10   Minutes

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward
F12=Cancel

```

Figure 31. Thresholds Panel

4. In the pop-up window, type in the values you want.
5. Press **Enter**.

When AON adds the thresholds, the following message is displayed in the message area near the bottom of the panel:

```
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED
```

## Changing Monitor Intervals

Use the Monitor Intervals panel to add, display and change, and delete monitor intervals. Monitor intervals determine how often AON tries to reactivate failed resources and if AON sends messages to the notification operators during these attempts. These values are retrieved from the MONIT control file entry.

**Note:** A DEFAULTS entry in the control file is required. The DEFAULTS entry is used when the parameters do not exist on the specific resource definition.

## Displaying the Monitor Intervals Panel

To display the Monitor Intervals panel:

1. Display the **AON: Automation Settings** panel.

**Note:** To display the AON: Automation Settings panel, see “Displaying the AON: Automation Settings Panel” on page 25.

2. Type **4** in the entry field on the AON: Automation Settings panel.
3. Press **Enter**.

The Monitor Intervals panel shown in Figure 32 is displayed.

**Note:** You can also display the Monitor Intervals panel by entering **AON 1.4.4, SETMONIT**, or **DELMONIT** on any command line.

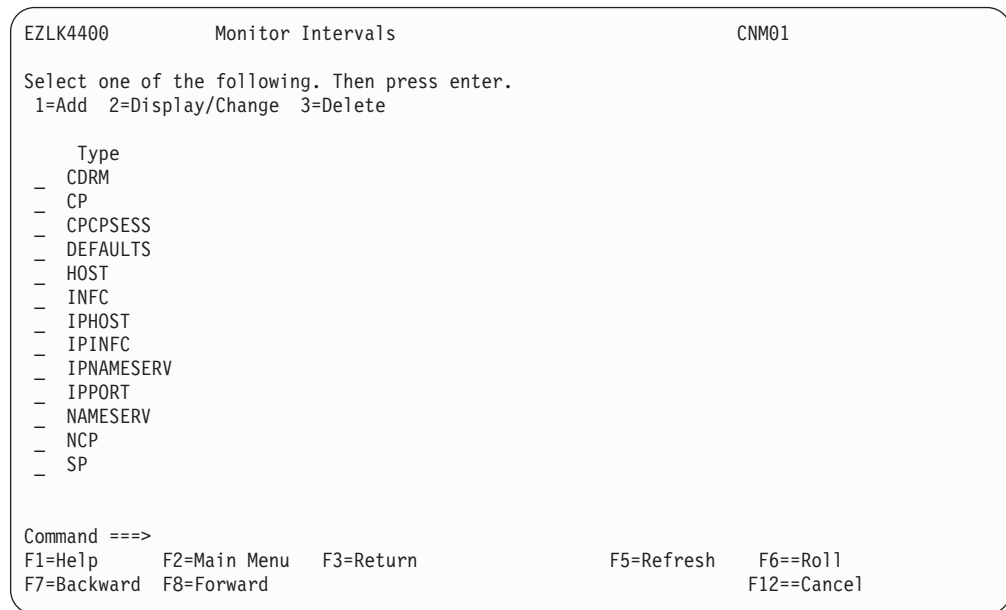


Figure 32. Monitor Intervals Panel

The types of monitor intervals are displayed in the Type column. You can use the Monitor Intervals panel to add, display, change, or delete monitor intervals. The following sections explain how to perform these actions.

## Displaying or Changing a Current Monitor Interval

To display or change recovery monitoring intervals:

1. Display the **Monitor Intervals** panel.

**Note:** To display the Monitor Intervals panel, see “Displaying the Monitor Intervals Panel”.

2. Type **2** in the entry field next to the resource type whose monitor interval you want to display or change.
3. Press **Enter**.

A pop-up window shown in Figure 33 on page 36 is displayed.

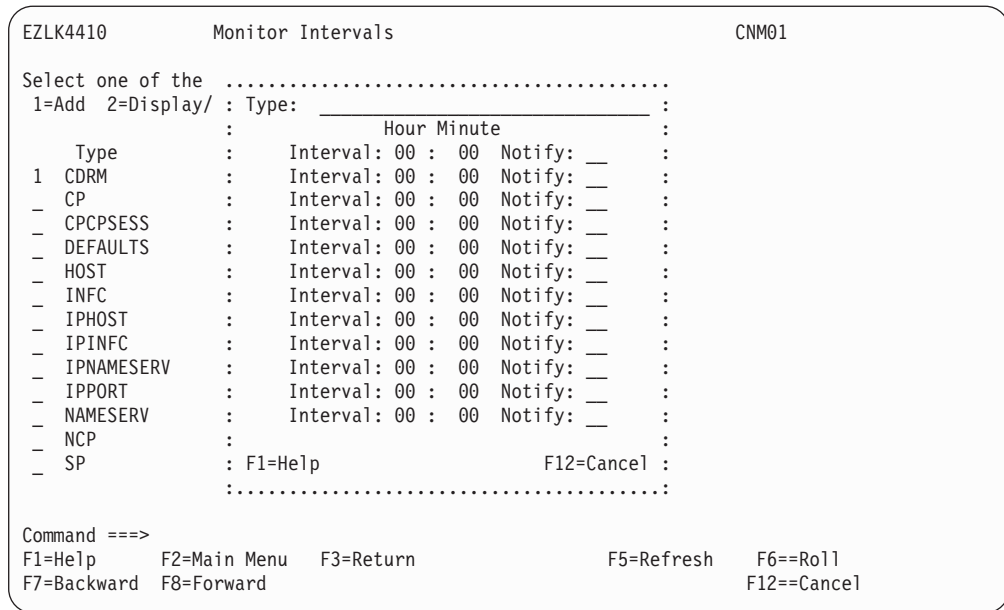


Figure 33. Monitor Intervals Panel

- To change a monitoring interval, type over the settings you want to change. The variables on this setting are:

*hh:mm*

The length of the interval between reactivation attempts expressed as hours (*hh*) and minutes (*mm*). The range is 00:00–24:00.

**Notify**

The setting that determines whether messages are sent to the notification operators when AON attempts to reactivate the resource. The settings can be:

**Y** Consult the notification policy to determine which notifications to issue.

**N** Do not send notifications.

**YF** Consult the notification policy to determine which notifications to issue. Repeat recovery monitoring at the last interval specified.

**NF** Do not send notifications. Repeat recovery monitoring at the last interval specified.

- Press **Enter**.

If the settings are entered correctly, AON displays this message:

```
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED
```

## Changing Active Monitor Settings

Use the Active Monitor Setting panel to set intervals for active monitoring and to verify that resources are active. If the resource is not active, recovery monitoring starts for the resource and a timer is set to check the resource again for the next interval. These values are retrieved from the ACTMON control file entry.

Active monitoring expects specific entries only. Wildcard entries are not allowed. Example SNA entries and types are:

- Specific resource name (PU01, LINE23)
- General resource type (NCP, LU, PU)

**Note:** A DEFAULTS entry in the control file is required. The DEFAULTS entry is used when the parameters do not exist on the specific resource definition.

## Displaying the Active Monitor Settings Panel

To display the Active Monitor Settings panel:

1. Display the **AON: Automation Settings** panel.

**Note:** To display the AON: Automation Settings panel, see “Displaying the AON: Automation Settings Panel” on page 25.

2. Type **5** in the entry field on the AON: Automation Settings panel.
3. Press **Enter**.

The Active Monitor Settings panel is displayed, as shown in Figure 34.

**Note:** You can also display the Active Monitor Settings panel by entering **AON 1.4.5** or **ACTMON** on any command line.

```

EZLK4500          Active Monitor Settings          CNM01
Select one of the following. Then press Enter.      More: - +
1=Add 2=Display/Change 3=Delete

   Name           Resource Type      Interval      Timer ID
-   SULU           CPCPSESS          13            FKV00011
-   TA1L5023       LINE              13            FKV00009
-   TA1N500        NCP               00:10         FKV00010
-   TA1T1046       LU                30
-   TA1T1047       LU                01:00
-   TA1T1048       LU                90
-   TEST1          SESSION           15
-   TEST2          SESSION
-   TEST3          SESSION
-   USIBMTA.TA1CPBAD CP                01:00
-   USIBMTA.TA1CP207 CP                01:00          FKV00012
-   USIBMTA.TA1CP208 CP                01:00
-   9.67.6.2       HOST              00:25
-   9.67.6.3       HOST

Command ==>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh     F6=Roll
F7=Backward  F8=Forward
  
```

Figure 34. Active Monitor Settings Panel

The Active Monitor Settings panel displays these columns of data:

**Name** The name of a resource.

**Resource Type**

The type of resource. This data is taken from the RESTYPE= keyword of the ACTMON control file entry.

### Interval

The interval setting. The interval can be in minutes or in both hours and minutes. This data is taken from the INTVL= keyword of the ACTMON control file entry.

### Timer ID

The ID of the timer. The timer issues the ACTMON routine for this resource to see if the resource is active.

Use the Active Monitoring Settings panel to add, display or change, and delete active monitoring settings. The following sections explain how to perform these actions.

## Displaying or Changing Active Monitor Settings

To display or change active monitoring settings:

1. Display the **Active Monitor Settings** panel.

**Note:** To display the Active Monitor Settings panel, see “Displaying the Active Monitor Settings Panel” on page 37.

2. Move the cursor to the field next to the resource you want to display or change and type 2.
3. Press **Enter**.

A pop-up window shown in Figure 35 is displayed.

```

EZLK4520          Active Monitor Settings          CNM01
Select one of the following. Then press Enter.          More: - +
1=Add 2=Display/Change 3=Delete

  Name              Resource Type          Interval          Timer ID
  -              -              -              -
  2 TA1L5023 .....          :          :          :
  - TA1N500 :          :          :          :
  - TA1T1046 : Name: TA1L5023_____          :          :
  - TA1T1047 :          :          :          :
  - TA1T1048 : Type: LINE_____          :          :
  - TEST1 :          :          :          :
  - TEST2 : Interval: 00 : 13          :          :
  - TEST3 :          :          :          :
  - USIBMTA.T : Timer Id:          FKV00009          :          :
  - USIBMTA.T : Timer Date/Time: 04/15/00 13:15:59          :          :
  - USIBMTA.T :          :          :          :
  - 9.67.6.2 : F1=Help          F12=Cancel :          :
  - 9.67.6.3 : .....          :          :

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward          F12=Cancel

```

Figure 35. Active Monitoring Settings Panel

4. Type the resource type in the Type field.
5. Type the interval values you want in the Interval field.  
An interval is defined by *hh:mm* with valid values that are in the range of 00:00–24:00. The intervals specified are cumulative time delays from the previous activation setting. You cannot change any other fields on this panel.
6. Press **Enter**.



If the data is entered correctly, the following message is displayed:  
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED



---

## Chapter 5. Using Cross-Domain Functions

This chapter documents general-use programming interface and associated guidance information.

To establish communication with NetView and other applications use the AON: Cross Domain Functions panel and its subordinate panels. You can use these panels to manage cross-domain sessions for your operators, for AON Gateway operators, and for terminal access facility (TAF) full-screen sessions.

---

### Displaying the Cross Domain Functions Panel

To display the Cross Domain Functions panel:

1. Display the Base Functions panel.

**Note:** To display the **Base Functions** panel, see “Displaying the AON Base Functions Panel” on page 4.

2. Type **5** in the entry field.
3. Press **Enter**.

The AON: Cross Domain Functions panel shown in Figure 36 is displayed.

**Note:** You can also display the AON: Cross Domain Functions panel by entering **AON 1.5** on any command line.

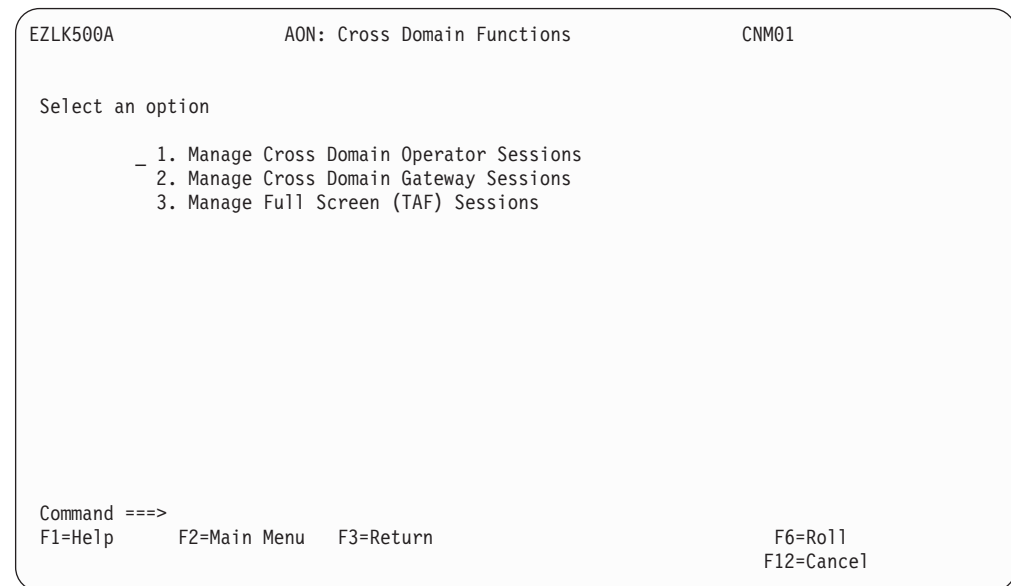


Figure 36. AON: Cross Domain Functions Panel

The AON: Cross Domain Functions panel displays the following options:

#### **Manage Cross Domain Operator Sessions**

Enables you to establish sessions with other NetView domains using your NetView-NetView Task (NNT) sessions or through remote command

(RMTCMD) sessions. After you log on to the sessions, you can send commands across those sessions. These values are retrieved from the CDLOG control file entry.

#### **Manage Cross Domain Gateway Sessions**

Enables you to start and stop the AON gateway sessions to other NetView domains and send commands across the gateway sessions. When you use the gateways, an automation operator logs on to the other domains and handles communications, so you do not need to establish your own sessions with the domains with which you want to communicate. These values are retrieved from the GATEWAY control file entry.

#### **Manage Full-Screen (TAF) Sessions**

Enables you to establish a full-screen session with another application using the NetView Terminal Access Facility (TAF). After you log on to another application using TAF, the display on your domain looks like the full-screen display for the application that has the established session. These values are retrieved from the FULLSESS control file entry.

The following sections explain how to use the options.

---

## **Managing Cross Domain Operator Sessions**

Use the AON: Cross Domain Functions panel to communicate with other NetView domains by establishing personal operator sessions with those domains. These values are retrieved from the CDLOG control file entry.

You can use the AON: Cross Domain Logon panel to:

- Start an operator session to another domain
- Stop an active session
- Send a command to an active session

You can establish NNT or RMTCMD sessions.

**Note:** To use the help desk to recover SNA resources on other NetView domains, you must have NNT sessions established to those domains to reactivate the failed SNA resources. Use the Manage Cross Domain Operator Sessions option to establish those sessions.

### **Displaying the AON: Cross Domain Logon Panel**

To display the AON: Cross Domain Logon panel:

1. Display the AON: Cross Domain Functions panel.

**Note:** To display the AON: Cross Domain Functions panel, see “Displaying the Cross Domain Functions Panel” on page 41.

2. Type **1** in the entry field on the **AON: Cross Domain Functions** panel.
3. Press **Enter**.

The AON: Cross Domain Logon panel, shown in Figure 37 on page 43, is displayed.

**Note:** You can also display the AON: Cross Domain Gateway Display panel by entering **AON 1.5.1** or **CDLOG** on any command line.

```

EZLK5000                AON: Cross Domain Logon                CNM01

          Origin Operator OPER2
1=Start   2=Stop   3=Send
Domain  Status  Operator  Type   Init  Description
-  CNM01  Inactive          RMTCMD
-  CNM01  Inactive          NNT
-  CNM02  Inactive          NNT
-  AOC10  Inactive          NNT
-  CNM10  Inactive          NNT
-  AOF10  Inactive          NNT
-  AOC06  Inactive          NNT
-  CNM06  Inactive          NNT
-  AOC05  Inactive          NNT
-  CNM05  Inactive          NNT

To issue commands, tab to the Domain and press F4.

Command ==>
F1=Help   F2=Main Menu  F3=Return   F4=Commands  F5=Refresh  F6=Roll
F7=Backward F8=Forward
F12=Cancel

```

Figure 37. AON: Cross Domain Logon Panel

The AON: Cross Domain Logon panel displays the following data:

**Domain**

Target NetView domain.

**Status** Status of the operator session, which is either active or inactive.

**Operator**

Target operator ID for session.

**Type** Type of operator session, either NetView-NetView Task (NNT) or remote command (RMTCMD). This data is taken from the SESSTYPE= keyword of the CDLOG control file entry.

**Init** Specifies whether this operator session should start automatically when you log on to your home NetView domain. This data is taken from the INIT= keyword of the CDLOG control file entry.

**Description**

A brief description for the session.

You can use the AON: Cross Domain Logon panel to start and stop cross-domain operator sessions and to send a command from your NetView domain to another domain, using an active NNT or remote command session. The following sections explain how to perform these actions.

## Starting a Cross Domain Operator Session

To start a cross-domain operator session:

1. Display the **AON: Cross Domain Logon** panel.

**Note:** To display the AON: Cross Domain Logon panel, see “Displaying the AON: Cross Domain Logon Panel” on page 42.

2. Type **1** in the field next to the domain name in which you want to start a session on the Cross Domain Logon panel.

3. Press **Enter**.

When all the information needed to start the session is available from the control file, the session starts immediately. However, usually, you must provide further information to start the session. If further information is needed, AON displays the pop-up window shown in Figure 38.

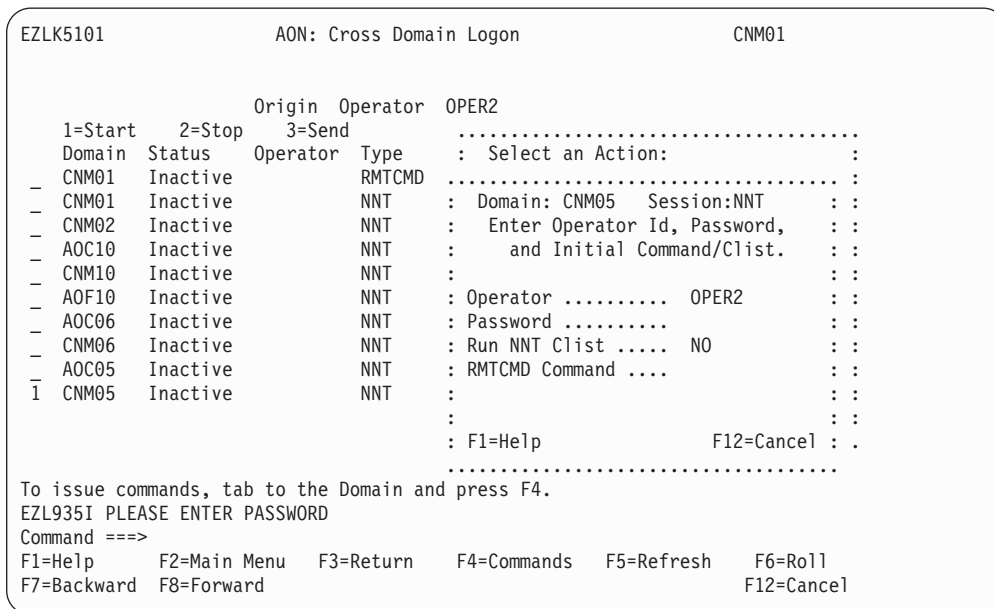


Figure 38. AON: Cross Domain Logon Panel with Pop-up Window

4. Type the operator ID you want to use to establish an NNT or remote commands session with the remote NetView domain in the Operator field.
5. Type the password for the operator ID at the remote NetView domain in the Password field.
6. Type Y or N in the Run NNT Clist field to specify whether the NNT routine runs initially.
7. Type Y or N in the RMTCMD Command field to determine whether the RMTCMD routine runs initially. This field applies only to remote command sessions.
8. Press **Enter**.

The status of the domain changes to active, if this session starts. Otherwise, an error message is displayed. Notice that the operator ID you entered in the pop-up window also is displayed in the operator column.

**Note:** You can use the F4 key to display a pop-up command window for issuing session commands. For more information about using these commands, see “Pop-up Command Windows” on page 6.

## Stopping an Active Operator Session

To stop an active operator session to another domain:

1. Display the **AON: Cross Domain Logon** panel.

**Note:** To display the AON: Cross Domain Functions panel, see “Displaying the AON: Cross Domain Logon Panel” on page 42.

2. Type **2** in the entry field beside the name of the domain you want to stop.
3. Press **Enter**.  
AON displays a pop-up window shown in Figure 39 for confirmation.

```

EZLK5102                AON: Cross Domain Logon                CNM01

      Origin Operator OPER2
      1=Start  2=Stop  3=Send  .....
Domain Status Operator Type : Select an Action: :
- CNM01 Inactive : ..... :
- CNM01 Inactive : :
- CNM02 Inactive : Stop Session Confirmation :
- AOC10 Inactive : Domain=CNM05 Oper= OPER2 :
- CNM10 Inactive : :
- AOF10 Inactive : :
- AOC06 Inactive : Select an Action: :
- CNM06 Inactive : :
- AOC05 Inactive : ENTER to continue :
2 CNM05 Active OPER2 : F12 to cancel :
: :
: F1=Help F12=Cancel :
To issue commands, tab to the Dom .....

Command ==>
F1=Help F2=Main Menu F3=Return F4=Commands F5=Refresh F6=Roll
F7=Backward F8=Forward F12=Cancel

```

Figure 39. AON: Cross Domain Logon Panel with Stop Session Confirmation Pop-up Window

4. Press **Enter** to confirm that you want to stop the session or press **F12** to cancel the session.  
When the session ends, the status of your domain is shown as inactive, and the following message is displayed in the panel:  
EZL930I SESSION(S) ENDED

## Sending a Command to Another Domain

To send a command from your NetView domain to another domain using an active NNT or remote command session:

1. Display the **AON: Cross Domain Logon** panel.

**Note:** To display the Cross Domain Logon panel, see “Displaying the AON: Cross Domain Logon Panel” on page 42.

2. On the Cross Domain Logon panel, type **3** in the field beside the name of the domain to which you want to send the command.
3. Press **Enter**.

If you try to send a command across an inactive session, you see the following message:

```
EZL881I NNT SESSION TO CNM02 IS NOT ACTIVE
```

If the operator session is active, the pop-up window shown in Figure 40 on page 46 is displayed.

```

EZLK5103                AON: Cross Domain Logon                CNM01

                                Origin Operator OPER2
1=Start  2=Stop  3=Send  .....
Domain  Status  Operator Type  :  Select an Action:      :
-  CNM01  Inacti .....
-  CNM02  Inacti :          Send Command To CNM05      : :
-  AOC10  Inacti :  Enter Command Below: (50 character limit) : :
-  CNM10  Inacti :  ==>                               : :
-  AOF10  Inacti :          :                          : :
-  AOC06  Inacti :          :                          : :
-  CNM06  Inacti :  Note: Output is displayed in NCCF, ROLL to return. : :
-  AOC05  Inacti :  F1=Help                               F12=Cancel : :
3  CNM05  Active .....
-  CNM01  Inactive. :          :                          : :
                                . F1=Help                F12=Cancel :
                                .....

To issue commands, tab to the Domain and press F4.

Command ==>
F1=Help  F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward  F8=Forward
F12=Cancel

```

Figure 40. AON: Cross Domain Logon Panel with Send Command to Remote Domain Pop-up Window

4. Type the command you want to enter in the **Enter Command Below** field.
5. Press **Enter**.

AON displays the command facility (NCCF). AON displays the results from issuing the command on the command facility, along with the following message:

```

EZL938I ISSUING COMMAND = "command". PRESS PF6 TO ROLL BACK
TO CDLOG

```

6. To return to the operator interface, press the Roll key, **F6**.  
To display a pop-up command window from which you can issue session commands, press the Commands key, **F4**. For more information about using these commands, see “Pop-up Command Windows” on page 6.

## Managing Cross-domain Gateway Sessions

Use the AON: Cross Domain Gateway Display panel to display the active and inactive sessions available for your domain. The list that is displayed is generated from the configuration file entries for your domain. You can use the AON: Cross Domain Gateway Display panel to start and stop a cross-domain gateway session and to send a command to a cross-domain gateway session. To send a command to a cross-domain gateway session, the session selected must be active. These values are retrieved from the GATEWAY control file entry.

**Note:** Gateway sessions must be NNT sessions.

### Displaying the AON: Cross Domain Gateway Panel

To display the AON: Cross Domain Gateway Display panel:

1. Display the **AON: Cross Domain Functions** panel.

**Note:** To display the AON: Cross Domain Functions panel, see “Displaying the Cross Domain Functions Panel” on page 41.



2. Type **2** in the entry field on the AON: Cross Domain Functions panel.
3. Press **Enter**.

The first half of the AON: Cross Domain Gateway Display panel shown in Figure 41 is displayed.

**Note:** You can also display the AON: Cross Domain Gateway Display panel by entering **AON 1.5.2** or **AONGW** on any command line.

```

EZLK5200                AON: Cross Domain Gateway Display                CNM01
                        FOCAL POINT = CNM01
                        OPERATOR ID = OPER2                                More: >

Select one of the following options, then press ENTER.
1=Start  2=Stop  3=Send
-----
DESCRIPTION                                DOMAIN    STATUS    VIA
-----
-        TO AOC06                            AOC06    INACTIVE  AOC06
-        TO CNM06                            CNM06    ACTIVE    CNM06
-        TO CNM10                            CNM10    ACTIVE    CNM10

Command==>
F1=Help   F2=Main Menu  F3=Return          F5=Refresh  F6=Ro11
F7=Backward F8=Forward      F11=Right         F12=Cancel

```

Figure 41. Cross Domain Gateway Display Panel

The Cross Domain Gateway Display panel displays the domains with which you are communicating through gateway operators and gives you information about the gateway operators that are controlling the communications.

The columns on the first half of the panel (Figure 41) provide the following information:

**DESCRIPTION**

The Description field shows a user-written description that describes the gateway to the remote NetView domain. For example, the first description says that this line of the status display states TO AOC06.

**DOMAIN**

The Domain field shows the name of the remote NetView domain as it is defined to NetView.

**STATUS**

The Status field indicates if communications between your home NetView domain and this remote NetView domain are ACTIVE or INACTIVE. In Figure 41, communications between the remote NetView domain, CNM06, and NetView domain, CNM01, are active.

**VIA**

The **Via** field shows the NetView domain that is physically between this remote NetView domain and your NetView domain that is used for routing communications between them. In Figure 41, the

communications between your NetView domain (CNM01) and CNM06 travel through CNM06, which means that your NetView domain and CNM06 are physically connected.

**Note:** Only one NetView domain can be physically located between your NetView domain and the remote NetView domain with which you establish gateway sessions.

- To display the second half of the Cross Domain Gateway Display panel, press **F11**. Figure 42 shows the adjoining gateway display panel for the sample display shown in Figure 41 on page 47.

```

EZLK5201                AON: Cross Domain Gateway Display                CNM01
                        FOCAL POINT = CNM01
                        OPERATOR ID = OPER2                                More: <

Select one of the following options, then press ENTER.
1=Start  2=Stop  3=Send
-----
DIRECT INB/OUTB STAT  SYSNAME  PRODUCT  ADJ DOM  ALT DOM  USER ID
-----
-  INACTIVE  INV OPID  NA       NA V.R
-  ACTIVE    ACTIVE    CNM06    TIV-AON 1.4  GATCNM06
-  ACTIVE    ACTIVE    CNM10    TIV-AON 1.4  GATCNM10

Command==>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh    F6=Roll
F7=Backward  F8=Forward    F10=Left      F12=Cancel

```

Figure 42. Cross Domain Gateway Display Panel—Scrolled-right View

The column headings in Figure 42 provide the following information about gateways between your NetView domain and this remote NetView domain:

**DIRECT INB**

The Direct Inbound field indicates if the remote domain has logged on to your NetView domain. Thus, for direct communications between your NetView domain and a physically adjacent NetView domain, the direct inbound status can be either ACTIVE or INACTIVE. If your NetView domain is not physically adjacent to the remote NetView domain, communications must be routed across an intermediate NetView domain that is physically adjacent to both your NetView domain and the remote NetView domain. The status is NO DIRECT, indicating that there are no direct communication gateways between your NetView domain and the remote NetView domain.

If an error occurred during a logon attempt by a gateway operator, the inbound status displays in yellow.

**OUTB STAT**

The Outbound Status field indicates if the gateway operator handling communications for your NetView domain is successfully logged on to this remote NetView domain and sending communications. A status of ACTIVE

means that communications from your NetView domain (outbound) to this remote NetView domain are going to it successfully. If outbound communications are not active, the status displayed indicates the cause of the problem, if it is known.

If an error occurred during a logon attempt by a gateway operator, the inbound status displays in yellow.

#### **SYSNAME**

The System Name field shows you the name by which the Dynamic Display Facility (DDF) knows this remote NetView domain. This name might be the same name used for the NetView domain under the DOMAIN heading on the scrolled-left view of the gateway panel (see Figure 41 on page 47), but it is not required. If the connection has not been established, the panel displays NA to indicate that the name is not available. Your system programmer defines the DDF names for the NetView domains using the SYSNAME parameter on the ENVIRON SETUP control file entry.

#### **PRODUCT**

The Product field provides the name of the product being run on this target NetView domain, for example, TIV-AON 1.4. If the product is back-level, the entry says OLD ?.?, which indicates that communications have been established, but the product name is not supplied to this panel by the back-level product.

If communications with the domain have not been established since the last NetView startup, the name of the product cannot be determined, so you see NA V.R, which is an abbreviation for Not Available Version.Release.

#### **ADJ DOM**

The Adjacent Domain field indicates a NetView domain that is a path to the remote domain. The adjacent domain must be physically adjacent. If a NetView domain that is physically adjacent to both domains is defined as an adjacent NetView domain, you can use gateways to communicate with a NetView domain that is not physically adjacent to your own. Your system programmer defines adjacent NetView domains in the control file with the ADJNETV control file entry.

#### **ALT DOM**

The Alternate Domain field displays the name of the physically adjacent NetView domain that can function as a backup to the adjacent domain. If you are using an adjacent NetView domain as an intermediate routing domain, it is useful to have another pathway in case the preferred adjacent NetView domain goes down. Your system programmer defines backup NetView domains in the control file using the ADJNETV entry.

#### **USER ID**

The User ID field shows the user ID for the gateway operator logged on to your NetView domain from another NetView domain. The gateway operator is a program, but it logs on to the other NetView domains much like a human operator does. In Figure 42 on page 48, GATCNM06 is the user ID for the gateway operator on NetView domain CNM06 that logs on to your NetView domain. That is, GATCNM06 handles outbound communications for CNM06, but it brings inbound communications to your NetView domain.

**Note:** Each NetView domain uses one gateway operator for outbound communications. That gateway operator logs on to all the other

NetView domains it communicates with. Your NetView domain can have many gateway operators logged on to it.

## Sending a Command to a Cross-Domain Gateway Session

To send a command to a cross-domain gateway session:

1. Display the Cross Domain Gateway Display panel.

**Note:** To display the AON: Cross Domain Display panel, see “Displaying the AON: Cross Domain Gateway Panel” on page 46.

2. Type **3** in the field beside the domain name for which you want to send a command.
3. Press **Enter**.

The AON: Command Routing panel shown in Figure 43 is displayed.

```
EZLK5300          AON: Command Routing          CNM01

RESP      =>  _          1=Yes, 2=Ack, 3=No
OPERATOR ID =>  _____ Can be left blank
To DOMAIN  =>  CNM06
Command    =>  _____

Command==>
F1=Help    F2=Main Menu  F3=Return          F6=Roll
F12=Cancel
```

Figure 43. AON: Command Routing Panel

4. Type the number of the entry you want in the **RESP** field. The choices are:
  - 1=Yes** Displays the result of the command you issued on the command facility (NCCF).
  - 2=Ack** Displays acknowledgment on the command facility indicating whether the command was issued.
  - 3=No** Displays neither the result of whether the command was issued nor the acknowledgment.
5. Optionally, specify the operator ID where the command is to be issued in the **OPERATOR ID** field. If you do not specify an operator ID, the GATOPER defined in the control file is used as the operator ID.
6. Type the name of the NetView domain to which you are sending the command in the **To DOMAIN** field.
7. Type the command to issue on the other domain in the **Command** field.

8. Press **Enter**.

The command you specified runs on the remote domain.

---

## Managing Full-screen TAF Sessions

You can log on to selected applications in the system by using the AON: Terminal Access Facility Menu panel. AON enables automated setup of TAF sessions.

The AON: Terminal Access Facility Menu panel displays the status of all TAF full-screen applications that are defined in the control file for operators. You can start and stop TAF full-screen sessions from this panel. When you establish a TAF session, your current domain looks like the full screen for the application with which you are in session. These values are retrieved from the FULLSESS control file entry.

**Note:** It is not required that you establish sessions with applications using TAF.

### Displaying the AON: TAF Menu Panel

To display the AON: Terminal Access Facility Menu panel:

1. Display the **Cross Domain Gateway Display** panel.

**Note:** To display the AON: Cross Domain Display panel, see “Displaying the AON: Cross Domain Gateway Panel” on page 46.

2. Type **3** in the entry field on the AON: Cross Domain Display panel.
3. Press **Enter**.

The AON: Terminal Access Facility Menu panel is displayed in Figure 44 on page 52.

**Note:** You can also display the AON: Terminal Access Facility Menu panel by entering **AON 1.5.3** or **AONTAF** on any command line.

```

EZLK5400                AON: Terminal Access Facility Menu          CNM01

                SRCLU = TAFANF00  OPERATOR ID = OPER1

Select one of the following. Then press Enter.
1=Start/Return  2=Stop
  Description          Applid          System          Status
  -----          -
  _  TSO Application    TSO            CNM01          ACTIVE

Command ==>>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward
F12=Cancel

```

Figure 44. AON: Terminal Access Facility Menu Panel

The **AON: Terminal Access Facility Menu** panel displays the following data:

**Description**

A short description that identifies the application to be started.

**Applid**

The short identifier for the application.

**System**

The name of the system on which the application runs.

**Status** Specifies whether the application is active or inactive.

You can use the AON: Terminal Facility Menu panel to start, return to, and stop a TAF full-screen session. The following sections explain how to perform these actions.

## Starting an Application Session

To start a TAF session:

1. Display the AON: Terminal Access Facility Menu panel.

**Note:** To display the AON: Terminal Access Facility Menu panel, see “Displaying the AON: TAF Menu Panel” on page 51.

2. Type **1** next to the session you want to start.
3. Press **Enter**.

The application you selected is displayed. The next step you take depends on the application. For example, if the application is Time Sharing Option (TSO), the logon panel for that TSO session is displayed.

## Stopping an Application Session

To stop a TAF session:

1. Display the **AON: Terminal Access Facility Menu** panel.

**Note:** To display the AON: Terminal Access Facility Menu panel, see “Displaying the AON: TAF Menu Panel” on page 51.

2. Type **2** next to the session you want to stop.
3. Press **Enter**.  
The TAF session deactivates.
4. Press **F5** to refresh the status.





---

## Chapter 6. Performing Task and Log Maintenance

To perform task and log maintenance, use the AON: Task and Log Maintenance panel and the subordinate panels. Use these panels to:

- display data in the configuration and status files
- browse the NetView and automation logs
- start and stop automation components
- work with automation tasks

---

### Displaying the AON: Task and Log Maintenance Panel

To display the Task and Log Maintenance panel:

1. Display the **Base Functions** panel.
2. Type **7** in the entry field on the AON: Base Functions panel.
3. Press **Enter**.

The AON: Task and Log Maintenance panel shown in Figure 45 is displayed.

**Note:** You can also display the AON: Task and Log Maintenance panel by typing **AON 1.7** or **AONMAINT** on any command line.

```
EZLK7000                AON: Task and Log Maintenance                CNM01

Select an option

  _ 1. Configuration Data Display
    2. Display Status Data
    3. Browse NetView Log
    4. Browse Automation Log
    5. Perform Data base Maintenance
    6. Start/Stop Automation Components
    7. NetView Tasks/Automation Operators

Command ==>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

Figure 45. AON: Task and Log Maintenance Panel

The AON: Task and Log Maintenance panel displays the following options:

#### Configuration Data Display

Displays current configuration data from the control file for an entry and type. The control file is checked and results displayed. You can add, change, and delete the configuration data.

**Display Status Data**

Displays the current status for specific IDs or a range of IDs. Deletions from the status file are enabled.

**Browse NetView Log**

The command BR NETLOGA enables you to browse the NetView log.

**Browse Automation Log**

The NLOG command enables you to browse the AON log.

**Perform Data Base Maintenance**

Enables selective purging of outdated VSAM database records. The databases that can be maintained are the NetView Hardware Monitor database, the NetView Session Monitor database, the AON status file, and other databases as installed by the AON components.

**Start/Stop Automation Components**

Enables you to start, stop, or reload the automation components. The components are DDF, LOG file, status file, and control file. In addition, you can change which control file member is loaded again or you can load another control file.

**Automation Tasks/Operators**

Finds all tasks on the domain and displays the information in a list. From this list, you can stop, start, force the task off the system, display detailed information about the task, or show the utilization of the task.

The following sections explain how to use these options.

---

## Displaying Configuration Data

Use the AON: Configuration Data Display panel to display data in the control file.

### Displaying the AON: Configuration Data Display Panel

To display the AON: Configuration Data Display panel:

1. Display the **AON: Task Log and Maintenance** panel.

**Note:** To display the AON: Task Log and Maintenance panel, see “Displaying the AON: Task and Log Maintenance Panel” on page 55.

2. Type **1** in the entry field.
3. Press **Enter**.

The AON: Configuration Data Display panel, shown in Figure 46 on page 57, is displayed.

**Note:** You can also display the AON: Configuration Data Display panel by entering **AON 1.7.1** or **DSPCFG** on any command line.

EZLK7100	AON: Configuration Data Display	CNM01
Entry: _____		
Type: _____		
Command ==>		
F1=Help	F2=Main Menu	F3=Return
		F6=Roll
		F12=Cancel

Figure 46. AON: Configuration Data Display Panel

4. Type the name of the entry in the control file that you want to display in the **Entry** field. You can enter from 1 to 15 characters without embedded blanks, commas, or quotes.

**Note:** The following wildcards are enabled for this field:

- \* Multiple character wildcard
- % Single character wildcard

You can display the entire control file by entering an asterisk (\*) in the this field.

5. Type any data associated with the entry in the **Type** field. You can enter from 1 to 32 characters without embedded blanks, commas, or quotes.

**Note:** The following wildcards are enabled for this field:

- \* Multiple character wildcard
- % Single character wildcard

You can display the entire control file by entering an asterisk (\*) in the this field.

For example, to display all settings for notification operators, type **NTFYOP** in the entry field.

6. Press **Enter**.

The AON: Configuration Data Display panel, shown in Figure 47 on page 58, displays the control file entries for notification operators.

```

EZLK7110          Display Configuration Data          CNM01
Select one of the following. Then press Enter.      More:  +
1=Add 2=Change 3=Delete

- OPER1          NTFYOP
- OPER          'OPERATOR ONE'
- CLASS          (60,65,66)
- HELDMSG        (I,W,E,A)
- OPER2          NTFYOP
- OPER          'OPERATOR TWO'
- CLASS          (10,20,30,50)
- HELDMSG        (I,W,E,A)
- OPER3          NTFYOP
- OPER          'OPERATOR THREE'
- CLASS          (10,30)
- OPER4          NTFYOP
- OPER          'OPERATOR FOUR'
- CLASS          10
- OPER5          NTFYOP

Command ==>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh  F6=Roll
F7=Backward  F8=Forward
F12=Cancel

```

Figure 47. Display Configuration Data Panel

Use the AON: Configuration Data Display panel to add, change, and delete notification operators. The following sections explain how to perform these actions. The changes are made to the in-storage copy of your policy and will be overwritten the next time the policy is reloaded.

## Adding Data to the Control File

To add an entry to the control file:

1. Display the control file through the **AON: Configuration Data Display** panel.

**Note:** To display the control file with the AON: Configuration Data Display panel, see “Displaying the AON: Configuration Data Display Panel” on page 56.

2. Type **1** next to an existing control file entry on the AON: Configuration Data Display panel.

**Note:** To add only a keyword, type **1** in a field for a keyword.

3. Press **Enter**.

The Configuration Data Display, shown in Figure 48 on page 59, is displayed with the ADD ENTRY pop-up window.

```

EZLK7111          Configuration Data Display          CNM01
Select one of the following. Then press Enter.      More:  +
1=Add 2=Change 3=Delete

1 OPER1          : ..... ADD ENTRY ..... :
- OPER          : Entry . . _____ :
- CLASS         : : :
- HELDMSG       : Type . . _____ :
- OPER2         : : :
- OPER          : F1=Help          F12=Cancel :
- CLASS         : ..... :
- HELDMSG       : (I,W,E,A) :
- OPER3         : NTFYOP :
- OPER          : 'OPERATOR THREE' :
- CLASS         : (10,30) :
- OPER4         : NTFYOP :
- OPER          : 'OPERATOR FOUR' :
- CLASS         : 10 :
- OPER5         : NTFYOP :

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward           F12=Cancel

```

Figure 48. Configuration Data Display Panel with Add Entry Pop-up Window

4. Type the name of the entry you want to add in the **Entry** field in the pop-up window.
5. Type the type of the entry you want to add in the **Type** field in the pop-up window.
6. Press **Enter**.

The Define Data pop-up window shown in Figure 49 is displayed.

```

EZLK7112          Configuration Data Display          CNM01
Select one of the following. Then press Enter.      More:  +
1=Add 2=Change 3=Delete

1 OPER1          : ..... ADD ENTRY ..... :
- OPER          : Entry . . ntfyop_____ :
- CLASS         : : :
- HELDMSG       : Type . . tstoper_____ :
- OPER2         : ..... :
- OPER          : DEFINE DATA :
- CLASS : KEYWORD . . . . _____ : :
- HELDMSG: : : : : : :
- OPER3 : KEYWORD VALUE . _____ :
- OPER : _____ :
- CLASS : _____ :
- OPER4 : F1=Help          F12=Cancel :
- OPER : F10=Save :
- CLASS : ..... :
- OPER5          : NTFYOP :

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward           F12=Cancel

```

Figure 49. DEFINE DATA Pop-up Window

7. Type a keyword in the keyword field of the **DEFINE DATA** pop-up window. The keyword can be any name from 1 to 31 characters in length. You cannot use embedded blanks, commas, or quotes.
  8. Type a value in the **KEYWORD VALUE** field. This is the value for the keyword entered. You can use as many as 62 characters for the value, including embedded blanks, commas, and quotes.
  9. To save the settings press **F10**.  
The following message is displayed:  
EZL001I REQUEST EZLSCMOD WAS SUCCESSFUL FOR *ntfyop*.
- 

## Displaying Status Data

Use the Display Status Data panel and the subordinate panels to display data in the status file.

The Display Status Data panel uses a set of command processors to write and update records for the AON status files. These records are written to a VSAM data set. The file contains the following type of information for each resource:

- Automation Status
- The operator ID that last changed the Automation Status field
- The last exceeded threshold
- The time stamps for errors that resulted in a lost session
- The operator ID that last changed a record in the Automation Status file.
- Additional information depending on the component.

### Displaying the Status Data Panel

To display the Display Status Data panel:

1. Display the **AON: Task Log and Maintenance** panel.

**Note:** To display the AON: Task Log and Maintenance panel, see “Displaying the AON: Task and Log Maintenance Panel” on page 55.

2. Type **2** in the entry field.
3. Press **Enter**.

The Display Status Data panel shown in Figure 50 on page 61 is displayed.

**Note:** You can also display the AON: Configuration Data Display panel by typing **AON 1.7.2** or **DSPSTS** on any command line.

EZLK7200	Display Status Data	CNM01
Select an Option		
_ 1. Id	_____	
2. From	_____	
To	_____	
Select a Component		
_ 1. AON Base		
2. AON SNA Automation - SNBU Option		
Command ==>		
F1=Help	F2=End	F3=Return
		F6=Roll F12=Cancel

Figure 50. Display Status Data Panel

The Display Status Data panel displays the following options:

#### Select an Option

Searches the status file by using one of two methods that you specify:

**Id** Searches for a specific resource by searching on the ID of the resource. The ID is the 16-character resource name for the resource records. To use this option, see the “Example” section.

#### From/To

Searches an alphabetical range within which the ID of the resource you want to view falls. The From and To fields are both required for this option. These entries are also 16-character keys to the resource records.

#### Select a Component

Specifies an AON component associated with the resource. If your component is not listed on the panel, select **1** for AON base.

The following example explains how to display the status of a resource. If you need status file records for SNBU automation, you must select those components. Status data for a resource managed by those components use different record formats and the data is accessible only by selecting that component.

#### Example

When you know the ID of a resource and want to display status data for that resource, do the following:

1. Type **1** in the Select an Option entry field on the Display Status Data panel.
2. Type the name of the resource in the **Id** entry field. This example uses resource **TA1N400**.
3. Type the number corresponding to the component type of the resource in the Select a Component entry field. This example uses **1** for AON Base.
4. Press **Enter**.

The Display Status Data panel, shown in Figure 51, is displayed with the data for the resource you specified.

```
EZLK7210          Display Status Data          CNM01

Select one of the following.  Then press Enter.
1=Delete

-  ID= TA1N400          , TYPE= UNKNOWN      , STATUS= ACTIV
   LAST UPDATE BY OPERATOR AUTMSG
   LAST THRESHOLD EXCEEDED -
   OPERATOR NOTIFIED: Y , TIMER SET:
   LAST STATUS CHANGE DATE= 04/18/00 , TIME= 19:27 , OPID= AUTMSG
   LAST MONITORED DATE= 04/18/00 , TIME= 19:27
   NO ERROR DATA AVAILABLE

Command ==>>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward   F12=Cancel
```

Figure 51. Display Status Data Panel

5. Optionally, type **1** to delete the record from the status file.
6. Press **Enter**.

---

## Maintaining Databases

Use the AON: Database Maintenance panel to maintain databases. The panel is built dynamically, based on the components installed. However, if a component does have a status file, it is defined in the component option definition table using the STSCMD= keyword. Select the database with which you want to work, and specify the Purge Limit and Purge Time.

**Note:** The DBMAINT command reproduces, without records marked for deletion, the VSAM database that is currently active. When the DBMAINT command finishes, the database that was active when the DBMAINT command started is activated again. The DBMAINT command works for an active primary or secondary VSAM database for the NetView hardware monitor (NPDA) or the NetView session monitor (NLDM). The AON status file (EZLSTS) has only a primary database.

### Displaying the AON: Database Maintenance Panel

To display the Database Maintenance panel:

1. Display the **AON: Task Log and Maintenance** panel.

**Note:** To display the AON: Task Log and Maintenance panel, see “Displaying the AON: Task and Log Maintenance Panel” on page 55.

2. Type **5** in the entry field.
3. Press **Enter**.



The AON: Database Maintenance panel, shown in Figure 52, is displayed.

**Note:** You can also display the AON: Database Maintenance panel by typing **AON 1.7.5** or **DBMAINT** on any command line.

```
EZLK7500                AON: Database Maintenance                CNM01

Select one of the following

  _ 1. Session Monitor
    2. Hardware Monitor
    3. AON Base
    4. AON SNA Automation - SNBU Option

Compress      : 1                (1=Yes  2=No)

Purge Limit   : 007 Days

Purge Time    : 045 Minutes

Command ==>
F1=Help      F2=Main Menu  F3=Return          F6==Roll
F7=Backward  F8=Forward    F12==Cancel
```

Figure 52. AON: Database Maintenance Panel

The AON: Database Maintenance panel displays the following fields and options:

**Select one of the following**

Enables you to purge records and compress the databases for hardware and session monitors and for AON status files.

**Compress**

Specifies whether to compress a database after deleting records from it.

**Purge Limit**

Specifies the number of days to leave in the file. If the number is 7, then all records older than 7 days are purged.

**Purge Time**

Specifies the amount of time to wait for the purge of the records to complete.



---

## Chapter 7. Using Support Functions

This chapter documents general-use programming interface and associated guidance information.

Use the AON Support Functions panel and the subordinate panels to perform the following options:

- Set traces
- Reinitialize AON
- Enable or disable automation
- Set common global variables
- Load or unload the automation table
- Browse or reload the option definition tables

The following subsections explain how to use these options.

---

### Displaying the AON: Support Functions Panel

To display the Support Functions panel:

1. Display the **Base Functions** panel.

**Note:** To display the Base Functions panel, see “Displaying the AON Base Functions Panel” on page 4.

2. Type **8** in the entry field.
3. Press **Enter**.

The AON: Support Functions panel is shown in Figure 53 on page 66.

**Note:** You can also display the AON: Support Functions panel by typing **AON 1.8** on any command line.

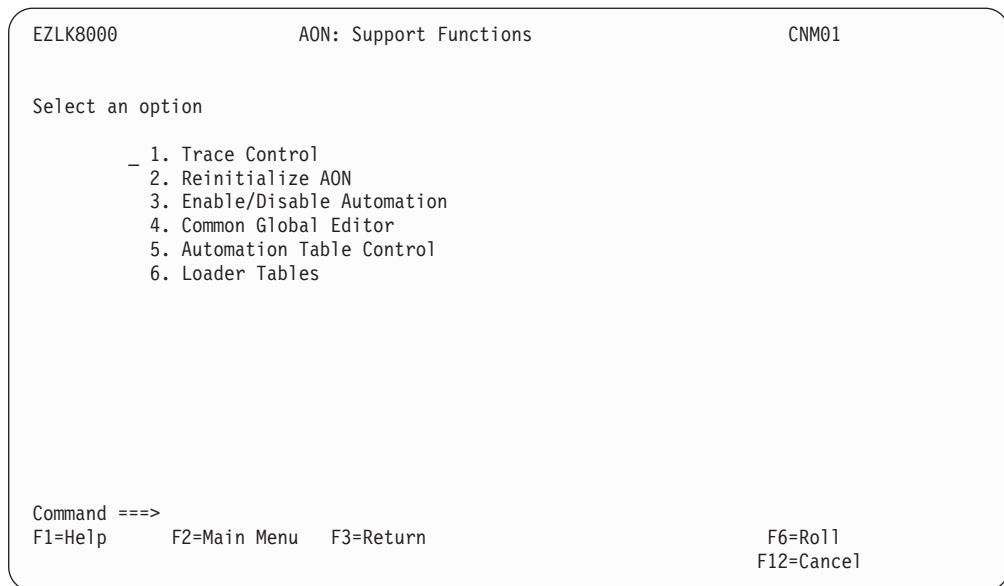


Figure 53. AON: Support Functions Panel

The AON: Support Functions panel displays the following options:

**Trace Control**

Traces the AON programs. You can use this option to debug problems without editing the AON program.

**Reinitialize AON**

Restarts AON using the automation table and control file currently being used.

**Enable/Disable Automation**

Turns off automation for AON and its components, or turns off automation for the components and subcomponents only.

**Common Global Editor**

Lists all common global variables used in NetView. Use this option to add, change, or delete common global variables.

**Automation Table Control**

Invokes the AUTOMAN function to assist you in managing your automation tables.

**Loader Tables**

Lists the tables used to load the common global variables. Use this option to browse and reload tables.

The following sections explain how to use these options.

---

## Setting Traces

To trace all of the programs that AON uses, or to trace a single program, use the AON: Set Trace panel.

### Displaying the AON: Set Trace Panel

To display the AON: Set Trace panel:

1. Display the **AON: Support Functions** panel.

**Note:** To display the AON: Support Functions panel, see “Displaying the AON: Support Functions Panel” on page 65.

2. Type **1** in the entry field on the AON: Support Functions panel.
3. Press **Enter**.

The AON: Set Trace panel is shown in Figure 54.

**Note:** You can also display the AON: Set Trace panel by entering **AON 1.8.1** or **AONTRACE** on any command line.

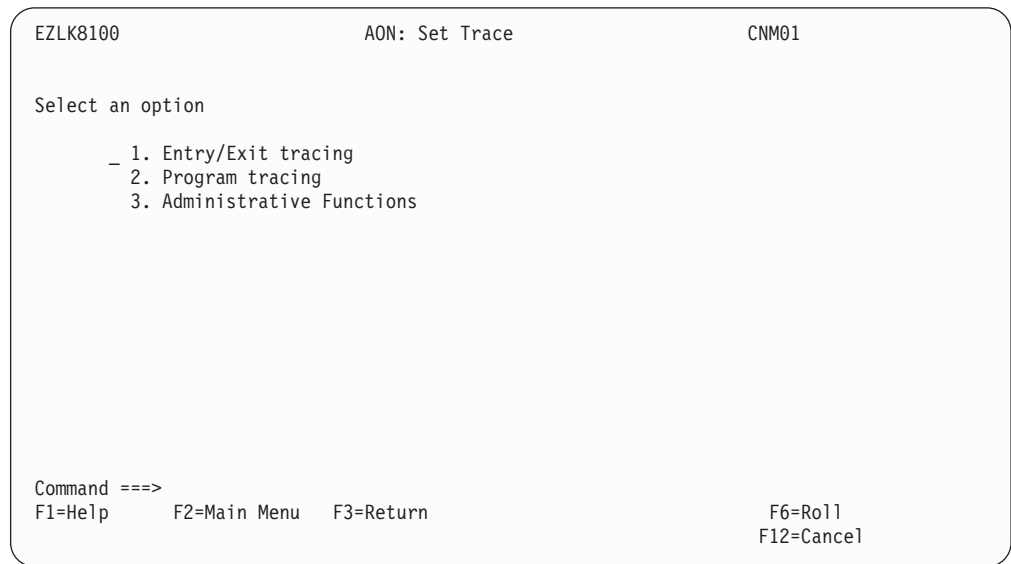


Figure 54. AON: Set Trace Panel

The AON: Set Trace panel displays the following options:

#### **Entry/Exit tracing**

Traces all the entry and exit parameters of the AON code. This includes command lists, REXX programs, and AON command processors. You can trace the programs running on an operator ID, a NetView domain, or both.

#### **Program tracing**

Traces the command lists and interpreted REXX programs you specify. Also, specify a trace option that limits the trace. Use the Program tracing option for the operator ID or the domain.

#### **Administrative Functions**

Authorized operators can enable Entry/Exit tracing and Program tracing. By default, tracing is disabled and can only be enabled through this option.

The following sections explain how to use these options.

## **Setting Entry/Exit Traces**

To trace all the programs that AON uses:

1. Display the **AON: Set Trace** panel.

**Note:** To display the AON: Set Trace panel, see “Setting Traces” on page 66.

2. Type **1** in the entry field on the AON: Set Trace panel.

3. Press **Enter**.

The AON: Set Entry/Exit Tracing panel is shown in Figure 55.

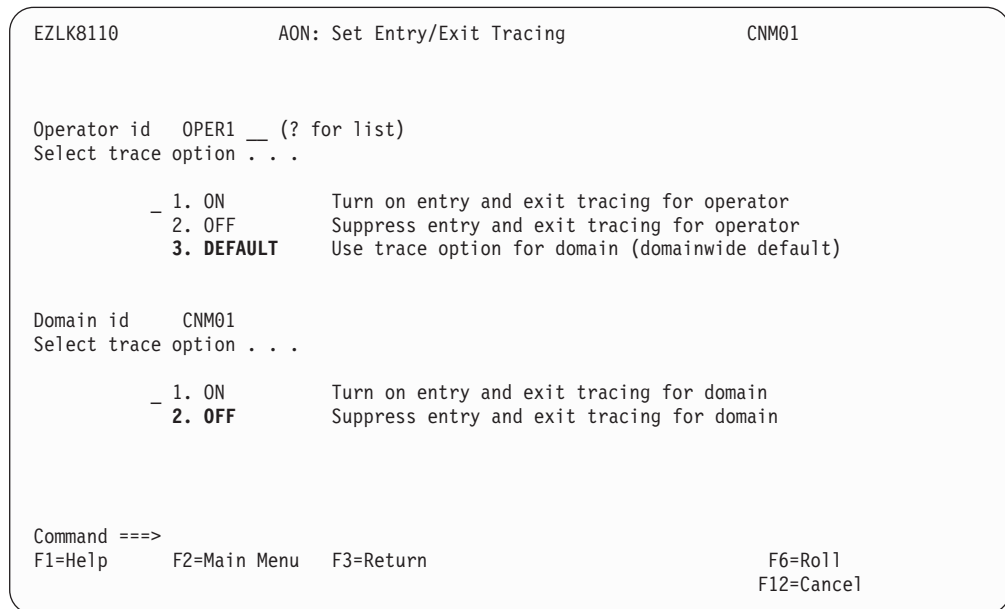


Figure 55. AON: Set Entry/Exit Tracing Panel

4. Select Entry/Exit tracing for an operator ID, a domain, or both on the **AON: Set Entry/Exit Tracing** panel. Domain tracing occurs only on the current domain. Current settings are highlighted.

To select Entry/Exit tracing for a domain only, use the following steps:

- Type **1** for ON or **2** for OFF in the **Domain id Select trace option** entry field.
- Press **Enter**.

The following message is displayed:

```
EZL908I SETTINGS REPLACED
```

## Setting Program Traces

To set a trace for a particular program:

- Display the **AON: Set Trace** panel.

**Note:** To display the AON: Set Trace panel, see “Setting Traces” on page 66.

- Type **2** in the entry field on the AON: Set Trace panel.
- Press **Enter**. The AON: Set Program Tracing panel is shown in Figure 56 on page 69.

```

EZLK8120          AON: Set Program Tracing          CNM01
Enter module name and trace option.                More:  +
R=Result I=Intermediate C=Command E=Error F=Failure L=Label O=Off

.. Settings for Operator OPER1__ .. .. Settings for Domain CNM01 .....
:   Module      Option          :   :   Module      Option          :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
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:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :
:   _____ :                :   :   _____ :                :

Command ==>>
F1=Help      F2=Main Menu   F3=Return
F7=Backward  F8=Forward
                                           F6=Roll
                                           F12=Cancel

```

Figure 56. AON: Set Program Tracing Panel

You can trace the programs by operator ID or domain ID. If you trace by domain ID, AON traces the programs in the domain the operator is logged onto. You can also select a tracing option on this panel that enables you to limit the trace.

4. Type the name of the program or programs you want to trace in the **Module** column for either the operator ID or domain ID.
5. Type the letter for the trace option you want to use in the **Option** column. You can select one of the following trace options:

- R (Result)**  
Use this option for general debugging. AON traces all the clauses before running them and traces the final results of evaluating expressions.
- I (Intermediate)**  
Use this option to trace all clauses before they are run and trace any intermediate results during expression evaluation and substitution.
- C (Command)**  
Use this option to trace all commands before running them and display any error return codes from the commands.
- E (Error)**  
Use this option to trace any command that has an error or fails after it is run. This option also displays the return codes.
- F (Failure)**  
Use this option to trace any command that fails after it is issued. This option is the same as the Trace Normal command.
- L (Label)**  
Use this option to trace all labels passed. You should make a note of all subroutine calls and signals when you use this option.

### O (Off)

Use this option to turn all traces off and reset any previous trace settings.

**Note:** If the program being traced is a NetView command list, the C, E, and O options are valid and all other selections result in a trace ALL.

#### 6. Press **Enter**.

The following message is displayed:

```
EZL908I SETTINGS REPLACED
```

## Administrative Functions

By default, entry/exit and program tracing is disabled for performance purposes. This is defined on your environment setup policy definition statement. To enable tracing:

#### 1. Display the **AON: Set Trace** panel.

**Note:** To display the AON: Set Trace panel, see “Setting Traces” on page 66.

#### 2. Type **3** in the entry field on the AON: Set Trace panel.

#### 3. Press **Enter**.

The AON: Trace Administrative Functions panel is shown in Figure 57.

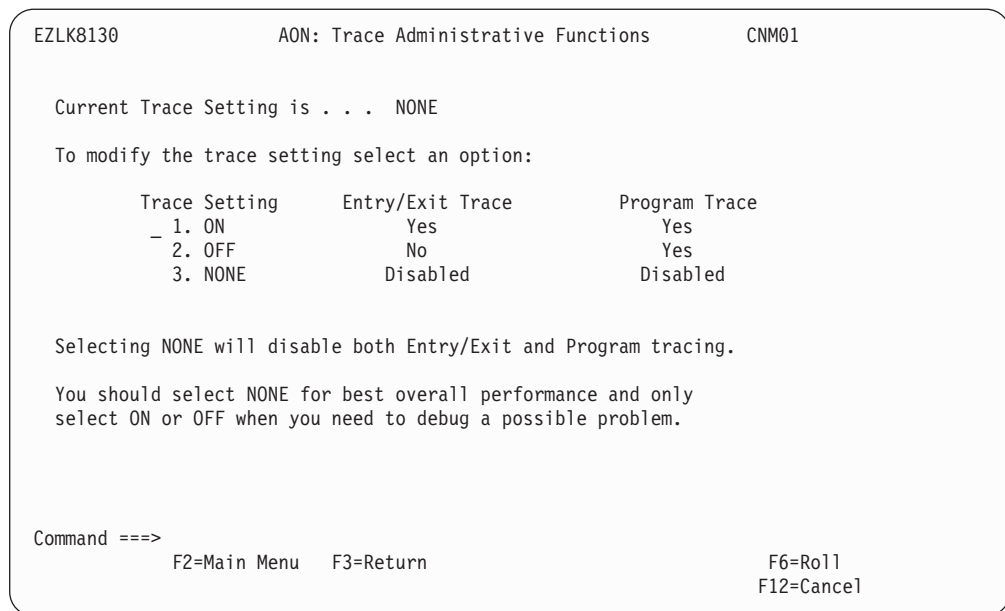


Figure 57. AON: Trace Administrative Functions Panel

Figure 57 displays that tracing is currently set to NONE, which means that all tracing is disabled for this domain. To enable tracing, select Options 1 or 2. Option 1 enables both entry/exit and program tracing. Option 2 only enables Program tracing.

Once you select options 1 or 2 you can turn on program tracing for any AON program by going back to the Trace Menu panel and selecting the **Program Trace** option.



---

## Reinitializing Automation

Use the AON: Reinitialize Automation panel to reinitialize the AON program. You can use the automation table and control file currently being used. To display the AON: Reinitialize Automation panel:

1. Display the **AON: Support Functions** panel.

**Note:** To display the AON: Support Functions panel, see “Displaying the AON: Support Functions Panel” on page 65.

2. Type **2** in the entry field on the AON: Support Functions panel.
3. Press **Enter**.

The AON: Reinitialize Automation panel is shown in Figure 58.

**Note:** You can also display the AON: Reinitialize Automation panel by typing **AON 1.8.2** or **AONINIT** on any command line.

```
EZLK8200          AON: Reinitialize Automation          CNM01

Select Confirmation Option  . . _ 1. Confirm
                             2. Cancel

Reload with Automation Table . . DSITBL01
Generate Listing File       . . LISTNAME

Reload with Control File    . . NVPOLICY

Trace Setting               . . OFF

Command ==>>>
F1=Help      F2=Main Menu  F3=Return

                             F6=Roll
                             F12=Cancel
```

Figure 58. AON: Reinitialize Automation Panel

4. Verify that the name of the automation table is correct. The default name for the automation table is DSITBL01. The policy file is defined in CNMSTYLE. The policy file name is fixed and cannot be changed.
5. Type **1** in the first entry field to confirm that you want to reinitialize AON or type **2** to cancel the reinitialization. For information on how AON loads the automation table, refer to the *Tivoli NetView for z/OS Installation: Getting Started*.
6. Press **Enter**.  
AON confirms or cancels your request.

---

## Enabling and Disabling Automation

You can use the AON: Enable/Disable Automation panel to turn off message processing for components. The panel supports multiple selections. If you enable or disable message processing for the AON base, you also enable or disable automation for all of the components. Therefore, select AON with caution.

When you select options 1–4 on the listing panel, special confirmation panels appear to enable you to confirm your action on the Enable/Disable panel. When you select a component that has subcomponents, the confirmation panel that is displayed lists all the subcomponents that the selection affects.

**Note:** Using this panel to enable or disable automation does not permanently change the settings. When you recycle AON or select the default option, AON resets the settings.

## Displaying the AON: Enable/Disable Automation Panel

To display the AON: Enable/Disable automation panel:

1. Display the **AON: Support Functions** panel.  
To display the AON: Support Functions panel, see “Displaying the AON: Support Functions Panel” on page 65.
2. Type **3** in the entry field on the AON: Support Functions panel.
3. Press **Enter**.

The AON: Enable/Disable Automation panel is shown in Figure 59.

**Note:** You can also display the AON: Enable/Disable Automation panel by entering **AON 1.8.3** or **AONENABL** on any command line.

```

EZLK8300                AON: Enable/Disable Automation                CNM01

Select one of the following. Then press enter.
1=Enable 2=Disable 3=Default 4=Initialize 5=Product Information

Component Name                Initialized  Enabled
- AON Base                    Y           Y
- AON SNA Automation          Y           Y
- AON SNA Automation - SNBU Option  Y           Y
- AON SNA Automation - X25 Option  N           N
- AON SNA Automation - APPN Option  Y           N
- AON SNA Automation - SubArea Option  Y           Y
- AON TCP/IP Automation        Y           Y
- AON TCP/IP Automation - NV4AIX Option  N           N
- AON TCP/IP Automation - TCP/IP 390 Option  Y           Y

Command ==>>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6==Roll
F7=Backward  F8=Forward    F12==Cancel

```

Figure 59. AON: Enable/Disable Automation Panel

The AON: Enable/Disable panel displays the following information:

**Component name**

Lists the components.

**Initialized**

States whether the component has been initialized when AON initialized or when you specified for it to be initialized.

**Enabled**

States the current ENABLE/DISABLE setting of the component. A

component can be listed as initialized but not enabled, but when a component is not initialized, it cannot be enabled.

You can use the AON: Enable/Disable Automation panel to enable and disable automation, to specify default automation for a component, to initialize a component, and to display information about a product. The following sections explain how to perform these actions.

---

## Using the Common Global Editor

You can use the Common Global Editor panel to view all of the current common global variables being used in AON. You can use the Common Global Editor panel to add, change, or delete common global variables (CGLOBALs).

Use this editor with caution because any changes you make can affect AON processing. Each common global variable is restricted to 255 characters. Mixed case is supported for common global variable values and is set exactly as you type.

Any changes that you make by using the editor are for the current AON session only. When AON recycles, the common global variables are reset to values at initialization time.

## Displaying the AON: Common Global Editor Panel

To display the AON: Common Global Editor panel:

1. Display the **AON: Support Functions** panel.

**Note:** To display the AON: Support Functions panel, see “Displaying the AON: Support Functions Panel” on page 65.

2. Type **4** in the entry field on the AON: Support Functions panel.
3. Press **Enter**.

The AON: Common Global Editor panel is shown in Figure 60 on page 74.

**Note:** You can also display the AON: Common Global Editor panel by typing **AON 1.8.4** or **CGED** on any command line.

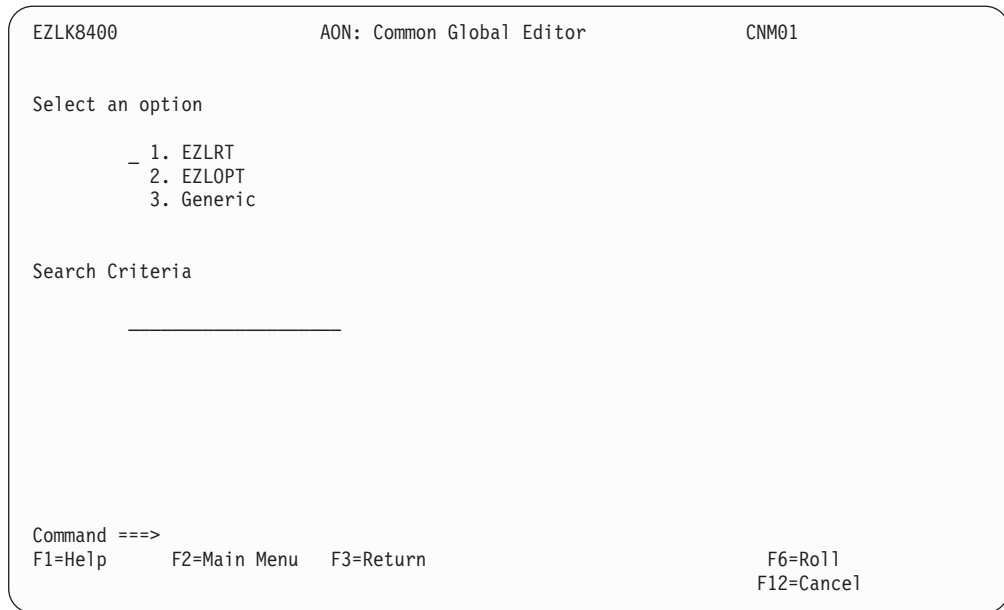


Figure 60. AON: Common Global Editor Panel

The AON: Common Global Editor panel displays the following options:

**Select an option.**

Specifies a common global. The options are:

**EZLRT**

Shows the resource type common global variables set from the option definition tables at AON startup. Do not delete these common global variables.

**EZLOPT**

Shows the option definitions set from the option definition tables at AON startup. Do not delete these common global variables.

**Generic**

Shows the common global variables specified by the operator. If you select this option and do not fill in the Search Criteria field, AON displays all of the common global variables. If you type a value in the Search Criteria field, AON appends an asterisk (\*) to the global name. You can also use a wildcard.

**Search Criteria**

Specifies the search criteria that you want to use.

The following sections explain how to use these options.

## Changing Common Global Variables

To change a common global variable:

1. Display the **Operator Command: CGLOBAL EDITOR** panel.

**Note:** To display the Operator Command: CGLOBAL EDITOR panel, see “Displaying the AON: Common Global Editor Panel” on page 73.

2. Select an option and the search criteria you want on the AON: Common Global Editor panel. For example, type **1** for EZLRT common global variables.

**Note:** If you select EZLRT or EZLOPT, the editor checks for an entry in the Search Criteria field. The entry in this field is then appended to EZLRT or EZLOPT. The search criteria must not exceed 31 characters.

For example, if you type **1** in the Select Option field and specify **AON** in the Search Criteria field, the editor searches for all common global variables that are EZLRT.AON.\*

Or, if you type **2** in the Select Option entry field and enter **APPN.ACT\*** in the Search Criteria field, the editor looks for all common global variables that are EZLOPT.APPN.ACT\*

3. Press **Enter**.

The CGLOBAL EDITOR panel is shown in Figure 61.

```

EZLK8410          Operator Command: CGLOBAL Editor          CNM01
Select one of the following. Then press Enter.          More: +
1=Add 2=Change 3=Delete

Name                                0.....1.....2.....3.....4.
- EZLRT.APPL.IST400I                (FKV552,)
- EZLRT.APPL.IST804I                (EZL550,"FKVEAIDC "RESNAME JOBNAME OUTMSG
- EZLRT.APPL.IST805I                (,"FKVEAIDD "RESNAME)
- EZLRT.APPL.MSGCLASS                26
- EZLRT.APPL.OPTION                  SA
- EZLRT.CDRM.CRITCACT                FKVEAIDB()
- EZLRT.CDRM.IST7270B                (FKV520,)
- EZLRT.CDRM.IST7270C                (FKV522,)
- EZLRT.CDRM.IST7270D                (FKV525,)
- EZLRT.CDRM.IST7270E                (FKV511,)
- EZLRT.CDRM.IST7270F                (FKV517,)
- EZLRT.CDRM.IST72707                (FKV521,)
- EZLRT.CDRM.IST72710                (FKV519,)
- EZLRT.CDRM.IST72711                (FKV531,)

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward   F11=Right        F12=Cancel

```

Figure 61. Operator Command: CGLOBAL Editor Panel

4. Type **2** in the entry field next to the CGLOBAL you want to change.
5. Type over the existing value of the CGLOBAL to the right of the entry field with the new value.
6. Press **Enter**.

The following message is displayed:

```
EZL919I ALL ACTIONS SUCCESSFULLY COMPLETED
```

AON changes the CGLOBAL.



---

## Chapter 8. Managing Multiple Automation Tables

This chapter documents general-use programming interface and associated guidance information.

The AUTOTBL command enables you to load multiple automation tables. An automation table, typically, is made up of many included members. The automation table management (AUTOMAN) command enables you to make changes to selected tables or changes that have an affect on all automation tables. To help you work with automation tables, AUTOMAN provides a full-screen panel interface.

AUTOMAN and the full-screen panel interface enable you to do the following:

- View and manage single or multiple automation tables
- Enable or disable individual automation tables or statements
- View existing tables and their status

---

### Getting Started

AUTOMAN provides individual table commands and global commands. The individual table commands apply to one or more selected tables, and global commands apply to all automation tables. See the following features and options of each type of command:

- With individual table commands, you can enable or disable automation tables. You can also enable or disable automation table statements, based on the following:
  - Sequence number
  - Label
  - Endlabel
  - Block
  - Group
  - Include

With individual table commands, you can also issue requests for the following:

- Display disabled statements
  - Display labels, blocks, and groups
  - Load or unload tables
  - Test tables
  - Display the %INCLUDE structure
  - Display synonyms
- With global commands, you can enable, disable, or unload automation tables. You can enable disabled statements or enable and disable blocks, groups, and labels. Global commands affect all automation tables.

Automation statements can be enabled or disabled across all tables based on the following:

- Label
- Block

- Group

With global commands, you can also issue requests for the following:

- Locate disabled statements
- Display labels, blocks, and groups
- Display the %INCLUDE structure

---

## Using Automation Table Management

From the command line, enter **AUTOMAN**. The panel in Figure 62 is displayed. This panel enables you to see your automation table structure and take action, as necessary.

```

EZLK8500                      Automation Table Management

AUTOMATION TABLE             Enter any character in the selection fields
SEL   POS   NAME              STATUS   MARKERS   TASK   DATE   TIME
-     1     DISTABLE         ENABLED
-     2     DSITBL01        ENABLED   (AON)    NETOP2 03/18/00 13:15:24
                                           NETOP2 03/18/00 13:11:09

Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Commands  F5=Refresh   F6=Roll
F7=Backward  F8=Forward   F9=Responses F10=Global Commands F12=Cancel

```

Figure 62. Automation Table Structure

## Using Commands for Selected Tables

The Commands pop-up in Figure 63 on page 79 provides options to help you work with one or more selected automation tables. In the following figure, options 1–7 apply to one or more selected tables, in contrast to global commands in *Tivoli NetView for z/OS Automation Guide*, which apply to all tables. Options 8–9 apply to only one table.

In Figure 62, pressing **F4**, for Commands, displays Figure 63 on page 79 where DSITBL01 is selected to be disabled.

Selecting option 2 causes a pop-up to be displayed to confirm that you want to disable the selected table. When DSITBL01 is disabled, a message will indicate whether the command was successful or whether failures were detected. Press **F9** in Figure 62 to view the results of your command.



```

EZLKATBC          AUTOMATION TABLE MANAGEMENT

AUTOMATION TABLE      Enter any character in the selection fields
SEL  POS  NAME  .....
/    1  DISTABL : COMMANDS (Choose a highlighted command option) :
-    2  DSITBL0 : .....
          : -      1 -ENABLE the selected tables          :
          :      2 -DISABLE the selected tables          :
          :      3 -RELOAD the selected tables          :
          :      4 -RELOAD and REINSTATE disabled elements :
          :      5 -TEST the selected tables          :
          :      6 -ENABLE/DISABLE parts of the selected :
          :          tables                               :
          :      7 -UNLOAD selected tables          :
          :      8 -INSERT a table                    :
          :      9 -DISPLAY options                  :
          : .....
          : Enter=Execute Command      F3 or F12=Cancel :
          : .....

Command ==>
F1=Help      F2=Main Menu                                F6=Ro11

```

Figure 63. Automation Table Management Commands Pop-up Window



---

## Chapter 9. Using the Inform Log Utility

This chapter documents general-use programming interface and associated guidance information.

Operators can use the inform log utility to display inform log entries. The entries are records of the automated notification actions that have taken place, such as a pager call or e-mail. An operator can view the log, acknowledge receipt of an inform notification, reinform a specific contact, or delete an entry. All automated actions are logged, by default, when inform logging is enabled. The logging of operator calls with INFORM/EZLECALL can be enabled in the inform policy. Refer to the SETUP policy member in the *Tivoli NetView for z/OS Administration Reference* for more details.

**Note:** It is not the purpose of the inform log utility to keep a log that tracks all inform actions. Rather, for tracking purposes, messages are generated and can be found in the NetView log. The purpose of the ILOG data set is to help you dynamically track, respond to, and delete inform log entries. Due to the I/O required and data set constraints, the ILOG function may not be practical in all environments.

To invoke the inform log utility, you can enter one of the following commands:

```
ILOG
AON 1.9
```

If you enter **ILOG**, the following full-screen panel containing the contents of your inform log is displayed:

```
EZLKINFL                INFORM LOG UTILITY

Enter  1 -ACKNOWLEDGE  2 -REINFORM  3 -REINFORM/NEW MESSAGE  4 -DELETE

_ CONTACT ENTRY NUMBER  1 OUT OF  3 CURRENT CONTACT STATUS ACKNOWLEDGED
AON DEVELOPMENT TEAM           EMAIL      AT 23:00:00 ON 01/26/00
A PU NAMED PU00005 FAILED DUE TO INNOP

_ CONTACT ENTRY NUMBER  2 OUT OF  3 CURRENT CONTACT STATUS ACKNOWLEDGED
AON DEVELOPMENT TEAM           EMAIL      AT 13:37:50 ON 01/27/00
A CDRM NAMED NTB7MUS FAILED DUE TO PACDRM

_ CONTACT ENTRY NUMBER  3 OUT OF  3 CURRENT CONTACT STATUS ISSUED
AON DEVELOPMENT TEAM           EMAIL      AT 13:39:48 ON 01/27/00
A PU NAMED PU00001 FAILED DUE TO INNOP

Command ==>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh      F6=Roll
F7=Backward  F8=Forward    F9=Search      F12=Cancel
```

Figure 64. Inform Log Utility Panel

You can choose any of the following functions, which are shown in Figure 64, for a single inform log entry:

### 1 -ACKNOWLEDGE

Changes the displayed status to ACKNOWLEDGED.

### 2 -REINFORM

Reissues the message against the active inform policy member using the original policy name.

### 3 -REINFORM/NEW MESSAGE

Reissues the message against the active inform policy member using the original policy name and provides a pop-up window with the original message text. The message text can be edited or replaced prior to confirming the REINFORM.

### 4 -DELETE

Removes the entry from the inform log.

The following function keys, located at the bottom of the panel, provide functions that are independent of an individual log entry:

**F5** Refreshes and displays a current version of the inform log.

**F9** Searches for specified log entries. From a pop-up window, you can search for a name, partial name, message text, and date and time. The default is to search through all log entries from the oldest to the most current. For more information, see "Searching Log Entries" on page 84.

The lines of a log entry in Figure 64 on page 81 displays the following options:

#### First line

Contains the current entry number, the total number of entries, and the status of the entry.

```
CONTACT ENTRY NUMBER 1 OUT OF 3 CURRENT CONTACT STATUS ISSUED
```

#### Second line

Contains the contact name field, the connection type used, and the time and date of the notification.

```
AON DEVELOPMENT TEAM          EMAIL    AT 23:00:00 ON 01/26/00
```

#### Third line

Contains the message issued by the notification.

```
A PU NAMED PU00005 FAILED DUE TO INNOP
```

You can also access the inform log utility by entering the **AON 1.9** command synonym. When the AON Base Functions panel, shown in Figure 65 on page 83, is displayed select option **9**:

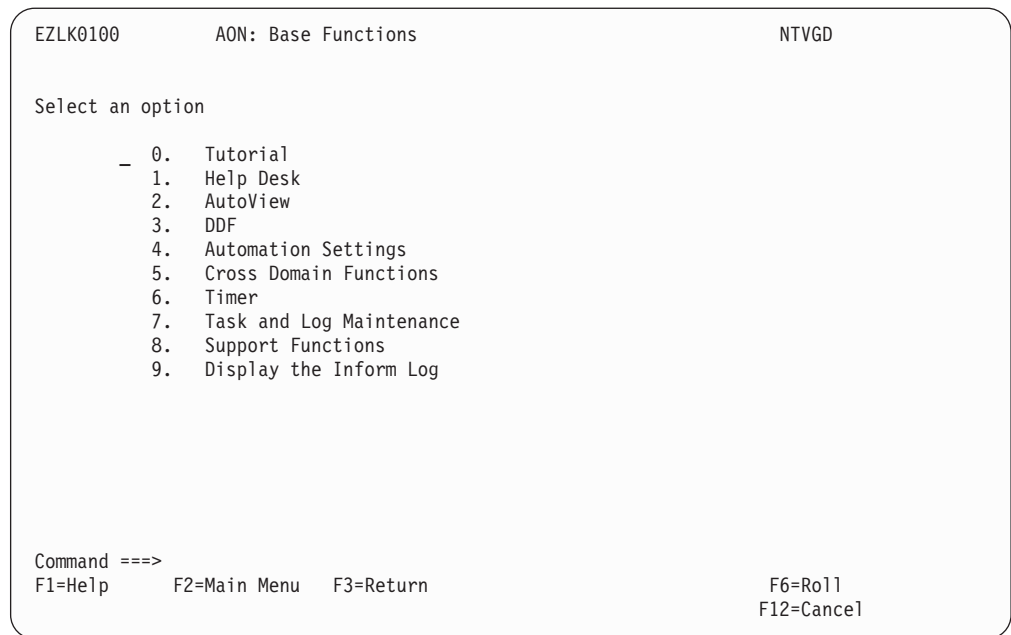


Figure 65. AON Base Functions Panel

## Checking Notification Status

The status conditions, which are located at the end of the first line in each log entry, are described in the following list. See Figure 64 on page 81 where the status is ISSUED.

### ISSUED

An inform request was sent to a service point.

### ACKNOWLEDGED

An operator acknowledged the notification.

### DELETED

The request was deleted from the inform log database.

### ROUTED

The request was routed to another NetView domain that owns the service point.

### REINFORMED

The request was reissued after the current inform policy was applied.

### REINFORMED/NEW

The request was reissued after the current inform policy was applied and a new message has been sent.

### FAILED

The request failed. The probable cause is a communication error with the service point.

### NOTROUTED

The request could not be routed to the target NetView domain.

## UNKNOWN ENTRY

The inform log contains a corruption error.

---

## Reissuing Notifications

To display the following pop-up window where you can reissue notifications, enter **3 -REINFORM/NEW MESSAGE** on the panel shown in Figure 64 on page 81:

```
EZLKINFR                INFORM LOG UTILITY

Enter 1 -ACKNOWLEDGE  2 -REINFORM  3 -REINFORM/NEW MESSAGE  4 -DELETE

CONTACT ENTRY NUMBER  1 OUT OF  3 CURRENT CONTACT STATUS ISSUED
AON .....:
A P : REISSUE an INFORM action via policy PAUL      :
3   :                                              :
AON : Update or Replace original message (60 character limit) :
A C : => A CDRM NAMED NTB7MVS FAILED DUE TO PACDRM      :
    :                                              :
AON : Note: Numeric message is required for Numeric Pagers   :
A P : F1=Help      Press ENTER to REINFORM      F12=Cancel  :
    .....:

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh      F6=Roll
F7=Backward  F8=Forward   F9=Search          F12=Cancel
```

Figure 66. Inform Log Utility with Reissue Request Pop-up Panel

Depending on how your policy is defined, the REISSUE request may change. For example, at 16:00, the policy may indicate a notification is to be sent as an e-mail, but at 19:00 the same policy may have no active contacts or may issue a notification through a pager.

### Usage Notes:

- An active inform policy member is required to view the inform log. Only automated notifications generated by EZLENFRM (the notification policy) are logged in the inform log by default. For more information about the notification policy, refer to the *Tivoli NetView for z/OS Administration Reference*
- Inform entries are logged in the DSILIST DD data set.
- The ILOG command uses the INFORM command to perform REINFORM actions. For information about the ILOG, INFORM, and INFORMTB commands, refer to the *Tivoli NetView for z/OS Command Reference*.

## Searching Log Entries

The inform log search panel, shown in Figure 67 on page 85, enables you to search the inform log entries.

```

EZLKINFS                INFORM LOG UTILITY

Enter  1 -ACKNOWLEDGE  2 -REINFORM  3 -REINFORM/NEW MESSAGE  4 -DELETE

CONTACT ENTRY NUMBER  1 OUT OF  3 CURRENT CONTACT STATUS ISSUED
AON .....:
A P : ENTER THE SEARCH CRITERIA .....:
   :                               specify Name of Message field search :
AON : Name Field:      * .....:
A C : Message Field:  * .....:
   : .....:
AON : Start Date:  01/26/00  23:00:00 -Oldest Log Entry Date/Time :
A P : Stop Date:   02/02/00  09:20:05 -Current Date/Time .....:
   : .....:
   : F1=Help          Press ENTER to REFRESH          F12=Cancel .....:
   :                with Search Criteria .....:
   : .....:
.....:

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh      F6=Roll
F7=Backward  F8=Forward   F9=Search           F12=Cancel

```

Figure 67. Inform Log Utility Search Panel

By default, the search proceeds through all entries beginning with the oldest date and time and ending with the current date and time. You can limit your search by any, a combination of, or all of, the following ways:

- The name or message fields
- Start and stop date and time

In a partial search, you can specify part of a name followed by an asterisk in the name field and the inform log utility will find every occurrence of the partial name. For example, you can search for XYZ or XYZ\* and the inform log utility will find all entries containing XYZ. The asterisk (\*) is optional. If you narrow the search still further using specific start and stop dates and times, the search is limited to the specified criteria beginning and ending on the specified dates and times.

If search criteria is not updated, press **F5**. An error message is displayed.





---

## Part 2. Using AON/SNA

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---

## Chapter 10. Getting Started with AON/SNA

This chapter explains navigation through the AON/SNA *operator interface*. The AON/SNA operator interface is a series of full-screen, menu-driven panels that enable you to use all of the operator functions available in AON/SNA.

You can identify an AON/SNA panel by the prefix of FKV in the panel name, located in the top left of the panel. Use the operator interface to look at color-coded displays of your network, resolve network problems, receive messages, issue commands, and perform many other functions that control automation and resource availability.

To perform a task in AON/SNA, use the operator interface or *panels*. For each task, there is a primary panel, which may have one or more subordinate panels.

In addition to AON/SNA panels, some AON/SNA tasks use AON panels, identified by an EZL prefix in the top left corner of the panel, and some AON/SNA tasks use NetView panels.

---

### Accessing the Operator Interface

You can access the AON/SNA operator interface from anywhere within NetView or the AON panels. You can also reach the AON/SNA panels from the other AON component (AON/TCP) if this component is installed and initialized by your organization.

To access the AON: Operator Commands Main Menu panel:

1. Type **AON** from the NetView command line.
2. Press **Enter**.

NetView displays the AON: Operator Commands Main Menu panel shown in Figure 68 on page 90. This panel displays all of the available components of AON. If a component (like AON/SNA) is not available, the name of the component on the panel is grayed out.

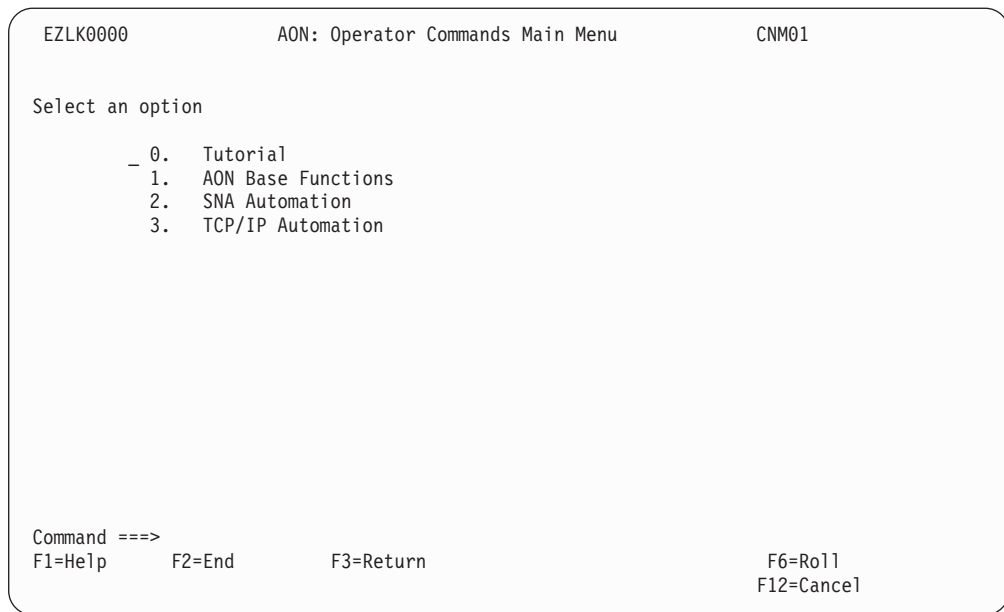


Figure 68. AON: Operator Commands Main Menu Panel

3. Type **2** in the entry field, which is located to the left of the first option.
4. Press **Enter**.

AON displays the SNA Automation: Menu panel shown in Figure 69 on page 91. Use this panel to access all the functions of AON/SNA.

**Note:** You can also display the AON/SNA operator interface by entering **AONSNA** on any command line within NetView, AON, or from the other AON components, provided these components are installed and initialized on your system.

```
FKVK0000          SNA Automation: Menu          CNM01

Select an option

  _ 0. Tutorial
    1. Help Desk
    2. SNAMAP
    3. VTAM Options Management
    4. NetStat
    5. VTAM Commands
    6. APPN menu
    7. Switched Network Backup menu
    8. X.25 menu
    9. NCP Recovery Definitions (NCP name=_____)

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

Figure 69. SNA Automation: Menu Panel

---

## Using the SNA Help Desk

The SNA Help Desk is an application program that enables NetView operators to solve network problems and to support end-users. The SNA Help Desk systematically finds the cause of the network problems and helps you perform recovery actions through a series of panels. The SNA Help Desk resolves network problems for AON/SNA by primarily attending to SNA resources with support for remote systems and NetView Access Services IDs (NVAS).

The SNA Help Desk enables you to select a resource and recycle it. The SNA Help Desk also enables you to use the problem determination panels to solve problems with that resource. Because AON/SNA performs problem determination through the operator interface panels, you receive immediate feedback on the status of a resource with any possible problems highlighted.

The SNA Help Desk enables you to view a resource and its higher connected nodes. This contrasts with SNAMAP which enables you to zoom to lower connected nodes.

The SNA Help Desk enables inexperienced help desk operators to solve network problems. The resource name is the only required field, so all you need to know is the terminal ID of the user. After you enter the terminal ID into the system, the SNA Help Desk displays a pictorial representation of how the user's terminal is attached to the system.

If your enterprise installed NetView Access Services (NVAS), you can select the NetView Access Services IDs (NVAS) option. This option determines the location of network problems using the caller's user ID, thus eliminating the need to know even the terminal ID.

To increase your productivity, the SNA Help Desk:

- Reduces the amount of input you enter
- Automates problem determination
- Enables you to be productive immediately, even if you do not know the network configuration
- Teaches you problem determination skills while you resolve network failures

To recover resources in another NetView domain, AON/SNA needs an active NNT or remote command (RMTCMD) NetView session with domains other than the one on which AON/SNA is located. This connection is necessary for the SNA Help Desk to find resources that are not on the operator's domain. If you need to establish these sessions, use the AON CDLOG command to go directly to the panel for establishing those sessions.

## Accessing the SNA Help Desk

To display the SNA Help Desk, select the Help Desk option on the SNA Automation: Menu panel, or use the fast path command or a panel synonym.

```

FKVK0000          SNA Automation: Menu          CNM01

Select an option

      1 0.  Tutorial
          1.  Help Desk
          2.  SNAMAP
          3.  VTAM Options Management
          4.  NetStat
          5.  VTAM Commands
          6.  APPN menu
          7.  Switched Network Backup menu
          8.  X.25 menu
          9.  NCP Recovery Definitions (NCP name=_____)

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel

```

Figure 70. Selecting the SNA Automation Help Desk

To display the SNA Help Desk from the SNA Automation: Menu panel:

1. Type **1** in the entry field.
2. Press **Enter**.

AON/SNA displays the SNA Automation: Help Desk panel shown in Figure 71 on page 93.

**Note:** You can also display the SNA Automation: Help Desk panel by typing **AON 2.1** or **SNAHD** on any command line and pressing **Enter**.

```

FKVK1000                SNA Automation: Help Desk

**** *  **  **      ** **          ***          *****          **
**  * ** ** ***** ** **          **          ** **          **
**   *** ** ** **   ** **   ****   **   ***** ** **   ****   ***** ** **
**   ***** ***** ***** ** **   **   ** ** ** ** ** ** ** ** ** ** ** **
** ** *** ** ** **   ** ** ***** **   ** ** ** ** ** ** ** ** ** ** ** **
*   ** ** ** ** ** **   ** ** **   **   ** ** ** ** ** ** ** ** ** ** ** **
**** **  * ** **   ** **   ****   ****   *****   *****   ****   ***** ** **

                               **
                               **

Enter name...: _____

Select option: _ 1. Recycle resource
                2. Problem Determination
                3. NetView Access Services User ID
                n. NetView Help Desk

Command ==>
F1=Help      F2=Main Menu  F3=Return

                               F6=Roll
                               F12=Cancel

```

Figure 71. SNA Automation: Help Desk Panel

3. Type the terminal ID of the user in the **Enter name** field.
4. Type the number of the option you want in the **Select option** entry field. You can select one of the following options:

**Recycle resource**

Attempts to activate the resource and its hierarchy.

**Problem Determination**

Displays the status of the resource and its higher node to help determine the problem.

**NetView Access Services User ID**

Enables you to use a NetView Access Services user ID to start problem determination.

**NetView Help Desk**

This option takes you to the main NetView Help Desk facility.

5. Press **Enter**.  
AON/SNA displays the panel for the option you selected. See the following sections for more information about those options.

## Recycling Resources

When you recycle a resource, AON/SNA attempts to deactivate and then activate the resource. Before attempting to activate the resource you select, AON/SNA checks all of the higher nodes to determine the highest inactive node and tries to recycle those nodes first.

For example, to recycle a resource from the SNA Automation: Help Desk panel shown in Figure 72 on page 94 do the following:

1. Type the terminal ID in the **Enter name** field, as shown in Figure 72 on page 94. This example uses the TA1PT209 terminal ID.
2. Type **1** in the entry field.
3. Press **Enter**.

```

FKVK1000                SNA Automation: Help Desk

**** *  **  **      ** **          ***          *****          **
**  * ** ** ***** ** **          **          ** **          **
**   *** ** ** **   ** **  ****   **  ***** ** **  ****  ***** ** **
**   ***** *****  ***** ** **  **  ** ** ** ** ** ** ** ** ** ** **
**  ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
*   ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
**** **  * ** **   ** **  ****  ****  ***** *****  ****  ***** ** **

                               **
                               **

Enter name...:  TA1PT209

Select option:      1 1. Recycle resource
                   2 2. Problem Determination
                   3 3. NetView Access Services User ID
                   n. NetView Help Desk

EZL333I PU TA1PT209 ON CNM01 HAS BEEN RECYCLED
Command ==>
F1=Help      F2=Main Menu  F3=Return

                               F6=Roll
                               F12=Cancel

```

Figure 72. Message Indicating Recycled Resources — SNA Automation: Help Desk

If AON/SNA cannot activate the resource, it displays a panel that displays a message, explaining the current status of the resource. Figure 72 shows a message that indicates AON/SNA successfully recycled the resource.

When AON/SNA cannot recycle the resource, it displays an Operator Command Interface: SNA Help Desk panel shown in Figure 73.

```

FKVK1RC1                Operator Command Interface: SNA Help Desk                CNM01

Current Status of PU : TA1P519A is NEVAC
Resource Domain is: CNM01

Select one of the following or Press F12 to Cancel:

_ 1. View Status Information for NEVAC
  2. Force activate resource
  3. View Hardware Monitor for LINE : TA1L5019
  4. View terminal Error Code explanation
  5. View X.25 Error Code explanation
  6. View Sense Code Information for 08220000

EZL910I ENTER A SELECTION
Command ==>
F1=Help      F2=Main Menu  F3=Return

                               F6=Roll
                               F12=Cancel

```

Figure 73. Operator Command Interface: SNA Help Desk Panel



Figure 73 on page 94 shows the domain you are on and the status of the resource. To use this panel, do the following:

1. Type the number of the command you want to process in the entry field. You can select one of the following options:

**View Status information**

Displays the status of the resource. Provides an explanation of the status as supplied by the NetView STATUS command.

**Force activate resource**

Tries to force the resource active.

**View Hardware Monitor**

Displays the most recent events for the highest inactive node of the resource.

**View terminal Error Code**

Displays a pop-up window, prompting you for a three-letter error code that you get from the person who called. You see an explanation of the terminal error code.

**View X.25 Error Code explanation**

Provides an explanation of the five-character error code provided by the person who called.

**View Sense Code Information**

Displays any sense code data and provides an explanation of it. This field may show sense code data when a VARY active occurs. You can look at this information using the NetView SENSE command. If there is no sense data, AON/SNA sets the sense field to 00000000.

2. Press **Enter**.

AON/SNA processes the command you selected.

## Determining Problem Cause

AON/SNA displays a panel that shows the pictorial representation of your network and displays a message that explains the status of the resource. For example, if the resource is active, AON/SNA displays a message similar to the following:

```
EZL043I TA1PT209 IS ACTIVE
```

You can use the SNA Help Desk to determine the cause of network problems. For example, suppose a user, whose terminal ID is RL523A1, detects problems. The user calls the help desk operator, who enters the terminal ID on the AON Help Desk panel. The AON/SNA Help Desk determines that the terminal is a SNA resource, so it displays the SNA Automation: Help Desk panel shown in Figure 74 on page 96.

```

FKVK1000                SNA Automation: Help Desk

**** *  **  **      ** **          ***          *****          **
**  * ** ** ***** ** **          **          ** **          **          **
**   *** ** ** **   ** ** **   *** **   ***** ** **   ****   ***** ** **
**   ***** ***** ***** ** **   **   ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
*  ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
**** **  * ** **   ** **   ****   *****   *****   ****   ***** ** **

                               **
                               **

Enter name...:  RL523A1

Select option:  2  1. Recycle resource
                2. Problem Determination
                3. NetView Access Services User ID
                n. NetView Help Desk

Command ==>
F1=Help      F2=Main Menu  F3=Return

                               F6=Roll
                               F12=Cancel

```

Figure 74. SNA Automation: Help Desk Panel – Selecting Problem Determination

To use the Problem Determination option on the SNA Automation: Help Desk panel:

1. Type the terminal ID in the **Enter name** field. This example uses the RL523A1 terminal ID.
2. Type **2** in the entry field.
3. Press **Enter**.

AON/SNA displays the Operator Command Interface: SNA Help Desk panel shown in Figure 75 on page 97.

```

FKVK1300          Operator Command Interface: SNA Help Desk          CNM01
                  Resource Domain:CNM01

      MAJNODE          LINE NAME  PHYSICAL UNIT          LOGICAL UNIT
      .....          :          :          :          :
      :               :          :          :          :
      : TA1N500       : TA1L5023 : TA1P523A : -- : RL523A1 :
      :               : ----- :          :          :
      :               :          :          :          :
      : .....          :          :          :          :
      :
      ACTIV          NEVAC          NEVAC          NEVAC

Enter Selection:
  _ 1. Terminal or X.25
    Code: _____
  2. View Sense Data:
    00000000

Tab to Resource and Press F4 for Commands

FKV333I RL523A1 IS NEVAC DUE TO LINE TA1L5023. PRESS F11 FOR ERROR DETAILS
Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Commands  F5=Refresh   F6=Roll
F10=Codes   F11=ErrDet   F12=Cancel

```

Figure 75. Color-Coded Resource Hierarchy

Figure 75 shows the resource hierarchy. This panel is color-coded to indicate the status of the resources. Because the line is not active, the line, the PU, and the LU all display in red on the panel. The red is represented in boldface in Figure 75. The line, the PU, and the LU each have a status of NEVAC (never active).

The selection menu in the lower right corner of the panel shows any sense codes or error codes associated with the problem. If you know the sense code data or the X.25 code, you can select these options for further information. Press F10 to move to the Enter Selection entry field or press the Tab key to move the cursor to the resource. On the Operator Command Interface: SNA Help Desk panel the cursor is positioned at the failing resource.

If the resource is not active, AON/SNA enables the F11 key. In this scenario, the message on the Operator Command Interface: SNA Help Desk panel instructs you to press F11 for error details and to continue with problem determination. Although the LU that you are investigating is RL523A1, the message displayed at the bottom of the panel in Figure 75 reveals that the line is the source of the problem.

- 4. Press **F11**.  
 AON/SNA displays the SNA Help Desk Problem Determination panel shown in Figure 76 on page 98.

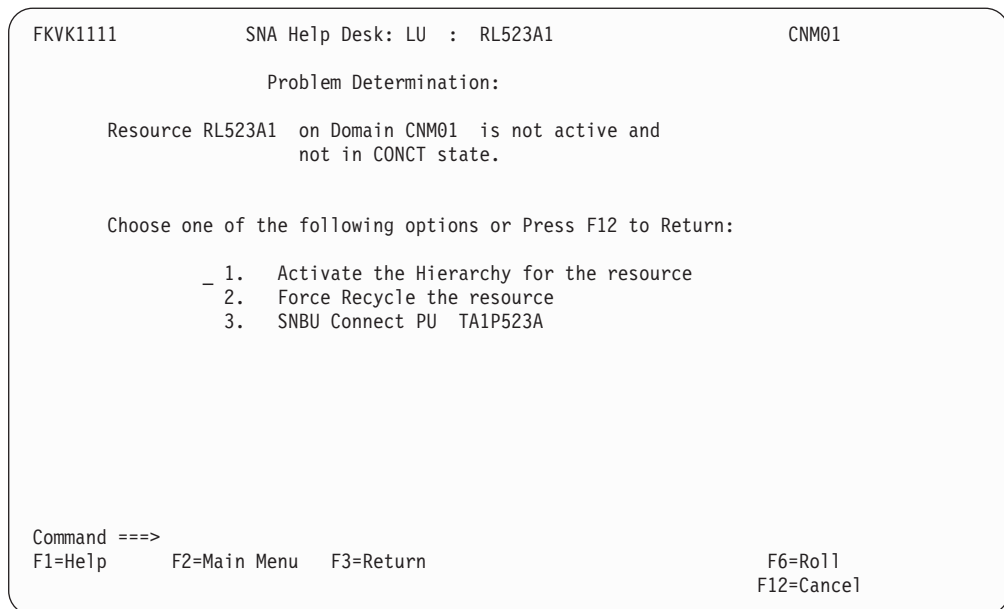


Figure 76. SNA Help Desk Problem Determination Panel

Figure 76 shows the error message at the top of the panel. The panel lists actions to take to attempt to solve the problem. The Problem Determination panel provides the following actions:

**Activate the Hierarchy for the resource**

Attempts to activate the hierarchy of the resource starting from the highest inactive resource to the resource you entered.

**Force Recycle the resource**

Attempts to deactivate, then activate the resource you entered.

**SNBU Connect PU**

Takes you to SNBU so you can initiate the dial backup connection.

See the following sections for more information about these options.

**Activating the Hierarchy**

To use the Problem Determination panel to attempt to activate the LU and the other resources in its hierarchy (the PU and the line):

1. Type **1** in the entry field shown in Figure 77 on page 99.
2. Press **Enter**.

AON/SNA attempts to activate all of the resources in the hierarchy, starting from the highest inactive resource continuing down to the resource you entered on the panel.

```

FKVK1111          SNA Help Desk: LU : RL523A1          CNM01

                Problem Determination:

Resource RL523A1 on Domain CNM01 is not active and
                not in CONCT state.

Choose one of the following options or Press F12 to Return:

    1 1.  Activate the Hierarchy for the resource
    2 2.  Force Recycle the resource
    3 3.  SNBU Connect PU

Command ==>
F1=Help      F2=Main Menu  F3=Return                      F6=Ro11
                                                    F12=Cancel

```

Figure 77. Activating the Hierarchy for the Resource

### Forcing a Recycle of a Resource

Although choosing option 1 to activate the hierarchy of the resource often resolves the problem, AON/SNA cannot always resolve the problem by activating the hierarchy for the resource. Figure 78 shows a message indicating that AON/SNA could not activate the hierarchy for RL523A1.

```

FKVK1111          SNA Help Desk: LU : RL523A1          CNM01

                Problem Determination:

Resource RL523A1 on Domain CNM01 is not active and
                not in CONCT state.

Choose one of the following options or Press F12 to Return:

    1 1.  Activate the Hierarchy for the resource
    - 2.  Force Recycle the resource
    3 3.  SNBU Connect PU

FKV339I UNABLE TO ACTIVATE THE HIERARCHY FOR RL523A1. SENSECODE=08220000
Command ==>
F1=Help      F2=Main Menu  F3=Return                      F6=Ro11
                                                    F12=Cancel

```

Figure 78. Unable to Activate Message on the Problem Determination Panel

If AON/SNA cannot activate the resource, try the **Force Recycle the resource** option (option 2) on the Problem Determination panel.

To force the recycle of a resource on the Problem Determination panel as shown in the panel in Figure 77 on page 99:

1. Type **2** in the entry field.
2. Press **Enter**.

If AON/SNA successfully activates the resource, it returns a message similar to the one that is shown in boldface in Figure 72 on page 94. If AON/SNA cannot recycle the resource, it displays a message similar to the following:

```
EZL334I  UNABLE TO VARY restype resname ON domain ACTIVE
```

### Selecting the SNBU Connect Option

If AON/SNA cannot activate the resource using the first two options on the Problem Determination panel, you can use the SNBU Connect option. This option enables you to switch the SNBU connection of the line from the inactive-leased line to a dialed backup line. Figure 78 on page 99 shows the Problem Determination panel. To select the SNBU Connect option:

1. Type **3** in the entry field.
2. Press **Enter**.

AON/SNA displays the Change Speed or Initiate/Terminate SNBU Operation panel with a verification message shown in Figure 79 on page 100.

```
FKVKCGBE          CHANGE SPEED OR INITIATE/TERMINATE SNBU OPERATION

Enter the following:

Resource name ..... TA1P523A

Use any character to select type of operation:

DISCONNECT SNBU .....
CONNECT SNBU ..... /
Note: Operation controlled by Automation Control File.

RESTORE to Full Speed .....
SWITCH to Backup Speed .....
Local|Remote|Both Modem ....      1 = Local | 2 = Remote | 3 = Both
Note: Modem will switch back if next statistics are good.

DELETE erroneous status .....
Note: Use only after servicing port or manual restore

FKV989I VERIFY SELECTION AND PRESS ENTER TO CONTINUE

Command ==>
F1=Help      F2=Main Menu   F3=Return
F6=Roll     F12=Cancel
```

Figure 79. Issuing a SNBU Connect

3. Verify that you want to select SNBU.

The resource name filled in on the panel is the name of the PU in the resource hierarchy. Although the initial resource investigated is an LU, and the source of the problem is a line, the resource on this panel is a PU. Because modems are not addressable units (NAU), AON/SNA issues the SNBU connect command to the PU associated with the modem. In this example, TA1P523A is the PU for the modem that performs the switched network backup for the inactive line.

4. Press **Enter**.

AON/SNA displays the Operator Command Interface: SNA Help Desk panel shown in Figure 80 on page 101. In this example, the SNBU Connect command

works, as seen by the informational message on the panel. AON/SNA activates all of the resources in the hierarchy and displays them in green.

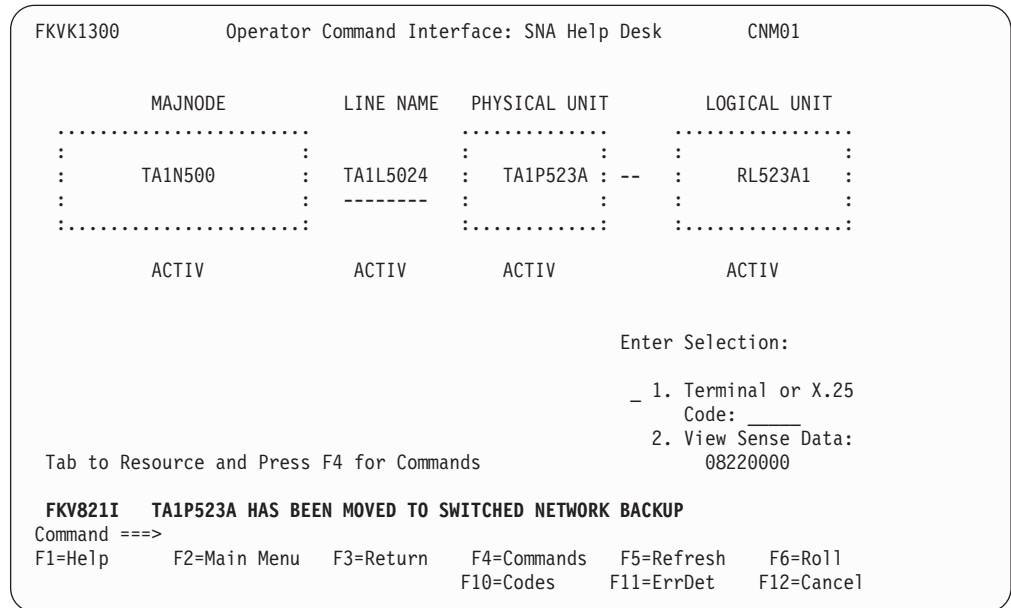


Figure 80. SNBU Connect Reactivating the Resource Hierarchy

The line name changes from TA1L5023 to TA1L5024. In this example, the modem that performed the SNBU connection dialed a different line for the backup. Figure 80 shows that the name of the line has changed. Depending on the capabilities of the modem used, AON may use the same line for backup.

### Using Problem Determination Commands

The Operator Command Interface: SNA Help Desk panel enables you to issue commands for a resource. To issue commands, press the F4 function key. AON/SNA displays a pop-up command window that lists the commands you can issue for the resource you select. To issue a command for a resource:

1. Press the **Tab** key to move the cursor to the resource you want.
2. Press **F4**.

AON/SNA displays a pop-up command window with the commands you can issue for that resource. Figure 81 on page 102 shows the command window for the TA1PT209 resource.

```

FKVK1401          Operator Command Interface: SNA Help Desk          CNM01
                  Resource Domain: CNM01

      MAJNODE          LINE NAME          PU_T2.1
.....:
: TA1N400             J000900F          :
:                   :-----: ID: TA1PT209      :
:                   :          : ACTIV          :
:                   :          :               :
      ACTIV          ACTIV          : 1. Recycle TA1PT209 :
:                   :          : 2. AutoView     :
SWITCHED SNA MAJOR NODE          : 3. SNAMAP       :
:                   :          : 4. List LUs     :
.....:                   :          : 5. DDF Details  :
: SWTOK01             :-----: 6. Automation Commands :
:                   :          : 7. NetView Commands :
:                   :          :                   :
      ACTIV          :                   :
:                   : F1=Help         F12=Cancel :
Tab to Resource and Press F4 for Commands :.....:

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
              F10=Codes   F11=ErrDet F12=Cancel

```

Figure 81. Operator Command Interface: SNA Help Desk Panel with Pop-up Command Window

3. Type the number for the command that you want to issue in the entry field of the pop-up window. You can select one of the following commands:

**Recycle *resname***

Forces the resource inactive, then activates the resource. See “Recycling Resources” on page 93 for more information about recycling resources.

**AutoView**

Displays the current automation setting for a resource. These settings include the current status of a resource, and the recovery, threshold, and monitoring settings. You can change the settings.

**SNAMAP**

Displays a map of the resource. You can zoom in on the resource to see the connecting lower nodes. You can also enter commands from the panel that is displayed.

**DDF Details**

Takes you to the Dynamic Display Facility (DDF) panel that shows the details for the resource. This panel also displays a message.

**Automation commands**

Displays the Automation Commands panel. See “Using the Automation Commands” on page 103 for more details about the commands available on this panel.

**NetView commands**

Displays the NetView Commands panel. See “Issuing NetView Commands” on page 104 for more details about the commands available on this panel.

4. Press **Enter**.  
AON/SNA issues the command that you selected.



**Using the Automation Commands:** You can use the Automation Commands panel to issue commands that control automation. You can access this panel by selecting Automation Commands from a pop-up command window shown in Figure 81 on page 102. To issue automation commands:

1. Type **6** in the entry field on the pop-up command window.
2. Press **Enter**.

AON/SNA displays the SNA Help Desk Automation Commands panel shown in Figure 82.

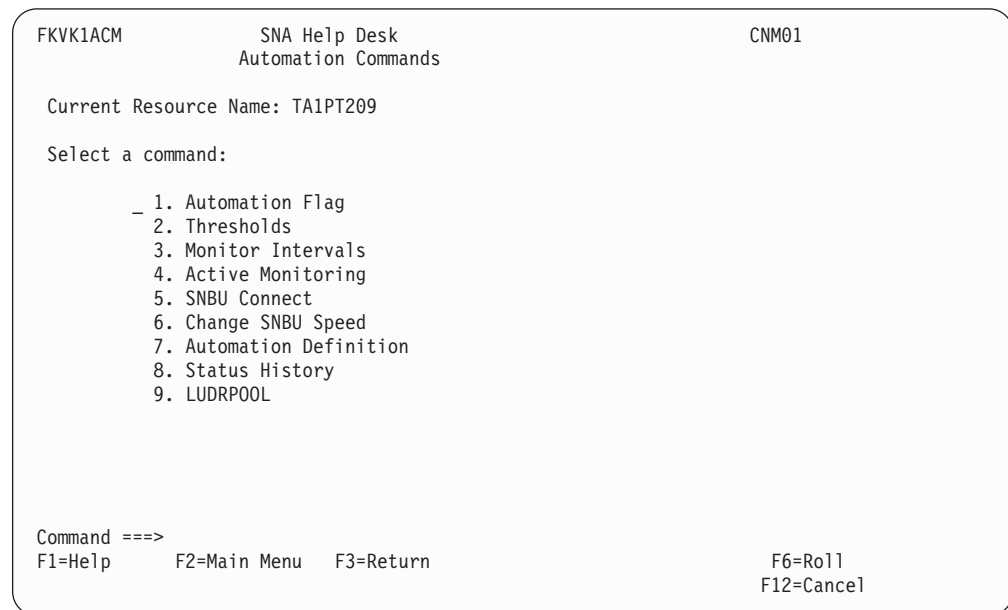


Figure 82. Using the SNA Help Desk Automation Commands Panel

3. Type the number of the command you want in the entry field. You can select one of the following commands:

**Automation Flag**

Enables you to set, change, or delete the automation recovery settings in the control file.

**Thresholds**

Enables you to set, change, or delete the threshold settings in the control file.

**Monitor Intervals**

Enables you to set or change the monitoring intervals.

**Active Monitoring**

Enables you to set or change active monitoring.

**SNBU Connect**

Enables you to change the SNBU connection, if SNBU is one of your resources.

**Change SNBU Speed**

Enables you to change the modem speed, if SNBU is one of your resources.

**Automation Definition**

Displays the configuration data for this resource.

**Status History**

Displays all the status information for this resource.

**LUDRPOOL**

Displays X.25 results from the LUDRPOOL command.

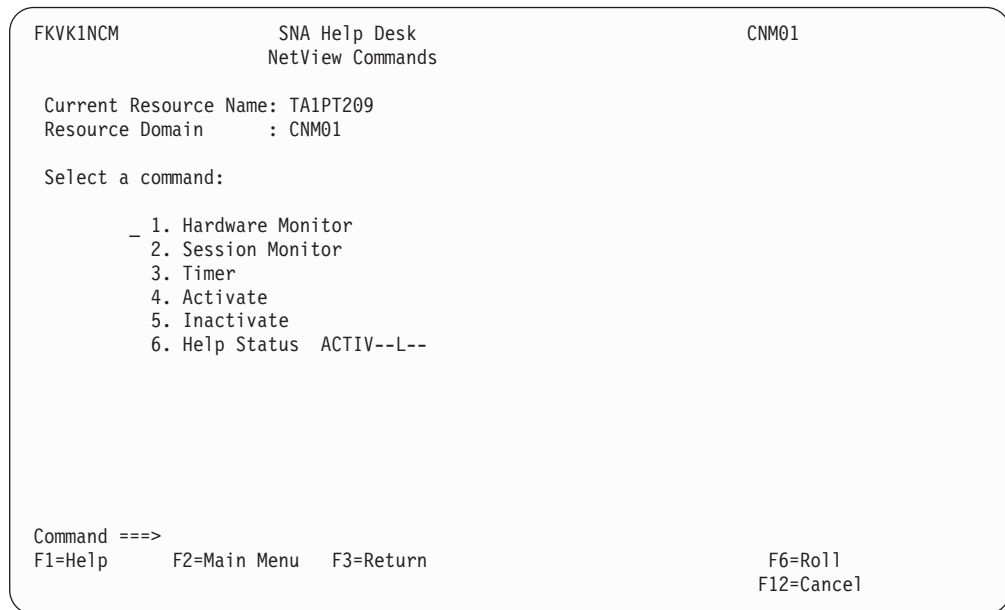
**4. Press **Enter**.**

AON/SNA issues the command that you selected.

**Issuing NetView Commands:** You can issue six different NetView commands from the NetView Commands panel. You can access this panel by selecting NetView Commands from a pop-up command window shown in Figure 81 on page 102. To issue NetView commands:

1. Type **7** in the entry field on the pop-up commands window.
2. Press **Enter**.

AON/SNA displays the SNA Help Desk NetView Commands panel shown in Figure 83.



*Figure 83. Using the SNA Help Desk NetView Commands Panel*

3. Type the number of the command you want in the entry field. You can select one of the following commands:

**Hardware Monitor**

Displays the most recent events for the resource.

**Session Monitor**

Displays the summary information for the latest response time.

**Timer** Enables you to set or change the timers for the resource.

**Activate**

Attempts to activate the resource.

### Inactivate

Attempts to deactivate the resource.

### Help Status

Shows the current status of the resource that is displayed in the Current Resource Name field on the NetView Commands panel.

#### 4. Press **Enter**.

AON/SNA issues the command that you selected.

## Using NetView Access Services (NVAS)

NetView Access Services (NVAS) provides simultaneous access to one or several applications from a single terminal, using one user ID and password. The applications include any of the following:

- System (for example, CICS®)
- Subsystem (for example, TSO/E)
- Application
- Transaction within a system

AON/SNA supports only the relay mode sessions for NetView Access Services (NVAS).

To select NetView Access Services from the SNA Automation: Help Desk panel shown in Figure 84:

1. Type your NVAS user ID in the **Enter name** field.
2. Type **3** in the entry field.
3. Press **Enter**.

```
FKVK1000                SNA Automation: Help Desk

**** * ** **          ** **          ***          *****          **
** * ** ** ** ****   ** **          **          ** **          **
**   ** ** ** ** **   ** ** ** ** **   **   ** ** ** ** **   ** ** ** ** **
**   **** ** ** **   **** ** ** **   **   ** ** ** ** **   ** ** ** **
** ** ** ** ** ** **   ** ** ** ** **   **   ** ** ** **   **   ** **
*   ** ** ** ** **   ** ** ** **   **   ** ** ** **   **   ** **
**** ** * ** **     ** ** ** **   ****   ****   ****   ****   ** **
                                     **
                                     **

Enter name...: OPER1__

Select option:  3 1. Recycle resource
                2. Problem Determination
                3. NetView Access Services User ID
                n. Netview Help Desk

Command ==>
F1=Help      F2=Main Menu  F3=Return
                                     F6=Roll
                                     F12=Cancel
```

Figure 84. Selecting the Option for NetView Access Services (NVAS) Problems

AON/SNA displays the SNA Help Desk panel for NetView Access Services shown in Figure 85 on page 106.

```

FKVKCHP1          Operator Command Interface: SNA Help Desk          CNM01
                  NetView Access Services: EMS01

                  USERID= OPER1          GROUP= PROD
Enter a Non-blank character next to selection to Cancel.  Then press enter.

Terminal Address          Relay LUs    Application LUs  ACB Type
_ TA1TT170                _ EMS01F01    AON01026        I
                        _ EMS01F03    AON06012        U
                        _ EMS01F01    AON05012        I
                        _ EMS01F02    AON04008        U

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward

```

Figure 85. SNA Help Desk Panel for NetView Access Services

The SNA Help Desk panel for NetView Access Services lists all available applications that are active for your user ID. The SNA Help Desk panel for NetView Access Services can display up to 99 applications for a single NetView Access Services user ID. You can use the F7 and F8 function keys to look at all of the applications.

The SNA Help Desk panel for NetView Access Services displays information about the ID and what LUs the ID is logged onto. From here, you can cancel the NetView Access Services user ID. This action cancels one or more of the applications under the NetView Access Services user ID.

The SNA Help Desk panel for NetView Access Services provides the following information for the user ID:

**Terminal Address**

The address on which the NetView Access Services user ID is logged on. If the address shows as DISCONNECTED, the ID is disconnected. However, AON/SNA may still run applications that you originally logged onto by the user ID.

**Relay LU**

The pseudo terminal name given when an application is selected by the NetView Access Services user ID. If the name shows as NO SESSIONS, the NetView Access Services user ID is logged on and is currently on the selection list.

**Application LU**

The primary logical unit for the application. The naming conventions are important to help identify the application.

**ACB Type**

Explains the type of session the ID is logged on to. The settings are:

- U Unique
- I Individual

## S Shared

A shared session is a special case because it uses the same relay LU as the other NetView Access Services user ID. To cancel a relay LU that is shared, AON/SNA cancels the terminal address instead. If AON/SNA cancels a shared user ID, the user of that ID can log onto NetView Access Services with that ID and issue the LF command against the application that is hung.

### **Canceling a NetView Access Services User ID**

To cancel a NetView Access Services user ID and all NetView Access Services applications:

1. Type a non-blank character in the entry field next to the terminal address.
2. Press **Enter**.

AON/SNA cancels the NetView Access Services user ID and all the NetView Access Services applications.

To cancel one or more applications running under the NetView Access Services user ID:

1. Press the **Tab** key to move the cursor to the **Relay LUs** column.
2. Type a non-blank character in the entry field next to the relay LUs and applications you want to cancel.
3. Press **Enter**.

AON/SNA cancels the applications you selected.

To cancel any other type of ACB session:

1. Type a non-blank character in the entry field next to the terminal address.
2. Press **Enter**.

AON/SNA cancels the ACB session you selected.

**Attention:** AON/SNA does not display a confirmation panel before canceling the NetView Access Services user ID. Use this function carefully.



---

## Chapter 11. Using SNAMAP

SNAMAP provides a tool to view a list of all the resources on a domain. You create the list by selecting one of the following resource types:

- Major nodes
- Applications
- Cross-domain resource managers
- Cross-domain resources
- Link stations
- Cluster controllers
- Terminals
- User entered resource name

SNAMAP displays lower connected nodes. This contrasts with the SNA Help Desk which provides a view of a resource and its connected higher nodes.

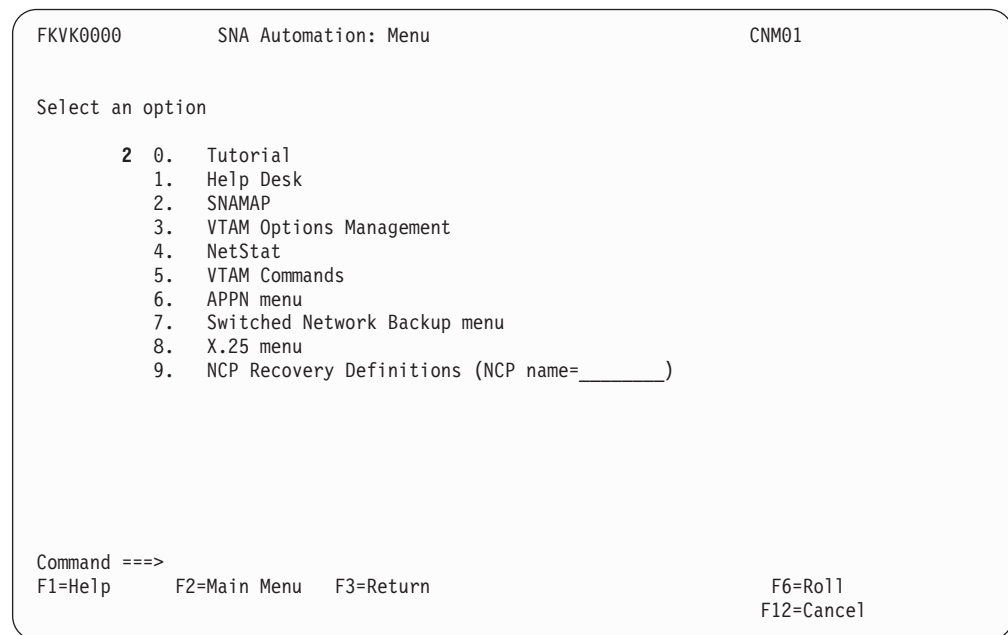


Figure 86. Selecting SNAMAP on the SNA Automation: Menu Panel

To use SNAMAP:

1. Type **2** in the entry field on the **SNA Automation: Menu** panel shown in Figure 86.
2. Press **Enter**.

AON/SNA displays the SNA Automation: SNAMAP panel shown in Figure 87 on page 110.

**Note:** You can also get to the SNA Automation: SNAMAP panel by typing **AON 2.2** or **SNAMAP** on any command line and pressing **Enter**.

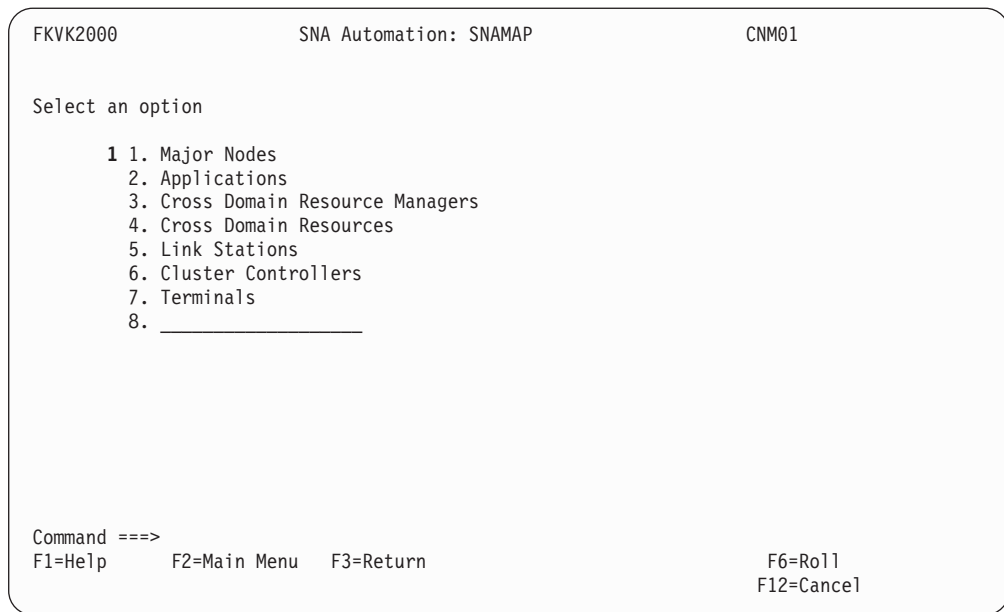


Figure 87. SNA Automation: SNAMAP Panel

3. Type the number of the option you want in the entry field. This example selects option 1 (Major Nodes) shown in Figure 87.
4. Press **Enter**.  
AON/SNA displays the Operator Command Interface: SNAMAP panel shown in Figure 88.

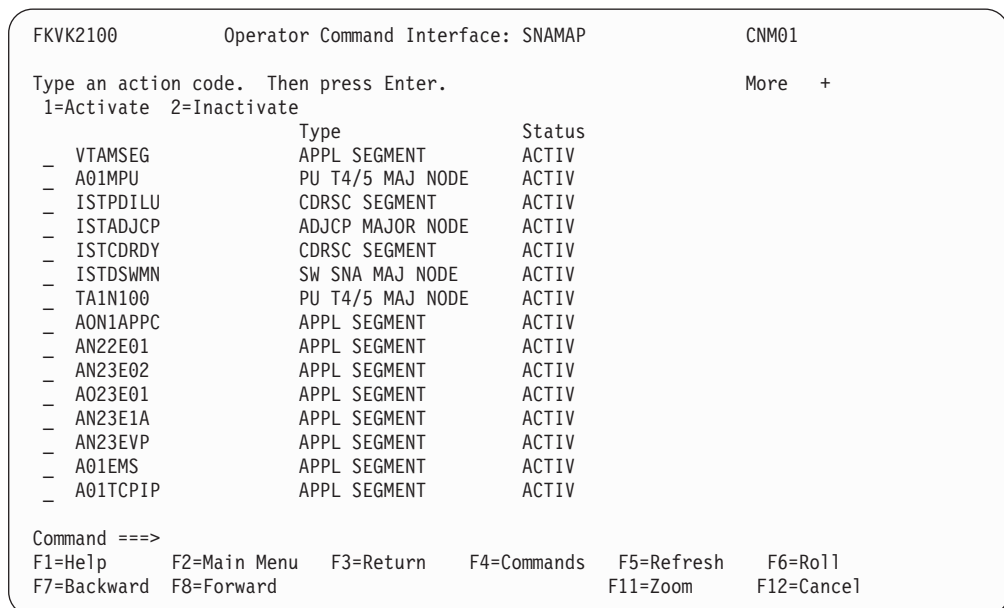


Figure 88. Operator Command Interface: SNAMAP Panel



The Operator Command Interface: SNAMAP panel lists the available resources and shows the type and status of each resource. Press the F7 and F8 function keys to scroll through the list of resources if they are displayed on more than one panel.

You can use one of the following action codes on a specified resource:

**1=Activate**

Activates the resource you specify

**2=Inactivate**

Deactivates the resource you specify

See the following sections for more information about activating and deactivating a resource.

## Activating Resources

You can activate a specific resource from the Operator Command Interface: SNAMAP panel. For example, to activate the AN23E02 resource:

1. Press the **Tab** key to move the cursor to the AN23E02 resource, as shown on the Operator Command Interface: SNAMAP panel in Figure 88 on page 110.
2. Type **1** in the entry field beside the AN23E02 resource.
3. Press **Enter**.

AON/SNA displays a message indicating that the resource is now active, as shown in Figure 89.

```

FKVK2100      Operator Command Interface: SNAMAP      CNM01
Type an action code. Then press Enter.      More:  +
1=Activate  2=Inactivate

-  VTAMSEG      Type      Status
-  A01MPU      APPL SEGMENT  ACTIV
-  ISTPDILU      PU T4/5 MAJ NODE  ACTIV
-  ISTADJCP      CDRSC SEGMENT     ACTIV
-  ISTCDRDY      ADJCP MAJOR NODE  ACTIV
-  ISTCDRDY      CDRSC SEGMENT     ACTIV
-  TA1N100      PU T4/5 MAJ NODE  ACTIV
-  AON1APPC      APPL SEGMENT      ACTIV
-  AN22E01      APPL SEGMENT      ACTIV
-  * AN23E02      APPL SEGMENT      ACTIV
-  A023E01      APPL SEGMENT      ACTIV
-  AN23E1A      APPL SEGMENT      ACTIV
-  A01EMS       APPL SEGMENT      ACTIV
-  A01TCPIP      APPL SEGMENT      ACTIV
-  A01TSO       APPL SEGMENT      ACTIV
-  CDRM01       CDRM SEGMENT      ACTIV
IST1132I AN23E02      IS ACTIVE, TYPE = APPL SEGMENT
Command ==>
F1=Help      F2=Main Menu    F3=Return     F4=Commands   F5=Refresh    F6=Roll
F7=Backward  F8=Forward      F11=Zoom     F12=Cancel

```

Figure 89. Activate Message

---

## Deactivating Resources

You can deactivate a specific resource from the Operator Command Interface: SNAMAP panel. For example, to deactivate the AON1APPC resource:

1. Press the **Tab** key to move the cursor to the AON1APPC resource, as shown on the Operator Command Interface: SNAMAP panel in Figure 88 on page 110.
2. Type **2** in the entry field beside the AON1APPC resource.
3. Press **Enter**.

AON/SNA displays a message indicating that the resource is now inactive, as shown in Figure 90.

```
FKVK2100          Operator Command Interface: SNAMAP          CNM01
Type an action code. Then press Enter.          More:  +
1=Activate 2=Inactivate
Type          Type          Status
- VTAMSEG          APPL SEGMENT          ACTIV
- A01MPU           PU T4/5 MAJ NODE      ACTIV
- ISTDILU          CDRSC SEGMENT         ACTIV
- ISTDJCP          ADJCP MAJOR NODE      ACTIV
- ISTDYD           CDRSC SEGMENT         ACTIV
- ISTDYD           SW SNA MAJ NODE       ACTIV
- TA1N100          PU T4/5 MAJ NODE      ACTIV
* AON1APPC         APPL SEGMENT          ACTIV
- AN22E01          APPL SEGMENT          ACTIV
- AN23E02          APPL SEGMENT          ACTIV
- A023E01          APPL SEGMENT          ACTIV
- AN23E1A          APPL SEGMENT          ACTIV
- A01EMS           APPL SEGMENT          ACTIV
- A01TCPIP         APPL SEGMENT          ACTIV
- A01TSO           APPL SEGMENT          ACTIV
IST1133I AON1APPC          IS NOW INACTIVE, TYPE = APPL SEGMENT
Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Commands  F5=Refresh   F6=Roll
F7=Backward  F8=Forward    F11=Zoom     F12=Cancel
```

Figure 90. Deactivate Message

4. Press **F5** to refresh the panel.

You can also press the **F4** function key to display the pop-up command window, or the **F11** function key to display the next level of information for a resource. Both of these function keys are cursor sensitive and display the information for the resource at the position of the cursor. The following sections describe the use of these keys.

---

## Viewing Lower Connected Nodes

You can use the **F11** function key to view the connected lower nodes for a specific resource. AON/SNA labels this function key as a zoom key. To see the connected lower nodes:

1. On the **Operator Command Interface: SNAMAP** panel, press the **Tab** key to move the cursor to the resource you want. This example shows the TA1N100 resource.
2. Press **F11**.

AON/SNA displays the lower connected nodes for the TA1N100 resource in a pop-up window on the right side of the panel shown in Figure 91 on page 113.

```

FKVK2110          Operator Command Interface: SNAMAP          CNM01
Type an action code. Then press Enter.          More +
1=Activate 2=Inactivate

.....
- VTAMSEG      : Type an action code. Then press Enter.      More: + :
- A01MPU       : 1=Activate 2=Inactivate                      :
- ISTDILU      :                                           Type          Status      :
- ISTDJCP      :  TA07LNPA          LINES          ACTIV----T :
- ISTDYRDP     :  TA07L000         LINES          NEVAC        :
- ISTDYRDP     :  TA07L004         LINES          NEVAC        :
- TA1N100      :  L07CA000         LINES          NEVAC        :
- AON1AAPP     :  L07CA001         LINES          NEVAC        :
- AN22E01      :  L07CA002         LINES          NEVAC        :
- AN23E02      :  L07CA003         LINES          NEVAC        :
- A023E01      :  L07CA004         LINES          NEVAC        :
- AN23E1A      :                                           :
- AN23EVP      : F1=Help   F3=Return F4=Commands F5=Refresh F6=Roll :
- A01EMS       : F7=Backward F8=Forward          F11=Zoom   F12=Cancel :
- A01TCPIP     : .....
Command ==>
F1=Help   F2=Main Menu   F3=Return   F4=Commands   F5=Refresh   F6=Roll
F7=Backward F8=Forward          F11=Zoom   F12=Cancel

```

Figure 91. Viewing Lower Connected Nodes

You can activate or deactivate the resources listed in the pop-up window. For more information about activating and deactivating the resources, see “Activating Resources” on page 111 and “Deactivating Resources” on page 112.

## Using SNAMAP Pop-up Commands

You can use the F4 function key to display a list of pop-up commands that you can issue for a specified resource. For example, you might want to display the status history of a resource before you activate it.

To display the command list and issue a command:

1. On the **Operator Command Interface: SNAMAP** panel, press the **Tab** key to move the cursor to the resource you want. This example shows the TA07LNPA resource.
2. Press **F4**.

AON/SNA displays the commands you can use in a pop-up window on the right side of the panel shown in Figure 92 on page 114.

```

FKVK2111          Operator Command Interface: SNAMAP          CNM01
Type an action code. Then press Enter.                      More +
1=Activate 2=Inactivate
.....
- VTAMSEG          : ID: TA07LNPA                               : .
- A01MPU           : Type an action code. Then pre : More: + : :
- ISTDJILU         : 1=Activate 2=Inactivate : :
- ISTDJILU         : Type : 5 1. Activate : :
- ISTDJILU         : TA07LNPA          LINES : 2. AutoView : :
- ISTDJILU         : TA07L000          LINES : 3. Display : :
- ISTDJILU         : TA07L004          LINES : 4. Display Config : :
- ISTDJILU         : L07CA000          LINES : 5. Display History : :
- ISTDJILU         : L07CA001          LINES : 6. Help Desk : :
- ISTDJILU         : L07CA002          LINES : 7. Inactivate : :
- ISTDJILU         : L07CA003          LINES : : :
- ISTDJILU         : L07CA004          LINES : F1=Help F12=Cancel : :
- ISTDJILU         : : : : : : :
- ISTDJILU         : F1=Help F3=Return F4=Commands F5=Refresh F6=Roll : :
- ISTDJILU         : F7=Backward F8=Forward F11=Zoom F12=Cancel : :
- ISTDJILU         : : : : : : :
Command ==>
F1=Help F2=Main Menu F3=Return F4=Commands F5=Refresh F6=Roll
F7=Backward F8=Forward F11=Zoom F12=Cancel

```

Figure 92. Displaying the Command List Pop-up Window

- Type the number of the command you want to issue in the entry field in the pop-up command window. In this example, you can issue one of the following commands:

**Activate**

Activates the resource.

**AutoView**

Shows all the automation settings for the resource and enables you to change the settings.

**Display**

Displays the details about this resource.

**Display Config**

Displays the control file for the resource.

**Display History**

Displays the status file history for the resource.

**Help Desk**

Displays the problem determination information from the SNA Help Desk.

**Inactivate**

Deactivates the resource.

**Monitor**

Displays the monitoring intervals for the resource.

**Recovery**

Displays the recovery settings for the resource.

**Thresholds**

Displays the error threshold settings for the resource.

**Timer**

Displays the timer settings for the resource.

Press the **F7** and **F8** function keys to scroll through the list of commands.

4. Press **Enter**.

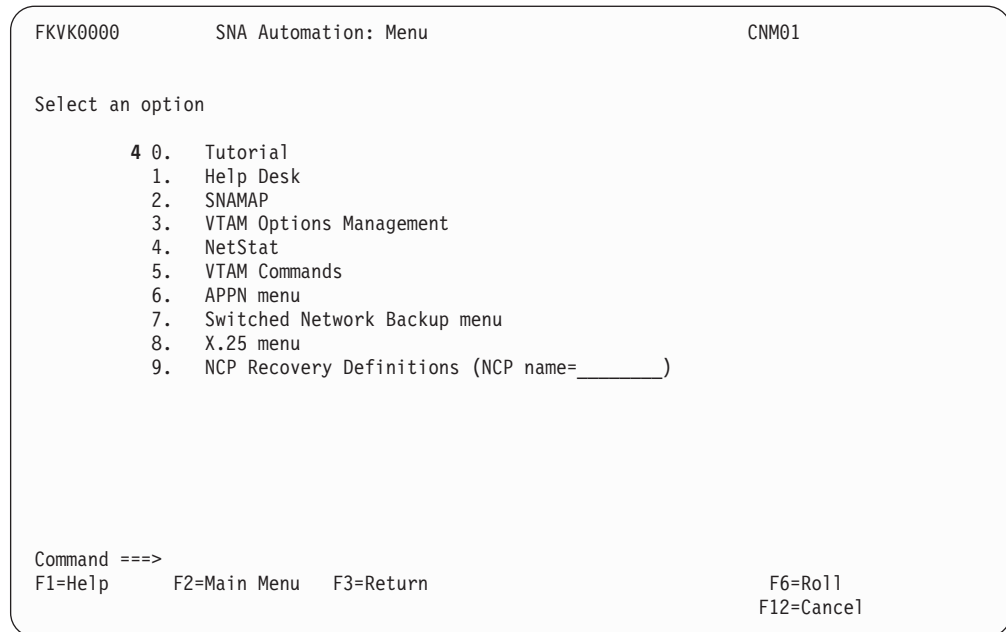
AON/SNA processes the command you selected.



---

## Chapter 12. Displaying Network Status

To display the status of specified resource groups, use the NetStat option. To check the status of your network, specify the type of resource and which resources of that type to display.



*Figure 93. SNA Automation: Menu Panel – Selecting the NetStat Option*

To check the status of your network from the **SNA Automation: Menu** panel:

1. Type **4** in the entry field.
2. Press **Enter**.

AON/SNA displays the SNA Automation: NetStat panel shown in Figure 94 on page 118.

**Note:** You can also display the NetStat panel by typing **AON 2.4** or **NETSTAT** on any command line and pressing **Enter**.

FKVK4000	SNA Automation: NetStat	CNM01
Select a Type	1 1. All 2. Physical resources 3. Applications 4. Cross Domain Resource Managers 5. Cross Domain Resources	
Select Scope	2 1. All 2. Not active (EXCEPT) 3. _____	
Check Automation:	1 (1=Yes 2=No)	
Send to DDF.....:	2 (1=Yes 2=No)	
Command ==>	F1=Help F2=Main Menu F3=Return	F6=Roll F12=Cancel

Figure 94. SNA Automation: NetStat Panel

3. Type the number of the resource type you want in the Select a Type entry field. You can select one of the following options:
  - All** Displays all known resources. The default is All.
  - Physical resources**  
Displays only the physical resources. For example, this option displays NCPs, lines, PUs, and LUs.
  - Applications**  
Displays all of the applications.
  - Cross Domain Resource Managers**  
Displays all of the cross-domain resource managers.
  - Cross Domain Resources**  
Displays all the cross-domain resources.
4. Type the number of the scope you want in the Select Scope entry field. You can select one of the following options:
  - All** Displays all resources regardless of their status.
  - Not active (EXCEPT)**  
Displays all resources currently not in an active state. The default is EXCEPT.
  - User-defined field**  
Displays the scope of resources you specify. If you do not want to display resources with a certain status, type an `~` before the status.
5. Specify whether you want to check automation. You can specify one of the following values:
  - 1=Yes** Checks the recovery setting for the resource before it displays the resource. If you specify yes and recovery is turned off, the resource is not displayed. This is the default.
  - 2=No** Does not check automation.



6. Specify if you want to send the resource to DDF. You can specify one of the following values:
  - 1=**Yes** Updates DDF with the status of the resource you display. You should only specify yes if you need to reset the status of the resource or reload DDF.
  - 2=**No** Does not update DDF with the status of the resource. The default is No.
7. Press **Enter**.  
 AON/SNA displays the status of the resources you specified on the Operator Command Interface: NetStat panel shown in Figure 95.

```

FKVK4100          Operator Command Interface: NetStat          CNM01
                                                           More: +
Name              Type              Status
TA27              CDRM              NEVAC
-----
TA07LNPA          LINE              NEVAC
TA07L000          LINE              NEVAC
TA07L004          LINE              NEVAC
L07CA000          LINE              NEVAC
L07CA001          LINE              NEVAC
L07CA002          LINE              NEVAC
L07CA003          LINE              NEVAC
L07CA004          LINE              NEVAC
L07CA005          LINE              NEVAC
L07CA006          LINE              NEVAC
L07CA007          LINE              NEVAC
L07CA009          LINE              NEVAC
L07CA010          LINE              NEVAC

Command ==>
F1=Help      F2=Main Menu  F3=Return          F6=Roll
F7=Backward  F8=Forward    F12=Cancel

```

Figure 95. Operator Command Interface: NetStat Panel

**Note:** For information about the programmatic interface to the AON NETSTAT function, see the SNA resource automation information (FKVESYNC) in the *Tivoli NetView for z/OS Automated Operations Network Customization Guide*.

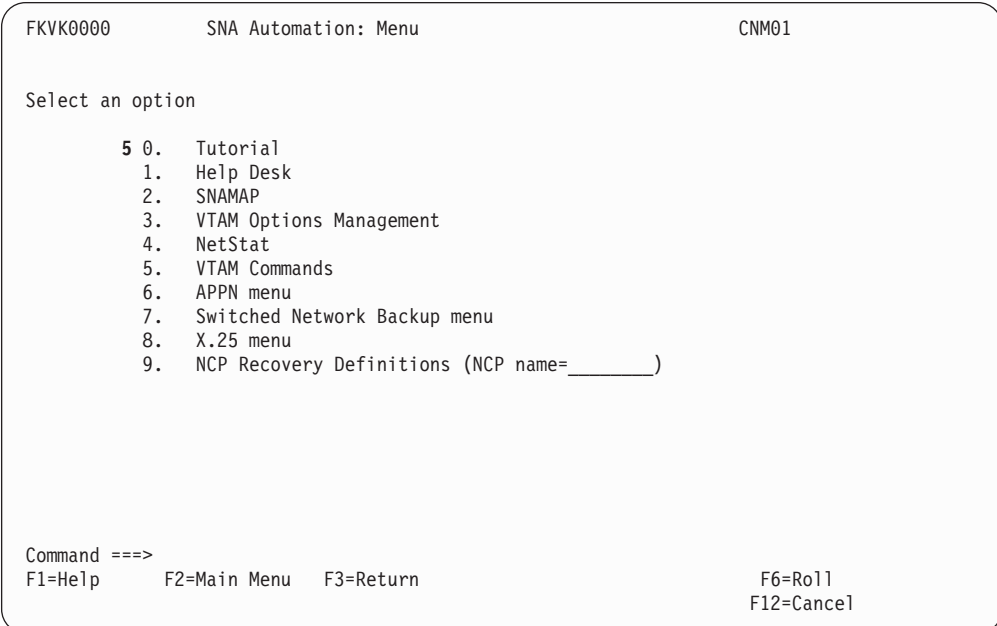


---

## Chapter 13. Issuing VTAM Commands

To issue VTAM commands and see the results of the commands on a panel, use the VTAM commands option on the SNA Automation: Menu panel or the VTAMCMD command. The VTAM commands option saves commands across user task sessions. If any command is left on the panel when you exit the panel, it is displayed in the same place when you return to the panel. This is helpful if you have a small set of frequently used commands, and you do not want to look up the syntax of a command each time you use it.

The VTAM command option is cursor sensitive. If you have several commands on the panel, AON/SNA issues the command at the position of the cursor. You can issue a command by typing a new command and pressing **Enter**, or use the **Tab** key to move the cursor to the command you want to select and press **Enter**.



```
FKVK0000          SNA Automation: Menu          CNM01

Select an option

   5 0.  Tutorial
     1.  Help Desk
     2.  SNAMAP
     3.  VTAM Options Management
     4.  NetStat
     5.  VTAM Commands
     6.  APPN menu
     7.  Switched Network Backup menu
     8.  X.25 menu
     9.  NCP Recovery Definitions (NCP name=_____)

Command ==>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

Figure 96. Selecting the VTAM Commands Option

To issue VTAM commands from the SNA Automation: Menu panel:

1. Type **5** in the entry field.
2. Press **Enter**.

AON/SNA displays the SNA Automation: VTAM Commands panel shown in Figure 97 on page 122.

**Note:** You can also get to the VTAM Commands panel by typing **AON 2.5** or **VTAMCMD** on any command line and pressing **Enter**.

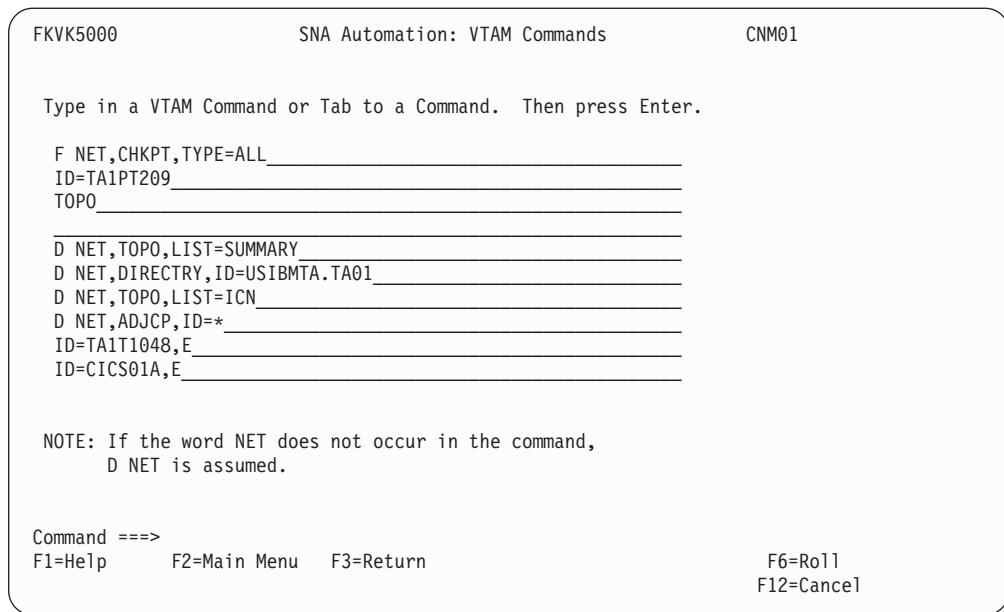


Figure 97. SNA Automation: VTAM Commands Panel

When you select this panel for the first time, the command input fields are blank. However, because AON/SNA saves the commands across user sessions, including NetView sessions, the panel fills up with the commands you use. This saves time if you use a few commands frequently.

You can shorten the commands on this panel. For example, you can enter the D NET,TOPO,LIST=ICN command as TOPO,LIST=ICN because AON/SNA assumes you want to use D NET if you do not specify the word NET.

To change a command, use the Tab key to move the cursor to the command and type over it.

To add a VTAM command to this panel and issue it:

1. Type the command in the entry field. You can only type one command on each line.
2. Press **Enter**.

AON/SNA issues the command and displays the Operator Command Interface: VTAM Commands panel shown in Figure 98 on page 123. In this example, the DISPLAY NET,ID=TA1T1048 command response is displayed.

```

FKVK5100      Operator Command Interface: VTAM Commands      CNM01
Output of: D NET,ID=TA1T1048,E                               More:  +

IST097I      DISPLAY ACCEPTED
IST075I      NAME = USIBMTA.TA1T1048 , TYPE = CDRSC
IST486I      STATUS= ACT/S---Y, DESIRED STATE= ACTIV
IST977I      MDLTAB=***NA*** ASLTAB=***NA***
IST861I      MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I      DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I      CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I      CDRSC MAJOR NODE = ISTCDRDY
IST479I      CDRM NAME = TA06 , VERIFY OWNER = NO
IST1131I     DEVICE = CDRSC
IST654I      I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I      ACTIVE SESSIONS = 0000000001, SESSION REQUESTS = 0000000000
IST206I      SESSIONS:
IST634I      NAME      STATUS      SID      SEND RECV VR TP NETID
IST635I      CNM01024 ACTIV-P      F9DB431A7D93BAD8 000D 0024 0 1 USIBMTA

Command ==>
F1=Help      F2=Main Menu   F3=Return      F6=Roll
F7=Backward  F8=Forward      F12=Cancel

```

Figure 98. Operator Command Interface: VTAM Commands Panel

The output from the command is displayed on this panel. If the output is more than one panel long, you can scroll through the panels to see all of the information.

To issue previously saved commands:

1. Press the **Tab** key to move the cursor to the command you want to issue.
2. Press **Enter**.

AON/SNA issues the command and displays the output on the Operator Command Interface: VTAM Commands panel.



---

## Chapter 14. Using Advanced Peer-to-Peer Networking (APPN)

AON/SNA Advanced Peer-to-Peer Networking (APPN) is a powerful, flexible, easy-to-use networking solution for client-server and distributed applications supported by VTAM 4.1 or later.

In an AON/SNA APPN environment, AON provides menu-driven commands to simplify VTAM topology and directory database management. This environment accepts operator commands for common AON/SNA APPN VTAM functions. It also provides active monitoring of control points and control point sessions.

You can use the AON/SNA: APPN Command Menu panel to perform the following APPN functions:

- Issue checkpoint commands
- Display control points
- Display directory
- Display transmission group profiles

```
FKVK0000          SNA Automation: Menu          CNM01

Select an option

  6 0.  Tutorial
    1.  Help Desk
    2.  SNAMAP
    3.  VTAM Options Management
    4.  NetStat
    5.  VTAM Commands
    6.  APPN menu
    7.  Switched Network Backup menu
    8.  X.25 menu
    9.  NCP Recovery Definitions (NCP name=_____ )

Command ==>
F1=Help      F2=Main Menu  F3=Return
                                     F6=Roll
                                     F12=Cancel
```

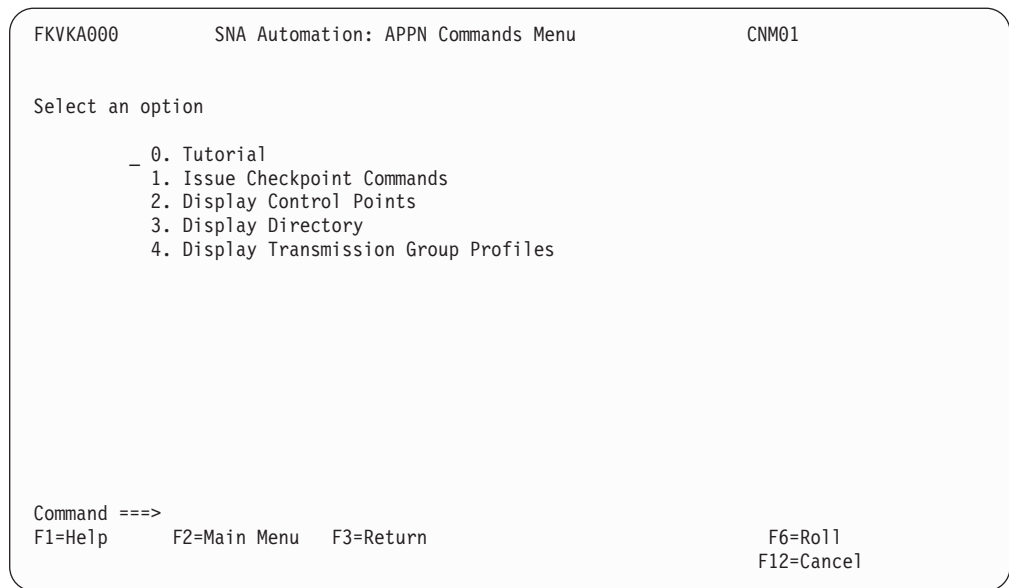
Figure 99. SNA Automation: Menu Panel – Selecting the APPN Menu Option

To use the APPN functions from the **SNA Automation: Menu** panel:

1. Type **6** in the entry field.
2. Press **Enter**.

AON/SNA displays the SNA Automation: APPN Commands Menu panel shown in Figure 100 on page 126.

**Note:** You can also get to the APPN Commands Menu panel by typing **AON 2.6** or **APPN** on any command line and pressing **Enter**.



*Figure 100. SNA Automation: APPN Commands Menu Panel*



## Displaying Control Points

You can select the display control points command from the SNA Automation: APPN Commands Menu panel. After you make this selection, you can select from the following actions for the resource:

- Details
- Delete topology
- Delete directory
- Active monitoring
- Timers
- AutoView

You can use the SNA Automation: APPN Control Points Display panel to identify control points to specify in your statements in the CPCPSESS control file entry.

You can use the Display Control Points option on the SNA Automation: APPN Commands Menu panel to work with the control points on your APPN network. To do this:

1. Type **2** in the entry field on the **SNA Automation: APPN Commands Menu** panel. Figure 100 on page 126 shows this panel.
2. Press **Enter**.

AON/SNA displays the APPN CP Display panel shown in Figure 101.

**Note:** You can also display the SNA Automation: APPN CP Display panel, type **AON 2.6.2** on any command line and pressing **Enter**.

```
FKVKA200          SNA Automation: APPN CP Display          CNM01
Type an action code. Then press Enter.                      More: +
1=Details 2=Delete Topology 3=Delete Directory 4=Active Monitoring
5=Timers 6=AutoView
Control Point      Node Type
1 ISTADJCP      ADJCP MAJOR NODE
- USIBMTA.TA1PT106 EN
- TA1CP213        *NA*
- TA1CP214        *NA*
- USIBMTA1.OPER1  EN
- USIBMTA.NTC0PUN6 *NA*
- USIBMTA.TA1CP210 EN
- APPN.TA1PT209   EN
- USIBMXXX.YYY00000 EN
- USIBMTA.TA1PT107 EN
- USIBMTA.TA1PT220 EN
- USIBMTA.TA1CP207 NN
- USIBMTA.TA1PT203 EN
- TA1CP208        *NA*

Command ==>>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh  F6=Roll
F7=Backward  F8=Forward    F12=Cancel
```

Figure 101. SNA Automation: APPN CP Display Panel

3. Type an action code in the entry field next to the resource you want. This example shows the Details action code next to the ISTADJCP control point. You can select one of the following actions:

### 1=Details

Displays detailed VTAM information for the control point on the

Operator Command Interface: APPN CP Detail panel. This is obtained from the combined output of the VTAM D NET,E commands and its link station. The output includes both session and LU information, which is helpful in solving problems. The status of the link station is often a clue to physical network problems, while the control point status information shows configuration or application program problems.

**2=Delete topology**

Deletes the control point from the topology database. Displays the messages about the deletion on the Operator Command Interface: VTAM commands panel.

**3=Delete directory**

Deletes the control point from the directory database. Displays the messages about the deletion on the Operator Command Interface: VTAM commands panel.

**4=Active monitoring**

Starts or stops active monitoring of the control point. AON/SNA displays the Active Monitoring Settings panel and enables you to change the settings.

**5=Timers**

Displays the AON Automation: Timer Set panel where you can add, display, change, and delete the timers for the control point you select.

**6=AutoView**

Displays automation information for the control point. Displays the AON: AutoView panel.

4. Press **Enter**.

AON/SNA displays the Operator Command Interface: APPN CP Detail panel shown in Figure 102.

```

FKVKA210      Operator Command Interface: APPN CP Detail      CNM01
                Control Point ISTDJCP                          More:  +

IST097I      DISPLAY ACCEPTED
IST075I      NAME = ISTDJCP          , TYPE = ADJCP MAJOR NODE
IST486I      STATUS= ACTIV          , DESIRED STATE= ACTIV
IST1100I     ADJACENT CONTROL POINTS FROM MAJOR NODE ISTDJCP
IST1102I     NODENAME                NODETYPE CONNECTIONS CP CONNECTIONS
IST1103I     USIBMTA.TA1PT106        EN          1          1
IST1103I     TA1CP213                *NA*        0          0
IST1103I     TA1CP214                *NA*        0          0
IST1103I     USIBMTA1.DOWNING        EN          1          1
IST1103I     USIBMTA.NTC0PUN6        *NA*        0          0
IST1103I     USIBMTA.TA1CP210        EN          1          1
IST1103I     APPN.TA1PT209           EN          1          1
IST1103I     USIBMXXX.YYY000000      EN          1          1
IST1103I     USIBMTA.TA1PT107        EN          1          1
IST1103I     USIBMTA.TA1PT220        EN          1          1
IST1103I     USIBMTA.TA1CP207        NN          1          1

Command ==>
F1=Help      F2=Main Menu   F3=Return      F6=Roll
F7=Backward  F8=Forward     F12=Cancel

```

Figure 102. Operator Command Interface: APPN CP Detail Panel



**Note:** You can also display the SNBU Automation Command Menu panel by typing **AON 2.7** or **SNBU** on any command line.

```
FKVKSX                               SNBU Automation Command Menu

Select an option

  _ 0. Tutorial
    1. Display SNBU Resource List
    2. Display Information on SNBU Resources
    3. Control SNBU Resources
    4. Display Modem Pools
    5. Add or Delete Modem Pool Resources
    6. Control SNBU Connections Manually
    7. Change Modem Speed Manually
    8. Display SNBU Status

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                     F6=Roll
                                     F12=Cancel
```

Figure 104. SNBU Automation Command Menu Panel

The following sections describe more about the options.

---

## Displaying the SNBU Resource List

You can use the Display SNBU Resource List option on the SNBU Automation Command Menu panel to display a list of the SNBU PU and modem pool entries that are defined in the AON/SNA control file. You can also see the status of each resource.

To display the SNBU Resource List from the SNBU Automation Command Menu panel:

1. Type **1** in the entry field on the **SNBU Automation Command Menu** panel. An example of this panel is shown in Figure 104.
2. Press **Enter**.

AON/SNA displays the AON SNBU Resource List panel shown in Figure 105 on page 131.

**Note:** You can also display the SNBU Resource List panel by typing **AON 2.7.1** or **LISTSNBU** from the command line of any panel and pressing **Enter**.

FKVKSNB1			AON SNBU Resource List			CNM01		
PU Name	Status	Poo1	PU Name	More	:	+	Status	Poo1
DEFAULTS			SNBU013				SNBU	PL3
PU			SNBU014				LOCAL	PL3
FOTESTPU	SNBU	PU2	SNBU015					PL3
SNBU001	ISNBU	PL1	SNBU016				INIT	PL3
SNBU002	ISNBU	PL1	SNBU017				SNBU	PL3
SNBU003		PL1	SNBU018					PL3
SNBU004		PL1	SNBU019				BOTH	PL3
SNBU005	SNBU	PL1	SNBU021				SNBU	PL4
SNBU006		PL2	SNBU022					PL4
SNBU007	SNBU	PL2	SNBU023				SNBU	PL4
SNBU008		PL2	SNBU024				BOTH	PL4
SNBU009	INIT	PL2	SNBU025					PL4
SNBU010		PL3	SNBU026				ISNBU	PL4
SNBU011	SNBU	PL3	SNBU027				SNBU	PL4
SNBU012	RVC	PL3	SNBU028				ISNBU	PL4

Command ==>>

F1=Help    F2=Main Menu    F3=Return    F4=Commands    F6=Roll

F7=Backward    F8=Forward    F11=EntryPoint    F12=Cancel

Figure 105. SNBU Resource List Panel

## Connecting or Disconnecting a Resource and Changing Modem Speed

You can use the Control SNBU Connections Manually option or the Change Modem Speed Manually option to:

- Disconnect a resource from SNBU automation
- Connect a resource to SNBU automation
- Restore a resource to full speed
- Switch a resource to backup speed
- Delete an erroneous status file entry

To perform one of these functions:

1. Type **6** or **7** in the entry field on the **SNBU Automation Command Menu** panel. An example of this panel is shown in Figure 104 on page 130.
2. Press **Enter**.

The Change Speed or Initiate/Terminate SNBU Operation panel shown in Figure 106 on page 132 is displayed.

**Note:** You can also display the Change Speed or Initiate/Terminate SNBU Operation by typing **AON 2.7.6**, **AON 2.7.7**, **CHGSNBU**, or **CHGSPEED** from the command line of any panel and pressing **Enter**.

```

FKVKCGBE  Change Speed or Initiate/Terminate SNBU Operation  CNM01

Enter the following:

Resource name .....

Use any character to select type of operation:

DISCONNECT SNBU .....
CONNECT SNBU .....
Note: Operation controlled by Automation Control File.

RESTORE to Full Speed .....
SWITCH to Backup Speed .....
Local|Remote|Both Modem ....      1 = Local | 2 = Remote | 3 = Both
Note: Modem will switch back if next statistics are good.

DELETE erroneous status .....
Note: Use only after servicing port or manual restore

Command ==>
F1=Help      F2=Main Menu  F3=Return
F6=Roll
F12=Cancel

```

Figure 106. Change Speed or Initiate/Terminate SNBU Operation Panel

3. Type a resource name in the **Resource name** field. The resource name is the PU name or alternate port name. Because a modem is not a network addressable unit (NAU), the modem is addressed using the network name and the address of the remote PU to which it is attached. When the PU name is used as an operand, relevant information for that PU is automatically filled in on the resulting panel.
4. Type any non-blank character in the remaining fields to perform the action you want. You can select the following fields:

**DISCONNECT SNBU**

Disconnects a SNBU dial backup condition.

**CONNECT SNBU**

Initiates a SNBU dial backup.

**RESTORE to Full Speed**

Restores the selected modem to full speed.

**SWITCH to Backup Speed**

Changes the selected modem to a backup speed.

**Local | Remote | Both Modem**

Selects a modem type (1=Local, 2=Remote, 3=Both).

**DELETE erroneous status**

Deletes old or erroneous status records. Failure to delete old or erroneous Busy and Down status records can result in an attempt at alternate port selection that does not succeed because the SNBU automation cannot use a port that is already marked busy or down. An FKV850I message that no ports are available might be issued, when in fact there is nothing to prevent the dial from occurring. An erroneous status file record keeps those ports from being selected.







---

## Chapter 16. NCP Recovery Definitions

To display the NCPRECOV Control File definitions for a particular NCP, or for all NCPs you have defined, use the NCP Recovery Definitions menu option.

To display all defined NCPs choose option 9. To display a particular NCP, choose option 9 and enter the name of the NCP in the **NCP name=** field on the panel.

Selecting the NCP Recovery Definition menu option will cause the DSPCFG command to be issued based upon your NCP selection.

Figure 108 displays the SNA Automation: Menu panel.

```
FKVK0000          SNA Automation: Menu          CNM01

Select an option

  9 0. Tutorial
    1. Help Desk
    2. SNAMAP
    3. VTAM Options Management
    4. NetStat
    5. VTAM Commands
    6. APPN menu
    7. Switched Network Backup menu
    8. X.25 menu
    9. NCP Recovery Definitions (NCP name= _____ )

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

*Figure 108. Selecting NCP Recovery Definitions*

To access NCP Recovery Definitions from the SNA Automation: Menu panel:

1. Type **9** in the entry field.
2. Press **Enter**.

AON/SNA issues the DSPCFG command for all of your defined NCPs, which is shown in Figure 109 on page 136.

```

EZLK7110          Display Configuration Data          CNM01

Select one of the following.  Then press Enter.
1=Add 2=Change 3=Delete

-  NCP01          NCPRECOV
-  HOST           CNM01
-  DUMP           (Y,N)
-  RELOAD         (Y,N)
-  LINKSTA        001-S
-  DUMPSTA        001-S
-  LOADTIME       00:05
-  DUMPTIME       00:10
-  EXIT01         FKVEX01
-  EXIT02         FKVEX02
-  EXIT03         FKVEX03
-  EXIT04         FKVEX04
-  LOADMOD        NCP01A

Command ==>>
F1=Help      F2=Main Menu  F3=Return      F5=Refresh    F6=Roll
F7=Backward  F8=Forward          F12=Cancel

```

Figure 109. Selecting NCP Recovery Definitions

This is the DSPCFG panel for the NCP01 NCPRECOV Control File statement. In this example, this is the only NCP being automated on this system.

---

## Chapter 17. Displaying SNA Resource Information with AutoView

The AutoView function displays a summary of information for a single resource and provides a list of commands you can issue for more information about the resource and changing its automation settings. To use the AutoView panel, you must know the name of the resource with which you want to work.

To display the AutoView selection panel:

1. Type **SNAVIEW** on the command line of any panel.
2. Press **Enter**. A panel similar to the one shown in Figure 110 is displayed. This panel is dynamically ordered according to your installation, so the order of the options on your panel may be different.

```
EZLK2000          AON: AutoView          CNM01

Resource Name _____

Resource Type _____ (Optional)

Select an Option

(Optional) _ 1. TCPIP
              2. APPN
              3. SNBU
              4. SNA

Command ==>>>
F1=Help      F2=Main Menu  F3=Return

                          F6=Roll
                          F12=Cancel
```

Figure 110. AON: AutoView Panel

3. Type the resource name in the **Resource Name** field.
4. Optionally, tab to the Resource Type field and type the resource type (such as LU, PU, NCP, or APPL).
5. Type **5** for SNA in the entry field. If you do not select an option, AON searches all of the automation components to find the resource.
6. Press **Enter**.

For example, to use AutoView for the TA1P523A resource, type **TA1P523A** in the **Resource Name** field, which is shown in Figure 111 on page 138.

```

EZLK2000          AON: AutoView          CNM01

Resource Name TA1P523A_____

Resource Type PU_____ (Optional)

Select an Option

(Optional) _ 1. TCPIP
              2. APPN
              3. SNBU
              4. SNA

Command ==>>>
F1=Help      F2=Main Menu  F3=Return

F6=Roll
F12=Cancel

```

Figure 111. AON: AutoView Panel Sample Entry

---

## Finding Defined Resources

Each automation component displays a different set of predefined information and a different list of commands. Because no particular automation component is selected in the example shown in Figure 111, AON searches all the automation components for the resource, TA1P523A. When the resource is defined to more than one automation component, AON lists all the places the resource is defined.

In Figure 112 on page 139, AON found the resource, TA1P523A, defined as both a SNA and a SNBU resource.

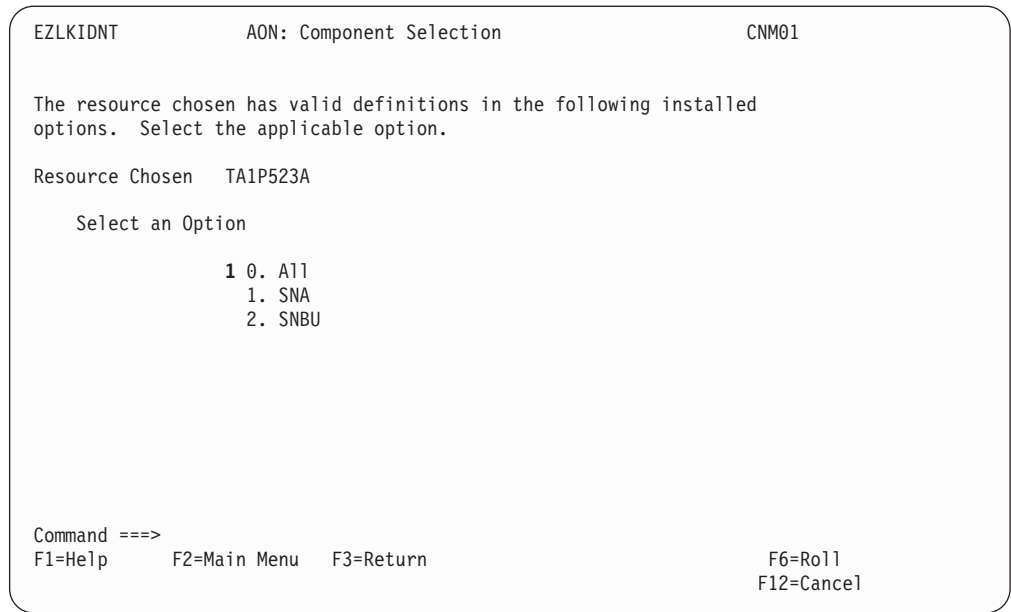


Figure 112. AON: Component Selection Panel

To select the SNA AutoView display:

1. Type **1** in the entry field of the **AON: Component Selection** panel.
2. Press **Enter**.

Figure 113 shows the SNA AutoView display for the resource, TA1P523A.

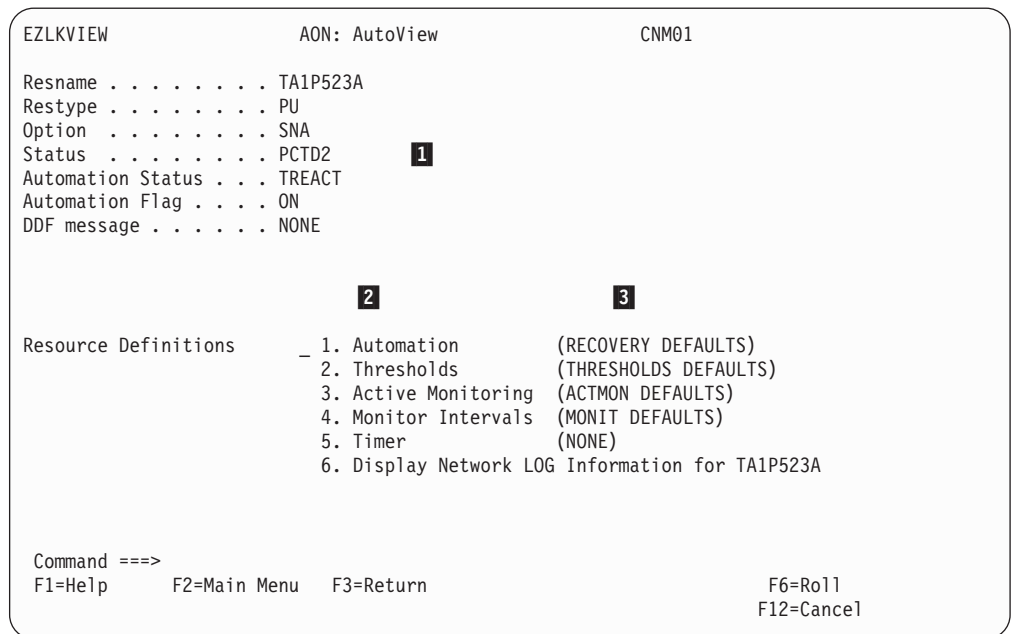


Figure 113. AON: AutoView Panel

---

## Viewing Resource Information

The following resource information is available:

- 1** The first group of information provides a summary of information about the resource including the resource name, resource type, status, automation settings for the resource, DDF message for the resource, if any, and other information depending on the automation component used.
- 2** The second group is a list of commands you can issue for the resource to display more information, change automation settings, or perform other functions depending on the automation component used.
- 3** The third group of information (shown in parentheses) tells you which control file entry is currently defining the settings for the commands shown in the second group. For example, in Figure 113 on page 139, the settings for option 1 (Automation) are defined by the RECOVERY DEFAULTS control file entry.

For commands that do not have a corresponding control file entry, such as option 5 (Timer) the information in the parentheses indicates whether a setting exists. In Figure 113 on page 139, there are no timers set for TA1P523A.

You can select one of the following resource definitions:

**Automation**

Turns automation on and off.

**Thresholds**

Adds, changes, or deletes the threshold settings. The settings are infrequent, frequent, and critical threshold.

**Active Monitoring**

Indicates if the resource is active.

**Monitor Intervals**

Sets the intervals for trying to reactivate a resource.

**Timer** Adds, changes, or deletes a timer.

**Display Network LOG Information**

Displays only the Netlog information for the resource.

---

## Part 3. Using AON with TCP/IP

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## Chapter 18. Using the AON/TCP Operator Interface

This chapter explains how to navigate through the full-screen, menu-driven panels that make up the *operator interface* for AON/TCP. As an operator, you can do most of your work from within the operator interface.

Automated Operations Network (AON) provides a rich operator interface for managing TCP/IP resources through an AIX® service point (NV4AIX option) or a z/OS (IP390 option) system. The functions provided by each option are dependent on functions provided by the AIX of MVS platforms; therefore, not all functions are available for both options.

The AIX option enables you to manage TCP/IP resources through RUNCMDs to one, or more, AIX service points. For example, you can PING TCP/IP hosts through the AIX service point. The AIX option also enables you to define thresholds for CPU utilization, disk utilization, resource failures, and security authorization failures.

The IP390 option enables you to manage TCP/IP resources through z/OS Communication Server IP. For example, you can use z/OS Communication Server IP to issue PING and TRACERTE commands. Also, you can manage telnet and FTP sessions connecting into your MVS system. The AON/TCP session management aids you in identifying session endpoints (correlating SNA and IP data), determining if a session is hung, and taking corrective actions. You can use the IP390 option to issue SNMP requests (for example, GET and SET), enable TCP/IP tracing (PKTTRACE and CTRACE), monitor resources for specific performance thresholds, and automate and monitor critical sockets.

---

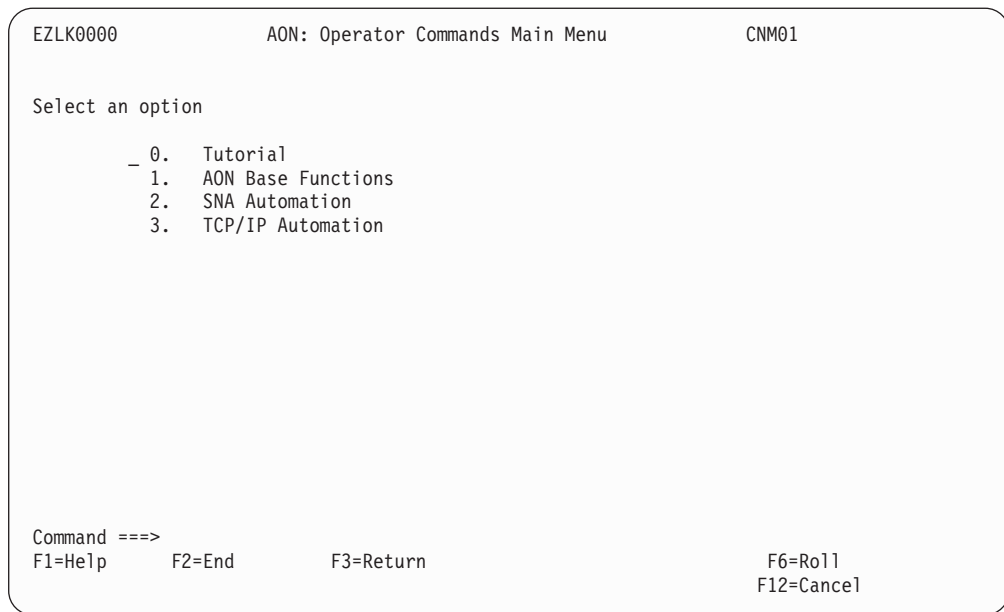
### Accessing the Operator Interface

You can perform any of the operator functions from the operator interface. The operator interface enables you look at color-coded status displays of the resources on your network, change automation settings, receive messages, issue commands, and perform many other functions that control automation and resource availability. New AON/TCP users might find the panels an easier way to reach the different functions.

You can access the AON/TCP operator interface from anywhere within NetView or from the AON panels. To access AON/TCP from NetView perform the following steps:

1. Type **AON** on the command line.
2. Press **AON**.

NetView displays the AON: Operators Commands Main Menu panel shown in Figure 114 on page 144:



*Figure 114. AON: Operator Commands Main Menu Panel*

The AON: Operator Commands Main Menu panel is the main panel for AON. This panel displays all available components. AON checks the control file entry for each AON component to determine if the component is installed and initialized. If the component is not available, the name of the component on the panel is grayed out.

To select the TCP/IP Menu option from the AON: Commands Main Menu panel:

3. Type **4** in the entry field.
4. Press **Enter**.

AON displays the TCP/IP Automation: Commands Menu panel, shown in Figure 115 on page 145. You can use this panel to get to all the functions of AON/TCP.

```
FKXX0000      TCP/IP Automation: Commands Menu      CNM01

Select an option

  _ 1. NetView for AIX Menu
    2. MVS TCP/IP Menu

Command ==>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

Figure 115. TCP/IP Automation: Commands Menu

**Note:** You can also reach the AON/TCP interface by typing **AONTCP** on any NetView command line and pressing **Enter**.

---

## Tivoli NetView (for UNIX) Menu

This topic describes how to use the AON/TCP AIX commands. Selecting option 1 from Figure 115 displays the following panel:

```
FKXX1000      NetView for AIX TCP/IP Automation: Commands Menu  CNM01

Select an option

  _ 1. Issue Ping
    2. General Commands
    3. Issue Remote Ping
    4. Performance Thresholds Management
    5. Display Resource List

Command ==>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
```

Figure 116. TCP/IP Automation: Commands Menu Panel for NetView for UNIX

To select an option from the TCP/IP Automation: Commands Menu panel:

1. Type the number of the option you want to use in the entry field.

2. Press **Enter**.

The number you select determines the AON/TCP option that is displayed. See the following list for a summary of the AON/TCP menu options:

**Option 1**

Sends a RUNCMD to the AIX service point to PING a TCP/IP resource.

**Option 2**

Sends the user specified command (through a RUNCMD) to the AIX service point.

**Option 3**

Sends a RUNCMD to the AIX service point to issue a remote PING of a TCP/IP resource.

**Option 4**

Manages AON/TCP thresholds for disk and CPU utilization, resource failures, and security authorization.

**Option 5**

Displays TCP/IP critical resource list, which are resources that have been defined using a TCP/IP policy definition statement.

## Pinging a TCP/IP Node through a Service Point

Pinging a service point can be a useful diagnostic tool if you are having trouble transmitting data. The response returned by the ping command tells you if the service point and node are up and functioning.

To send a ping command to a service point:

1. Type **1** in the entry field on the TCP/IP Automation: Commands Menu panel.
2. Press **Enter**.

AON/TCP displays the TCP/IP Automation: Ping a Service Point panel shown in Figure 117 on page 147.

**Note:** For fast access to the TCP/IP Automation: Ping a Service Point panel, enter **AON 4.1.1** or **NV6KPING** on the command line.

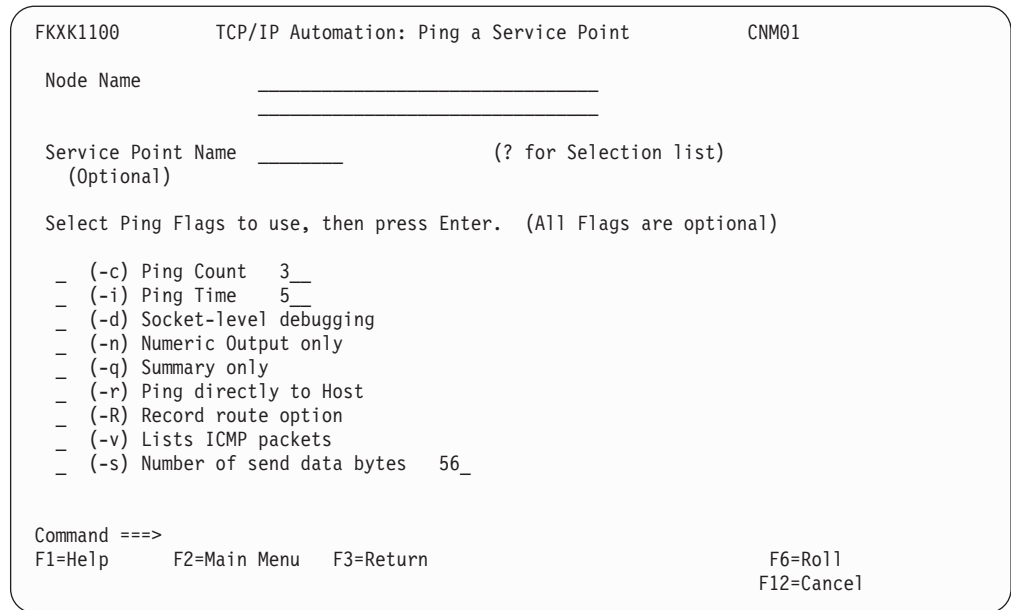


Figure 117. TCP/IP Automation: Ping a Service Point Panel

3. Type the name of the node associated with the host you want to ping in the Node Name field.
4. Optionally, you can type the name of the service point to which you want to send the ping in the Service Point Name field. If you want to see a list of possible service points, type ?. This field is optional, but accelerates the response because all service points do not have to be checked for the node.
5. Optionally, you can type a non-blank character in the entry field next to any of the following ping flags:

**(-c) Ping Count**

Specifies the number of echo requests that you want to send and receive. AON/TCP retrieves the default value from the control file.

**(-i) Ping Time**

Specifies the number of seconds to wait between sending each ping request. AON/TCP retrieves the default value from the control file.

**(-d) Socket-level debugging**

Indicates that you want to get information about a host and start socket-level debugging.

**(-n) Numeric Output only**

Indicates that you do not want AON/TCP to look up symbolic names for host addresses.

**(-q) Summary only**

Specifies quiet output. If you specify this option, AON/TCP displays only the summary lines at startup and finish time.

**(-r) Ping directly to Host**

Indicates that you want to bypass the routing tables and send the ping directly to a host on an attached network. You can use this option to ping a local host through an interface that no longer has a route through it.

**(-R) Record route option**

Indicates that you want to include the RECORD\_ROUTE option in the ECHO\_REQUEST packet and display the route buffer on returned packets.

**(-v) Lists ICMP packets**

Indicates that you want to request verbose output, which lists ICMP packets that are received in addition to echo requests.

**(-s) Number of send data bytes**

Specifies the number of data bytes to send. The default is 56. Add 8 bytes for the ICMP header data to determine the actual number of bytes to send per data packet.

6. Press **Enter**.

If you entered a question mark in the Service Point Name field, AON/TCP displays the Operator Command Interface: SELECTION panel shown in Figure 118, which enables you to select the service point.

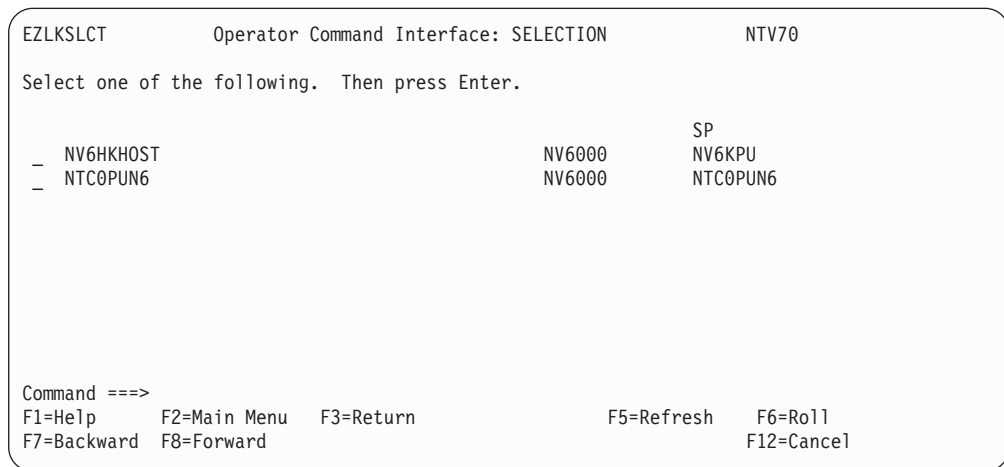


Figure 118. Operator Command Interface: SELECTION Panel

7. Type **s** (or any other non-blank character) beside the desired service point.

8. Press **Enter**.

AON/TCP displays the TCP/IP Automation: Ping a Service Point panel with the service point name field filled in and a message as shown in Figure 119 on page 149.

```

FKXK1100          TCP/IP Automation: Ping a Service Point          CNM01
Node Name          TESTER1_____
Service Point Name NTC0PUN6          (? for Selection list)
                  (Optional)
Select Ping Flags to use, then press Enter. (All Flags are optional)
- (-c) Ping Count   3__
- (-i) Ping Time    5__
- (-d) Socket-level debugging
- (-n) Numeric Output only
- (-q) Summary only
- (-r) Ping directly to Host
- (-R) Record route option
- (-v) Lists ICMP packets
- (-s) Number of send data bytes  56_

FKX910I SERVICE POINT NAME SET. PRESS ENTER TO CONTINUE
Command ==>
F1=Help      F2=Main Menu  F3=Return
                                           F6=Roll
                                           F12=Cancel

```

Figure 119. TCP/IP Automation: Ping a Service Point Panel with Message

9. Press **Erase**.

After performing a successful ping command, AON/TCP displays a panel like the one shown in Figure 120.

```

FKXKLWN2 OUTPUT FROM REMOTE CMDS                                     1 of 11
FKX504I NETVIEW FOR AIX SERVICE POINT NTC0PUN6 RESPONSE FOR COMMAND -
Executing RUNCMD "asis ping -c 3 -i 5 tester1"
PING tester1.raleigh.ibm.com (9.67.13.25): 56 data bytes
64 bytes from 9.67.13.25: icmp_seq=0 ttl=60 time=84 ms
64 bytes from 9.67.13.25: icmp_seq=1 ttl=60 time=15 ms
64 bytes from 9.67.13.25: icmp_seq=2 ttl=60 time=15 ms

--- tester1.raleigh.ibm.com ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 15/38/84 ms
DSI268I RUNCMD COMPLETE

Command==>
PF3=Ret  PF4=Fndprev  PF5=Rptfnd  PF6=Roll  PF7=Back  PF8=Forw  PF12=Cancel

```

Figure 120. Ping Results Panel

This panel shows information such as how many packets were transmitted, how many packets were received, and how long the ping round trip took.

## Issuing a Command to a Service Point

The General Commands option on the TCP/IP Automation: Commands Menu panel enables you to issue a command to a service point.

To issue any valid AIX line output command to a service point:

1. Type **2** in the entry field on the TCP/IP Automation: Commands Menu panel.
2. Press **Enter**.

AON/TCP displays the TCP/IP Automation: Issue Command to Service Point panel shown in Figure 121. Because data is saved across sessions, Figure 121 shows data in some of the fields.

**Note:** You can also access the TCP/IP Automation: Issue Command to Service Point panel by entering **AON 4.1.2** or **NV6KCMD** on any command line.

```
FKXK1200      TCP/IP Automation: Issue Command to Service Point      CNM01

Service Point Name NVIXTA01_      (? for Selection list)

Type in the remote command below. Then press Enter.

0.....1.....2.....3.....4.....5.....6.....7.....
who_____
_____
_____
_____
_____
_____
_____
_____

Command ==>
F1=Help      F2=Main Menu      F3=Return
F11=Right    F6=Roll          F12=Cancel
```

Figure 121. TCP/IP Automation: Issue Command to Service Point Panel

3. Type the name of the service point, to which you want to send the command, in the Service Point Name field. If you want to see a list of possible service points, type **?**.

**Note:** If you entered a question mark in the Service Point Name field on the TCP/IP Automation: Issue Command to Service Point panel, AON/TCP displays an Operator Command Interface: SELECTION panel like the one shown in Figure 118 on page 148, which enables you to select the service point by typing **s** next to the desired service point. After pressing Enter, AON/TCP displays the TCP/IP Automation: Issue Command to Service Point panel with the Service Point Name field filled in.

4. Type the UNIX command on any of the available lines. Remember that the service point is case sensitive so you must type the command exactly as the command is expected to be on the machine. You can send any AIX command to the NetView for UNIX service point as long as the results are line mode and not interactive in nature.

The length of the command to be issued cannot exceed 150 characters due to a limitation on passing information between programs.



If you need more space than what is provided on one panel, you can press **F11** to page to the right. To help you keep track of your position, the last two characters on the first panel become the first two characters on the second panel when you page to the right.

AON/TCP supports AIX pipe characters, but you must use the pipe character that translates to EBCDIC X'6A'.

This panel is cursor sensitive and saves entries across sessions. So, to issue a needed command, place the cursor on the command. To change an existing command, type over any command not needed.

5. Press **Enter**.

**Note:** If your command is longer than one panel, you can press Enter to issue the command whether or not you scrolled the panel to the right.

AON/TCP displays a scrollable panel similar to Figure 122.

```
FKXKLWN2 OUTPUT FROM REMOTE CMDS                               Line 1 of 8
FKX504I NV6000 SERVICE POINT NTC0PUN6 RESPONSE FOR COMMAND -
Executing RUNCMD "asis who"
root      hft/0      Mar 02 13:59
root      pts/2      Apr 06 14:54
root      pts/0      Apr 06 14:47
root      pts/3      Apr 06 15:05
root      pts/4      Apr 06 15:11
DSI268I RUNCMD COMPLETE
```

Figure 122. Results of Issuing a Command to a Service Point

## Displaying the Critical Resource List

The Display Resource List option displays a list of the critical TCP/IP resources you defined with TCPIP entries in the control file. After seeing the available resources, you can do one of the following:

- ping a resource
- issue AutoView for a resource
- issue a remote ping to an AIX resource

To display a list of the TCP/IP resources that you defined for your network:

1. Type **3** in the entry field (on the TCP/IP Automation: Commands Menu panel shown in Figure 125 on page 154).
2. Press **Enter**.

AON/TCP displays the TCP/IP Automation: Resource List panel shown in Figure 123.

**Note:** You can also go to the TCP/IP Automation: Resource List panel by entering **AON 4.3** or **TCPLIST** on any command line.

```
FKXX1500          TCP/IP Automation: Resource List          CNM01
Select one of the following. Then press Enter.          More:>
1=Ping  2=Autoview  3=Remote Ping

  Alias      Serv Pt.  Type    IP Address  Host Name
- BLDSEVER   NV6KHOST NAMESERV 9.67.3.100  server.plant.floor.c
- COSERVER   NV6KHOST NAMESERV 9.67.2.20  coserver.plant.floor.c
- DUMMYSRV   NMPIPL10 HOST     9.37.99.255 DUMMYSRV
- OPSWS      NV6KHOST HOST     9.67.8.89   opsws.plant.floor.c

Command ==>>
F1=Help   F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward F8=Forward    F11=Right  F12=Cancel
```

Figure 123. TCP/IP Automation: Resource List Panel

The fields on the Resource List panel are:

**Alias** The alias, or nickname, of the host you are monitoring.

**Serv Pt.**

The service point responsible for the resource.

**Type**

One of the following resource types:

- Host
- Nameserver
- INFC
- LINK

**IP Address**

The IP address of the host you are monitoring.

### Host Name

The fully qualified name of the host you are monitoring.

3. Type the number of the action you want to perform in the entry field next to the desired alias name. The action codes are:
  - 1 Sends a ping command, which causes the same results as described in “Pinging a TCP/IP Node through a Service Point” on page 146. The advantage of performing the ping this way is that the Node Name and Service Point Name fields are already filled in for you.
  - 2 Displays an AutoView for the alias name. This panel shows all currently known information about the resource from the control file and the service point. From this panel, you can manage all the automation definitions for the resource.
  - 3 Sends a remote ping command, which causes the same results as in “Pinging a TCP/IP Node through a Service Point” on page 146. The advantage of performing the remote ping this way is that the Source Node Name and Service Point Name fields are already filled in for you.
4. Press **Enter**.

AON/TCP displays the appropriate panel. If you entered **1** for Ping, AON/TCP displays the panel in Figure 117 on page 147. Follow the steps in “Pinging a TCP/IP Node through a Service Point” on page 146 to complete the proper fields and issue a ping.

The Resource List panel displays AIX resources. If you press **F4** on Figure 123 on page 152, the panel in Figure 124 is displayed containing a pop-up window where you can select options for the appropriate resource:

```
FKXX1501          TCP/IP Automation: Resource List          CNM01
Select one of the following. Then press Enter.          More:>
1=Ping  2=Autoview  .....
      Alias      : Select an Option for BLDGSERVER      :
- BLDSEVER     :   1. Ping server.plant.floor.co      :
- COSERVER     :   2. Remote Ping server.plant.floor.co      :
- DUMMYSRV    :   3. Send command to NV6KHOST      :
- OPSWS       :   4. Active Monitoring      :
              :   5. Automation      :
              :   6. Failure Thresholds      :
              :   7. Performance Thresholds      :
              :   8. Monitor Intervals      :
              :   9. Timer      :
              :  10. Display Configuration Data      :
              :  11. Display Network LOG Information      :
              :      :      :
              : F1=Help          F12=Cancel      :
.....

Command ==>
F1=Help    F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward F8=Forward          F11=Right  F12=Cancel
```

Figure 124. TCP/IP Automation: Resource List Panel

From this panel, you can:

- Issue a ping of a resource.

- Issue a remote ping to a resource.
- Send a command to a resource.
- Display an AON ACTMON entry for a resource.
- Display the AON RECOVERY policy for a resource.
- Display an AON MONIT entry for a resource.
- Display timers that are set for a resource.
- Display TCP/IP control file definitions for a resource.
- Issue the BLOG command.

## MVS TCP/IP

This section explains the function in AON/TCP that utilizes z/OS CommServer IP.

Selecting option 2 on the panel in Figure 115 on page 145 (TCP/IP Automation: Commands Menu) displays the MVS TCP/IP menu, as shown in Figure 125.

```

FKXK2000          MVS TCP/IP Commands Menu          NTV9D

Select an option

- 1. Issue Ping
  2. MVS IP Session Status
  3. Issue Tracerte Command
  4. Issue Commands
  5. SNMP MENU
  6. IP Server Management
  7. IP Resource Manager
  8. SNMP View
  9. CISCOworks Blue Inter-network Status Monitor
 10. TCP/IP Trace Control Center. SP: _____

Command ==>>
F1=Help      F2=Main Menu  F3=Return

                                F6=Roll
                                F12=Cancel
  
```

Figure 125. MVS TCP/IP Automation: Commands Menu

The options on this panel provide the following functions:

### Option 1

Ping a resource through z/OS Communication Server IP.

### Option 2

Solve problems and manage IP connections for your MVS system, such as TN3270 and FTP sessions.

### Option 3

Issue a TCP/IP TraceRte command against a resource.

### Option 4

View a full-screen panel that contains TSO or UNIX line mode commands. Responses are correlated and displayed in a full-screen panel.

**Option 5**

Link to the SNMP menu where you can issue SNMP commands.

**Option 6**

Monitor and control TSO and UNIX command servers.

**Option 7**

Provides management functions for TCP/IP resources, such as managing policy definitions and proactive monitoring.

**Option 8**

Provides generic interface resource views through SNMPView.

**Option 9**

Provides Cisco router management functions through Cisco Works Blue.

**Note:** AON/TCP provides a link to Cisco Works Blue from this panel, but before attempting to select this option, perform all of the installation or customization steps required to run Cisco Works Blue, for example, authorizing all NetView operators to use Cisco Works Blue.

**Option 10**

Perform diagnostic traces to resolve TCP/IP problems.

**Usage Notes:** For options 2, 4, 5, 7, and 8, the resources must support SNMP requests.

## MVS TCP/IP Ping

Pinging a resource can be a useful tool. To ping a resource, select option 1 from the panel in Figure 125 on page 154. The panel shown in Figure 126 is displayed.

```

FKXK2100          MVS TCP/IP Automation: Ping from a Service Point      CNM01
Host Name or IP  _____
Address          _____
Service Point Name _____  (? for Selection list)

Ping Count       1__
Ping Timeout     10__
Ping Length      256__

Command ==>
F1=Help          F2=Main Menu    F3=Return
F6=Roll         F12=Cancel

```

Figure 126. MVS TCP/IP Automation: Ping from a Service Point

The MVS TCP/IP Automation: Ping from a Service Point panel can also be accessed by using the **MVSPING** and **AON 4.2.1** commands.

In Figure 126 on page 155, the resource name can be an IP host name or an IP address. If no service point name is specified, AON searches the TCP/IP policy definitions for the SP associated with the resource.

Optionally, you can choose to change the following fields for a PING:

**Ping count**

Specifies the number of PING requests to issue.

**Ping timeout**

Specifies the interval (in seconds) to wait for each PING response.

**Ping length**

Specifies the length of data to be sent for a ping request.

Figure 127 is an example of a panel showing the result when you do not request routing information.

```
FKXKLWN2      OUTPUT FROM TCP/IP 390      Line 1 of 1
PING: Ping #1 response took 0.031 seconds. Successes so far 1.

Command ==>
F3=Ret  F4=Findprev  F5=Rptfnd  F6=Ro11  F7=Back  F8=Forward  12=Cancel
```

Figure 127. Output from TCP/IP 390 Ping Request Panel with No Routing Details

**Note:** You can also use the **MVSPING** command from any NCCF command line to ping a resource and have the results correlated and displayed on your workstation, instead of on these panels.

---

## Session Status

Users who connect to your MVS system through TN3270 or FTP sessions can encounter various problems. The session status option of the AON/TCP function enables you to determine the session endpoints, whether the session is hung, and to, optionally, drop the session. You can access the session status panel by selecting option 2 shown in Figure 125 on page 154. This enables you to display and correlate SNA and IP connectivity and status information. This option enables you to:

- Identify the type of session (such as, TN3270, FTP, or SMTP).
- Identify if that session is hung.
- Break the session.
- Correlate SNA VTAM data with TCP/IP data.
- Run TCP/IP problem determination commands, such as PING and TraceRte, to determine the cause of session problems.
- Access the SNA help desk for LU and application problem determination.

- Query sessions on multiple MVS hosts and multiple TCP/IP stacks.
- Access the SNMP main menu.
- Display detailed information about specified Telnet connections.
- Cause specified ports to not accept any new Telnet connections.
- Cause previously quiesced ports to begin accepting Telnet connections.

The Session Status panel can also be accessed by entering the **IPSTAT** or **AON 4.2.2** commands.

**Note:** The Session Status panel issues SNMP requests to collect data. The Community name used for those requests is defined on the TCP390 definition for the associated stack where the request is being issued. For more information, refer to the TCP390 definition statement in the *Tivoli NetView for z/OS Administration Reference*.

```

FKXX2200          TCP/IP for 390 Session Status          NTVE1

  Enter TCP/IP address: _____
 or HOSTNAME:     _____

  Service Point  System  IP Address  Host Name
  _ NMP217      TCPIP   9.67.50.67  NMP217.raleigh.ibm.com

Command ==>
F1=Help      F2=Main Menu  F3=Return          F6=Roll
F7=Backward  F8=Forward    F9=Filters         F10=Long Name    F12=Cancel

```

*Figure 128. TCP/IP for 390 Session Status Panel*

To use the Session Status panel:

- Enter a TCP/IP address (or wildcard, for example 9.\*) or Host Name.
- Select one, or more, MVS TCP/IP stacks by placing any non-blank character next to it.
- Press **Enter**.

The panel in Figure 129 on page 158 displays the selected MVS TCP/IP stacks and the number of sessions connected to each.

Depending on how you have customized your IPPORT policy definitions, this panel might not show all active sessions. For additional information, refer to IPPORT in *Tivoli NetView for z/OS Administration Reference*.

**Note:** The IBM and Cisco TN3270 Servers do not support the use of a wildcard (\*) in any part of the IP Address field. Message FKX962I is displayed if you try to use a wildcard with a TN3270 Server.

You can also set up session filters by pressing **F9**. For additional information refer to "Session Status Filters" on page 161.

```
FKXX2210          TCP/IP for 390 Session Status          NTVE1

CLIENT

146.*.*.*

Service   Active   IP
Point     Sessions Address   HostName
NMP217    1        9.67.50.67  NMP217.raleigh.ibm.com

Command ==>
F1=Help   F2=Main Menu  F3=Return   F4=Commands  F5=Refresh  F6=Roll
F7=Backward F8=Forward   F9=Filters  F11=Zoom     F12=Cancel
```

*Figure 129. TCP/IP for 390 Session Status Panel*

Press **F11** (Zoom) to display information for all sessions as shown in Figure 130 on page 159.



```

FKXX2220      TCP/IP for 390 Session Status      NTVE1
SERVICE
CLIENT - - - -> POINT
NMP217
146.*.*.*    9.67.50.67      Active Sessions 1
Filtered Sessions 1
TCP/IP STACK
Client      Local
Port Client Address Port      Send Rec      Logical App1.
1445 146.84.144.55 23      174 57      NTCPE101 NTE1TS02

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward  F8=Forward    F9=Filters

```

*Figure 130. TCP/IP for 390 Session Status Panel Showing the Status of the Specified Resource*

In this example, the user, 146.84.144.55, has one active TN3270 session into port 23 and application NTE1TS02.

The session management functions have correlated the user's IP address with the Logical Unit and application for the session.

You can issue commands against the session, logical unit, or application by tabbing to that field on the screen and pressing **F4** (commands).

```

FKXXK2221      TCP/IP for 390 Session Status      NTVE1
                SERVICE
CLIENT - - - -> POINT - - - -> SESSION
                NMP217      1445
146.84.144.55  9.67.50.67      23
.....
Client Local   : Conn ID 00000002CB      Commands      :
Port Port     : Addr 146.84.144.55    1. Ping       :
1445 23       : Port 1445              2. Tracerte   :
                : LU NTCPE101          3. Autoview   :
                : APPL NTE1TS02       4. Drop       :
                :                      5. ARP Cache   :
                : Send 174             6. SNMP Commands :
                : Rec 57               7. Display Conn :
                :                      8. Quiesce Port :
                :                      9. Resume Port  :
                :                      10. SNMP View   :
                : F1=Help              11. Conn Details :
                : F12=Cancel           12. Session Status :
                :                      :
                :                      :
.....
Command ==>
F1=Help      F2=Main Menu  F3=Return      F6=Roll
F7=Backward  F8=Forward   F9=Filters

```

Figure 131. TCP/IP for 390 Session Status Panel Showing Session Commands

**Note:** For options 3, 4, 6, 10, 11, and 12, the resources must support SNMP requests.

If you issue the PING command, which is shown as option 1 in Figure 131, a panel similar to that shown in Figure 132 is displayed.

```

CNMKWIND OUTPUT FROM  COMMAND: PING 146.84.144.55 ISSUED TO  LINE 0 OF 3
*----- Top of Data -----*
EZZ3121I Executing under single stack configuration of INET. The -p option ignored
CS V1R2: Pinging host 146.84.144.55
Ping #1 response took 0.117 seconds.
*----- Bottom of Data -----*

TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==>

```

Figure 132. Output from TCP/IP Panel with Ping Command Result

## Determining If a Session Is Hung

To determine if a session is hung, use **F5** to refresh the panel and monitor the send and receive columns shown in Figure 130 on page 159. If, after the refresh, there is

no change, the session might be hung. Press F4 in the panel shown in Figure 131 on page 160 to drop the session. AON/TCP performs the following steps:

- Issues a DROP connection command for the session.

**Notes:**

1. This function requires that the resources must support SNMP requests.
2. In order for the DROP option to work properly, you must enable the SET command in the TCP profile: SACONFIG SETSEENABLED in member PROFILE.TCPIP of DSIPARM dataset.
3. The SNMP Community name defined in the control file for each TCP390 stack must match the one configured by the communication server for each stack. The Community name can be dynamically updated by using the IP Resource Manager function. Refer to the *Tivoli NetView for z/OS Security Reference* for more information about the SNMP Community name and UNIX System Services authorization. The Community name definition can be found in the TCP390 definition in the *Tivoli NetView for z/OS Administration Reference*.

- Returns to the Session Status panel.
- Refreshes the session list.
- Displays the following confirmation message:

```
FKX611I SESSION 1006 WAS SUCCESSFULLY DROPPED
```

## Session Status Filters

The NetView program provides the ability to display TCP/IP session status information for selected stacks. Displaying the session status information can result in a very large volume of information for you to review to find a particular resource or set of resources. The session status filters enable you to display only resources of particular interest. These filters are set on a task basis. You can invoke the Session Status Filters panel using the PF key on selected TCP/IP panels. You can also set the Session Status Filters using the command line interface.

Figure 133 on page 162 shows the Session Status Filters panel. The default values are completed.

```

FKXKSSF0          TCP/IP for 390 Session Status Filters          NTV74

The current filter and sort settings are shown.

Type the data to be displayed in one or more fields.
Client IP
Port  Address      Type      Send      Rec      Logical
n/a   *             *         n/a       n/a      *        Appl.
                                           *
Type an action code to define the logical operator for the search:
  2 1 OR
  2 AND

Type numbers from 1 to 4 to define the column order for sorting.
Client IP
Port  Address      Type      Send      Rec      Logical
n/a   1             4         n/a       n/a      3        Appl.
                                           2
Type an action code to define the sort order.
  1 1 Ascending order
  2 2 Descending order

Command ==>
F1=Help          F3=Return      F6=Roll
                  F9=Defaults    F12=Cancel

```

Figure 133. TCP/IP for 390 Session Status Filters Panel

The following describes the sections of the TCP/IP for 390 Session Status Filters panel. To change a setting, tab to any entry that is to be changed and type the new information. Press **Enter** to process the changes.

The first section shows the data to be displayed on the Session Status panel. A blank or an asterisk (\*) in an input field indicates that data is not to be filtered for that field. If, for example, you enter **TSO** in the Appl field, any session that contains the string **TSO** in the application field is displayed.

The second section shows the logical operator to be used for the filtering criteria that was set, when multiple input fields are specified, in the first section. The **OR** operator causes sessions that match ANY of the specified criteria to be displayed. The **AND** operator causes sessions that match ALL of the specified criteria to be displayed.

The third section shows the sort order to be used when the session status is displayed. These fields accept only the numbers 1 through 4, and blank as input. At least one field must be specified. The input must be sequential, starting with 1. If an operator enters 1 in the Appl field and 2 in the IP Address field, the Session Status display is sorted by the Appl field first. If there are identical Appl entries, they will then be sorted by the IP Address field.

The fourth section shows the order to be used for the sort. When 1 is entered the fields are sorted in ascending order and when 2 is entered the fields are sorted and displayed in descending order.

**Note:** The **F3**, **F6**, and **F12** keys *do not* save any data typed on the panel. Use the **F9** key to restore the defaults that are shipped with NetView. The Session Status panel automatically reflects the most recent settings of the session status filters.

Figure 134 shows the Session Status detail panel displaying the active sessions on a stack using the default filter settings. Note that 11 TCP/IP sessions are active and all are displayed.

```

FKXK2220      TCP/IP for 390 Session Status      NTVE1
SERVICE
CLIENT - - - -> POINT
NMP217
146.84.144.55 9.67.50.67      Active Sessions 11
Filtered Sessions 11
TCP/IP STACK
Client          Local
Port Client Address Port          Send   Rec   Logical  Appl.
Unit SLU (PLU)
1006 9.37.35.138   23           274    4
1005 9.37.35.138   23          21402  1250   NTCP7406 NT74IS03
1012 9.37.35.138   23           253    41
1013 9.37.35.138   23           253    41
1009 9.37.35.138   23           439    57     NTCP7403 NTV74EC0
1010 9.37.35.138   23           841    78     NTCP7404 NTV74EC0
1008 9.37.35.138   23          1320   57     NTCP7402 NTV74045
1007 9.37.35.138   23           301    57     NTCP7401 NT741802
1011 9.37.35.138   23           301    57     NTCP7408 NT741804
1000 9.67.43.04     23           480    80     NTCP7405 NTV74EC0
1014 9.67.50.34    23          10499  379    NTCP7407 NTV74046

Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Commands  F5=Refresh   F6=Ro11
F7=Backward  F8=Forward    F9=Filters   F12=Cancel

```

Figure 134. TCP/IP for 390 Session Status Panel

To see only the IP addresses containing 138 and the applications that contain the string NT74, you can press **PF9** and the Session Status Filters panel is displayed. Complete the data in the **IP Address** and **Appl** fields as shown, then press **Enter**.

```

FKXKSSF0      TCP/IP for 390 Session Status Filters      NTV74

The current filter and sort settings are shown.

Type the data to be displayed in one or more fields.
Client IP
Port Address      Type          Send   Rec   Logical  Appl.
n/a  *138*          *           n/a    n/a    *        NT74
Type an action code to define the logical operator for the search:
 2 1 OR
 2 AND

Type numbers from 1 to 4 to define the column order for sorting.
Client IP
Port Address      Type          Send   Rec   Logical  Appl.
n/a  1              4           n/a    n/a    3        2
Type an action code to define the sort order.
 1 1 Ascending order
 2 Descending order

Command ==>
F1=Help      F3=Return    F6=Ro11
F9=Defaults  F12=Cancel

```

Figure 135. TCP/IP for 390 Session Status Filters Panel

There are still 11 active sessions, but only 2 sessions displayed meet the filter criteria.

The message EZL919I is issued to indicate that the filters have been saved. Press **F3** to return to the detail panel shown in Figure 136.

```

FKXK2220      TCP/IP for 390 Session Status      NTVE1
SERVICE
CLIENT - - - -> POINT
NMP217
146.84.144.55 9.67.50.67      Active Sessions 11
Filtered Sessions 2
TCP/IP STACK
Client      Local
Port Client Address Port      Send Rec      Logical App1.
Unit SLU (PLU)
1007 9.37.35.138 23      301 57      NTCP7401 NT741802
1011 9.37.35.138 23      301 57      NTCP7408 NT741804

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward  F8=Forward    F9=Filters  F12=Cancel

```

Figure 136. TCP/IP for 390 Session Status Panel

## Line Mode Invocation

The session status filters panel can also be invoked from the command line, or a command list, with parameters. Line mode invocation passes parameters to the routine and sets the filters without invoking the view panel. This provides the ability to set filters in a user's initial CLIST. Refer to the NetView online help for more information about this command.

The line mode command used to set filters is FKXESSF. An example follows:

```
FKXESSF DISIP=138 DISAPPL=NT74
```

### Setting Up IP Session Status Filters

The Line Mode Invocation panel enables the operator to set the filters from the command line.

**Note:** All of the sort keywords must be specified when invoked from the command line or from another list.

The return codes for the line mode invocation are as follows:

- 0 The task completed successfully.
- 4 The task completed successfully, but duplicate keywords were found. The last instance was used.
- 7 A variable has no value.
- 8 The syntax is not valid.
- 12 The keyword is not valid or has no value.

The panel in Figure 137 on page 165 is an example of the syntax values that can be entered from the command line for line mode invocation.

```

NCCF          Tivoli NetView NTV74 KENNIE1 09/14/00 11:38:21 A

FKXESSF distype=ftp disip=9 disoper=2 sorttype=0 sortlu=0 sortappl=2
sortip=1 sortord=2

```

Figure 137. Tivoli NetView Line Mode Invocation Panel

The filter settings on the Session Status Filters panel after line mode invocation is shown.

```

FKXKSSF0      TCP/IP for 390 Session Status Filters      NTV74

The current filter and sort settings are shown.

Type the data to be displayed in one or more fields.
Client IP
Port  Address      Type      Send      Rec      Logical  Appl.
n/a   *              *        n/a       n/a      *        *
Type an action code to define the logical operator for the search:
  2 1 OR
  2 2 AND

Type numbers from 1 to 4 to define the column order for sorting.
Client IP
Port  Address      Type      Send      Rec      Logical  Appl.
n/a   1              4        n/a       n/a      3        2
Type an action code to define the sort order.
  1 1 Ascending order
  2 2 Descending order

Command ==>
F1=Help          F3=Return      F6=Roll
                  F9=Defaults   F12=Cancel

```

Figure 138. TCP/IP for 390 Session Status Filters Panel

The TCP/IP Session Status panel is shown, after the line mode invocation.

```

FKXX2220      TCP/IP for 390 Session Status      NTVE1
SERVICE
CLIENT - - - -> POINT
NMP217
146.*.*.*    9.67.50.67      Active Sessions 1
Filtered Sessions 1
TCP/IP STACK
Client      Local
Port Client Address Port      Send Rec      Logical Appl.
1445 146.84.144.55 23      207  90      NTCPE101 NTE1TS02

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F7=Backward  F8=Forward    F9=Filters

```

Figure 139. TCP/IP for 390 Session Status Panel

## MVS TCP/IP TraceRte

The TCP/IP TraceRte command is useful in problem determination, for example, determining lost packets. You can access AON/TCP TraceRte functions by selecting option 3 from the MVS TCP/IP Commands Menu (see Figure 116 on page 145).

Figure 140 is displayed when you select option 3 in Figure 125 on page 154:

```

FKXX2300  MVS TCP/IP Automation: Trace Route from a Service Point  CNM01

Host Name or IP _____
Address      _____

Service Point Name _____ (? for Selection list)

Max          30
Try          3
Port         4096
Wait         5
Debug        2      (1=Y, 2=N)

Command ==>
F3=Ret  F4=Fndprev  F5=Rptfnd  F6=Roll  F7=Back  F8=Forward  F12=Cancel

```

Figure 140. MVS TCP/IP Automation: Trace Route Panel



The panel shown in Figure 140 on page 166 can also be accessed by issuing the **TRACERTE** or **AON 4.2.3** commands.

The resource name can be an IP host name or an IP address. If a stack name is not specified, AON searches the configuration file for the stack defined IP address or host name. The following list describes the parameters and their defaults:

**MAX**

Tracerte maximum time to live (TTL). The default is 30 milliseconds.

**TRY**

Number of attempts. The default is 3.

**PORT**

The starting port number. The default is 4096.

**WAIT**

How long to wait for a response. The default is 5.

**DEBUG**

Show any additional messages. The default is 2.

The example in Figure 141 shows output from a TCP/IP trace route command for a workstation with an IP address of 9.37.36.228:

```
FKXKLWN2      OUTPUT FROM TCP/IP 390 TRACE ROUTE      Line 1 of 6

Trace route to 9.37.36.228 (9.37.36.228)
 1 (9.67.50.1)   2 ms 0 ms 0 ms
 2 (9.67.43.71) 3 ms 3 ms 3 ms
 3 (9.67.43.12) 8 ms 9 ms 11 ms
 4 (9.37.36.228) 13 ms 11 ms 10 ms

Command ==>
F3=Ret F4=Fndprev F5=Rptfnd F6=Roll F7=Back F8=Forward F12=Cancel
```

*Figure 141. MVS TCP/IP Automation: Trace Route Panel*

The panel in Figure 141 can also be accessed by issuing the **TRACERTE** from any NCCF command line and the results can be correlated and displayed on your screen, instead of in a panel.

## Issuing Commands

You can issue line mode TSO or UNIX commands from NetView without logging onto TSO. Using the panel in Figure 125 on page 154, select option 4 to display the panel shown in Figure 142 on page 168.

```

FKXK2400      TCP/IP Automation: Issue Command to Service Point      CNM01

Service Point Name nmpip110      (? for Selection list)

Command Interface: TS0

Type in the remote command below and press Enter.

0.....1.....2.....3.....4.....5.....6.....7
netstat conn _____
netstat home _____
netstat _____
tracerte pquigley _____
time _____
netstat ? _____
netstat sock _____
netstat up _____
netstat tcp tcp32 _____
netstat byte _____

Command ==>
F1=Help  F2=Main Menu  F3=Return      F6=Roll
F11=Right  F12=Cancel

```

Figure 142. TCP/IP Automation: Issue Command to Service Point Panel

The panel in Figure 142 can also be accessed by issuing the **AON 4.2.4** command. You can easily issue a command; for example, move to the first command line (netstat conn) and press **Enter**. A panel similar to Figure 132 on page 160 is displayed.

```

FKXKLWN2      OUTPUT FROM COMMAND      Line 1 of 15
COMMAND:netstat conn WAS ISSUED TO SERVICE POINT: nmpip110
MVS TCP/IP Netstat V3R2

Active Transmission Blocks
User ID  Conn  Local Socket      Foreign Socket      State
-----  ---  -
INTCLIEN 1000  *..TELNET         *..*                Listen
INTCLIEN 1006  9.67.50.52..TELNET 9.37.36.228..3020  Established
OMVS     1004  *..10007          *..*                Listen
SNMPD32  UDP   *..161            *..*                UDP
SNMPD32  1001  *..1024           *..*                Listen
SNMPQ32  UDP   *..162            *..*                UDP
SNMPQ32  UDP   *..1024           *..*                UDP
SNMPQ32  1002  *..1025           *..*                Listen
NSSERV   1003  *..6000           *..*                Listen

Command ==>
F3=Ret  F4=Fndprev  F5=RPTfnd  F6=Roll  F7=Back  F8=Forward  F12=Cancel

```

Figure 143. Output from Command Issued to Service Point Panel

## SNMP Management

| For SNMP management, use a Commands Menu, shown in Figure 115 on page 145,  
| or the command line interface. For NVSNMP command line and syntax  
| information, refer to the NetView online help.

**Note:** Wherever you specify a Community name, it is suppressed for security purposes and does not display in the NetView log. The Community name can be defined in the TCP390 definition for the associated stack where the SNMP request is being issued. For more information, refer to the TCP390 definition in the *Tivoli NetView for z/OS Administration Reference*.

If you specify a Community name, AON uses it for the resulting SNMP request. If you do not specify a Community name, AON uses the name defined for the stack, if one is provided. If no Community name is defined for the stack, then the default name defined to z/OS CommServer IP is used.

To manage SNMP, select option 5 from the MVS TCP/IP Automation: Commands Menu shown in Figure 125 on page 154. When you select option 5, the following panel is displayed:

```
FKXX2500      TCP/IP for 390 SNMP Menu      NTV70
Host Name or IP Address _____
(blank: Use Stack Name) _____
TCP/IP Stack _____ (? for Selection list)

  1. Command:
  _ Get _GetNext _Set _Walk
  _ 2. Group Menu
  _ 3. Remote Ping

Command ==>
F1=Help      F2=Main Menu  F3=Return
F6=Ro11
F12=Cancel
```

*Figure 144. TCP/IP for 390 SNMP Menu Panel*

The SNMP Menu has four options. Option 1 is a selection, with multiple options, that is based on your command. Figure 145 on page 170 shows the resulting panel if you select the **Get** command in Figure 144.

```

FKXX2510          TCP/IP for SNMP Commands          NTV70
Resource: LOCAL
Password(Community)          Command: GET
TCP/IP Stack: LOCAL
MIB Variables:
_____
_____
_____
_____
_____
_____
_____

Command ==>
F1=Help      F2=Main Menu  F3=Return      F6=Roll
              F9=Options    F12=Cancel

```

Figure 145. TCP/IP for SNMP Commands Panel

The options screen shows the SNMP Options and the system settings. These settings can be defined in the AON policy definitions. Place an X beside the options you want to override. If the system definition is different than the SNMP default, the fields are automatically selected.

**Note:** If **Bulk** is selected, the command is changed to GETBULK or BULKWALK.

Figure 146 is the resulting panel if you select the Set command in Figure 144 on page 169.

```

FKXX251S          TCP/IP for 390 SNMP Commands          CNM01
Resource: LOCAL
Password(Community)          Command: Set
TCP/IP Stack: LOCAL
MIB Variable          Type
Value
sysName.0
NMPIPL10 Test system _____
_____
_____
_____
_____
_____

Command ==>
F1=Help      F2=Main Menu  F3=Return      F6=Roll
              F9=Options    F12=Cancel

```

Figure 146. TCP/IP for 390 SNMP Commands Panel

For the **Set** command, the Type and Value fields are added to the screen. Type is used to override the MIB definition type. Value is used for the new value of the MIB.

Figure 147 is the resulting panel if you select the Walk command in Figure 144 on page 169 .

```

FKXK2510          TCP/IP for SNMP Commands          NTV70

Resource: 9.37.32.124
Password(Community)          Command: WALK
TCP/IP Stack: LOCAL

MIB Variables:
_____

Command ==>
F1=Help      F2=Main Menu  F3=Return          F6=Ro11
              F9=Options          F12=Cancel
  
```

Figure 147. TCP/IP for SNMP Commands Panel

For a **Walk** command, only one MIB can be specified, so only one is accepted from the screen.

Figure 148 is the resulting panel if you select the Group Menu in Figure 144 on page 169.

```

FKXK2510          TCP/IP for 390 SNMP Groups          NTV70

Resource: 9.37.32.124
Password(Community)
TCP/IP Stack: LOCAL

Groups:
system          WALK
sys2            LIST
sysOR           TABLE
IFTable        WALK
UDP             WALK
UDPnotab       LIST
UDPTable       TABLE

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Description  F6=Ro11
F7=Backward  F8=Forward   F9=Options          F12=Cancel
  
```

Figure 148. TCP/IP for 390 SNMP Groups Panel

The SNMP Group screen displays the groups that are defined in DSIPARM sample FKXSNMP. To display more information about the group, tab to the group and select **PF4**. To display the SNMP options, select **PF9**. For more information about creating MIB groups, refer to the *Tivoli NetView for z/OS Automated Operations Network Customization Guide*.

Figure 149 displays the description of the group UDPnotab, and has a type of LIST. Note the four MIB variables that display when you use the UDPnotab group.

```
FKXX2524      TCP/IP for 390 SNMP Groups Description      NTV70

Group: UDPnotab      Type: LIST

Abstract:
  UDP group MIBs without the UDP Table

MIB Variables:
  udplnDatagrams.0
  udpNoPorts.0
  udplnErrors.0
  udpOutDatagrams.0

Command ==>
F1=Help      F2=Main Menu  F3=Return      F6=Ro11
              F9=Options  ENTER=Get Group Data  F12=Cancel
```

Figure 149. TCP/IP for 390 SNMP Groups Description Panel

Figure 150 displays the description of the group system and has a type of WALK.

```
FKXX2524      TCP/IP for 390 SNMP Groups Description      NTV70

Group: system      Type: WALK

Abstract:
  System group MIB variables for SNMP v1 or SNMP v2 including OR Table
  The definition of this group can be found in:
  RFC1907 for v2 or RFC1450 for v1.
MIB Variables:      FULL Name:SYSTEM

Command ==>
F1=Help      F2=Main Menu  F3=Return      F6=Ro11
              F9=Options  ENTER=Get Group Data  F12=Cancel
```

Figure 150. TCP/IP for 390 SNMP Groups Description Panel

Figure 151 on page 173 displays the description of the group UDPTable and has a type of TABLE.

```
FKXX2524      TCP/IP for 390 SNMP Groups Description      NTV70

Group: UDPTable          Type: TABLE

Abstract:
  UDP group MIBs with the UDP Table

MIB Variables:          INDEX MIB: 1.3.6.1.2.1.7.5
udpLocalAddress
udpLocalPorts

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Description      F6=Roll
              F9=Options  ENTER=Get Group Data  F12=Cancel
```

Figure 151. TCP/IP for 390 SNMP Groups Description Panel

## Using Extended SNMP Groups

If you need more flexibility than what is provided with the SNMP Groups, use extended SNMP Groups. These groups are different in that they enable you to code generic MIB objects (using the LIST+ statement) which are to be appended with group variables obtained from a pop-up panel when this group is selected.

For example, select option 2 on the SNMP Menu panel shown in Figure 144 on page 169 to use extended SNMP groups. When option 2 is selected, Figure 152 on page 174 is displayed.

```

FKXK2520      TCP/IP for 390 SNMP Groups      NTV9D
                                                    More: +
Resource: LOCAL
Password (Community)
TCP/IP Stack: LOCAL

Groups:
ExtGroup      LIST+      UDPTable      TABLE      atm      WALK
system         WALK      ip            WALK      3172sys    WALK
sys2          LIST      ipforward     WALK      3172ifTrap WALK
sysOR         TABLE    ipAddrTable   WALK      3172channel WALK
snmp          WALK      ipRouteTable  WALK      3172lan    WALK
IFTable       WALK      ipNoTab       LIST      3172blk    WALK
IFXTable      WALK      icmp          WALK      3172db1k   WALK
atTable       WALK      tcp           WALK      3172device WALK
UDP           WALK      tcpConnTable  WALK      MvsTcpSystem WALK
UDPnotab     LIST      tcpNoTab      LIST      MvsTcpIf    WALK

COMMAND ==>
ENTER=Get Group Data
F1=Help      F2=Main Menu  F3=Return    F4=Description    F6=Roll
F7=Backward  F8=Forward    F9=Options   F12=Cancel

```

Figure 152. TCP/IP for 390 SNMP Groups Panel

In Figure 152 move the cursor to LIST+ Group name (ExtGroup) and press **Enter**.

The panel in Figure 153 on page 175 is displayed.

**Note:** To use the LIST+ function you must first customize member FKXSNMP in DSIPARM offline. For information on customizing FKXSNMP see “Appendix D. Customizing the SNMP Group Definitions File (FKXSNMP)” on page 221.



```

FKXXK252V      TCP/IP for 390 SNMP Group Extensions      NTV9D

Resource: LOCAL
Password (Community)
TCP/IP Stack: LOCAL

Groups : .....
ExtGroup : PLEASE ENTER AN INTERFACE NUMBER :
system : :
sys2 : 2_____ :
sysOR : :
snmp : :
IFTable : :
IFXTable : :
: :
atTable : :
UDP : :
UDPnotab : :
: :
: .....
WALK

COMMAND ==>
F1=Help      F2=Main Menu  F3=Return  F6=Roll      F12=Cancel

```

Figure 153. TCP/IP for 390 SNMP Group Extensions Panel

On the SNMP Group Extensions panel type **2** to display details for interface 2 and then press **Enter**. Listed MIB variable information for interface adapter number 2 is collected and displayed as shown in Figure 154.

```

CNMKWIND Output from SNMP GET to LOCAL                      LINE 0 OF 20
*-----TOP of DATA -----*
*
START OF DATA
ifName.2 = LOOPBACK
ifLinkUpDownTrapEnable.2 = 1
::::::::::::::::::
END OF DATA

TO SEE YOUR KEY STTINGS, ENTER 'DISPLAY'
CMD==>

```

Figure 154. CNMKWIND Output from SNMP GET to LOCAL Panel

## IP Server Management

To manage TSO server sessions, select option **6** from the MVS TCP/IP Automation: Commands Menu shown in Figure 125 on page 154. When you select option 6, the panel shown in Figure 155 on page 176 is displayed:

```

FKXXK2600                TCP/IP for 390 Servers                NTVE1
                                                                    More :
Select an option:
1=Start 2=Stop

      Service
Domid Point  Server  Type  Submit  Receiver  PPI
-   NTVE1  NMP217  UNIX  UNIX  n/a      CNMEUNIX  0      ACTIVE
-   NTVE1  NMP217  NV2TS1  TSO   CNMSJTSO $E100001  0      ACTIVE
-   NTVE1  NMP217  NV2TS2  TSO   CNMSJTSO $E100002  0      ACTIVE
-   NTVE1  NMP217  NV2TS3  TSO   CNMSJTSO $E100003  0      ACTIVE

Command ==>
F1=Help      F2=Main Menu  F3=Return
F7=Backward  F8=Forward
F5=Refresh   F6=Roll
F12=Cancel

```

Figure 155. IP for 390 Servers Panel

In the panel shown in Figure 155, two TSO servers for NMPNET1B and the UNIX server for NMPNET1 are displayed. Start or stop a server as follows:

1. Move the cursor to a server.
2. Type **1** to start the server or **2** to stop the server.
3. Press **F5** to refresh the panel.

**Note:** You can start or stop multiple servers at the same time.

## IP for 390 Resource Management

This section provides information about managing IP resources that are defined in AON. To display the IP for 390 Resource Management main panel, enter the fast path **AON 4.2.7** or you can enter **IPMAN** on the command line.

**Note:** The TCP/IP for 390 Resource Management panel uses SNMP requests to collect data. The Community name used for those requests is defined on the TCP390 definition for the associated stack where the request is being issued. For more information, refer to the TCP390 definition statement in the *Tivoli NetView for z/OS Administration Reference*.

### IP for 390 Resource Management Main Panel

You can control monitoring of IP Resources from the IP for 390 Resource Management main panel. Use the IP for 390 Resource Management Filters panel (see “IP Resource Management Filters Panel” on page 180) to select which resources to display in the IP for 390 Resource Management main panel.

**Note:** When running OS/390 V2R6 or later with multiple TN3270 ports, any changes to the dynamic policy definitions created by AON will not be reset until the next stack monitor interval.

The following monitoring functions can be selected from the IP for 390 Resource Management main panel:

- ADD/START
- DISPLAY/CHANGE
- DELETE
- START
- STOP

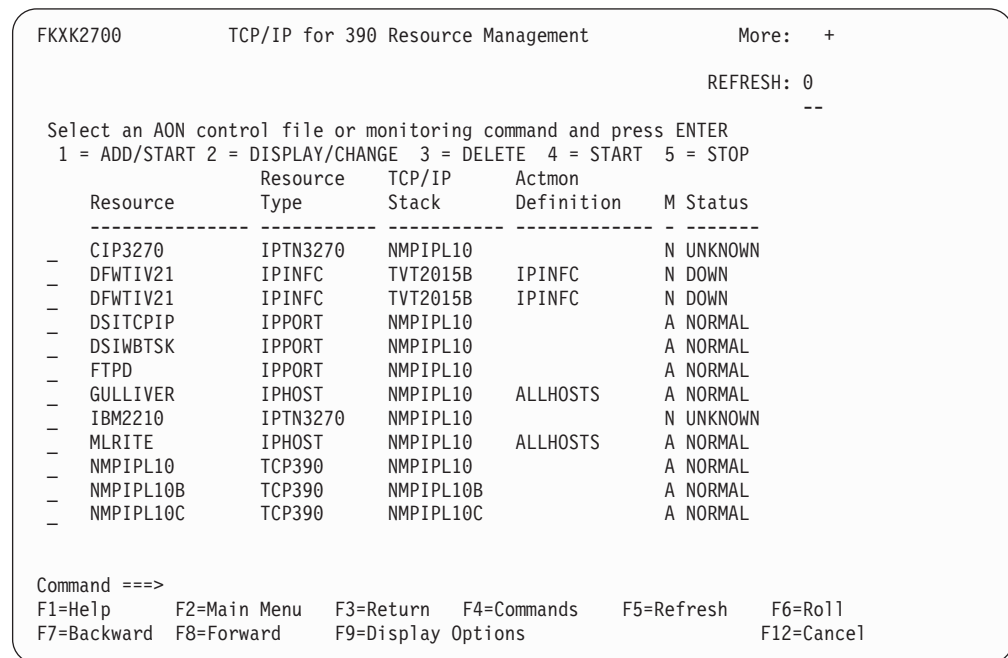


Figure 156. TCP/IP for 390 Resource Management Main Panel

The following commands can be issued directly from the IP for 390 Resource Management main panel by placing the command choice (1 through 5) in front of the resource name:

- 1 Calls the Add/Change Panel in add mode. Once the resource is added, monitoring is started. For additional information refer to "IP Resource Management Add Panel" on page 178.
- 2 Calls the Add/Change panel in change mode. For additional information, refer to "IP Resource Management Change Panel" on page 180.
- 3 Deletes the entry only from the in storage control file and terminates all monitoring.
- 4 Start monitoring for the resource.
- 5 Stop monitoring for the resource.

**Note:** For IP Port Monitoring, all ports under a defined stack are always actively monitored at the start of AON. They cannot be stopped or started individually.

Function Keys:

- F4** Displays a command pop-up panel (see “IP for 390 Resource Management Command Pop-up Window” on page 182 ) based on the resource type of the selected resource. To select a resource, place your cursor on a row containing resource data.
- F9** Displays the IP Management Filters panel for the current operator task. The filters can be updated as needed.

The remaining functions are the standard AON view panel options.

The following fields are displayed for each IP resource defined in the control file:

**Resource**

The name of the resource you are monitoring.

**Resource Type**

The resource type can be TCP390, IPHOST, IPINFC, IPNAMESRV, IPPORT, or IPTN3270.

**TCP/IP Stack**

When the name in this field is the same as the resource name, it is a stack.

**Actmon Definition**

If a reference to an ACTMON definition exists, that name is displayed in this field.

**M** The monitoring field contains the current active monitoring status. The status can be one of the following:

- A** Active monitoring
- R** Recovery monitoring
- N** No monitoring.

**Status** The status field contains the current status. The status can be one of the following:

- NORMAL (GREEN)
- DOWN (RED)
- DEGRADED (PINK)
- THRESH (YELLOW)
- UNKNOWN (BLUE)

**REFRESH**

The IP Resource Manager main panel can be automatically refreshed, by changing the value of this field, from 0 (no refresh) to 59 minutes.

## IP Resource Management Add Panel

Select ADD (option 1) on the IP Resource Management main panel to display the following panel:

```

FKXXK2760          TCP/IP for 390 Resource Management          More:  +
Update the allowable fields, Press F4 to ADD resource and Start Monitoring
Command Options
X - Fixed Field    R-Required Field
1 - Change Field
2 - Delete Field

COMMAND  KEYWORD  VALUE
-----
R        RESNAME
X        RESTYPE  IPTN3270
X        OPTION   IP390
R        SP        NMPIPL10
-        IPADDR
-        TNIPADDR  69.200.140.129
-        TNPORT    23
-        SYSTEM    TN3270
-        DATACOL   FKXEXCIP
-        DROPL     FKXEDCIP
-        INTVL     15
-        FORMAT    SNMP

Command ==>
F1=Help    F2=Main Menu  F3=Return    F4=SUBMIT UPDATE    F6=Roll
F7=Backward F8=Forward    F9=Add a field    F12=Cancel

```

Figure 157. TCP/IP Resource Management Add Panel

The Add panel enables resources to be added dynamically into the in store control file. When the resource is added, proactive monitoring is started for the resource. There is a delay before the monitoring field (M column) is updated on the main panel. Use **F5** to refresh the screen until the change is displayed.

The IP Resource Management Add panel contains the following fields:

**Command**

A fixed field or a field that is updated using one of the following command options:

- 1** Change Value for keyword.
- 2** Delete keyword and its value.
- R** Indicates field is required. This option is set by the program.
- X** Indicates the field cannot be changed. This option is set by the program.

**Keyword**

Specifies the keyword name as set in the control file.

**Value**

Specifies the current value of the keyword under most circumstances. The value is cleared for ADD operations if a new value is required.

**Notes:**

1. Keywords marked with an X cannot be updated. In cases where multiple field relationships exist, not all required keywords are marked with an R.
2. Values for keywords are not syntax checked. Entering incorrect data can cause unpredictable results.

Changes are validated prior to a page forward or backward attempt. When R required fields are accepted their command is changed to X or fixed field, automatically.

To submit the changes, press **F4**. To add a new keyword-value pair press **F9** to display the Add keyword pop-up window.

## IP Resource Management Change Panel

Selecting Option 2 (change) on the IP Resource Management main panel displays the panel shown in Figure 158.

```

FKXX2760          IP for 390 Resource Management          More:  +
Update the allowable fields, Press F4  Command Options
to Change the settings                X - Fixed Field  R-Required Field
                                      1 - Change Field
                                      2 - Delete Field
COMMAND  KEYWORD  VALUE
-----
X        RESNAME  CIP3270
X        RESTYPE  IPTN3270
X        OPTION   IP390
-        SP       NMPIPL10
-        IPADDR   69.200.144.14
-        TNIPADDR 69.200.140.129
-        TNPORT   23
-        SYSTEM   TN3270
-        DATACOL  FKXEXCIP
-        DROPL    FKXEDCIP
-        INTVL    15
-        FORMAT   SNMP

Command ==>
F1=Help      F2=Main Menu  F3=Return      F4=SUBMIT UPDATE      F6=Roll
F7=Backward  F8=Forward    F9=Add a field  F12=Cancel
  
```

Figure 158. IP for 390 Resource Management Change Panel

## IP Resource Management Filters Panel

The IP Resource Management Filters panel can be displayed by entering IPMANSSF with no parameters or by pressing **F9** on the IP for 390 Resource Management main panel.

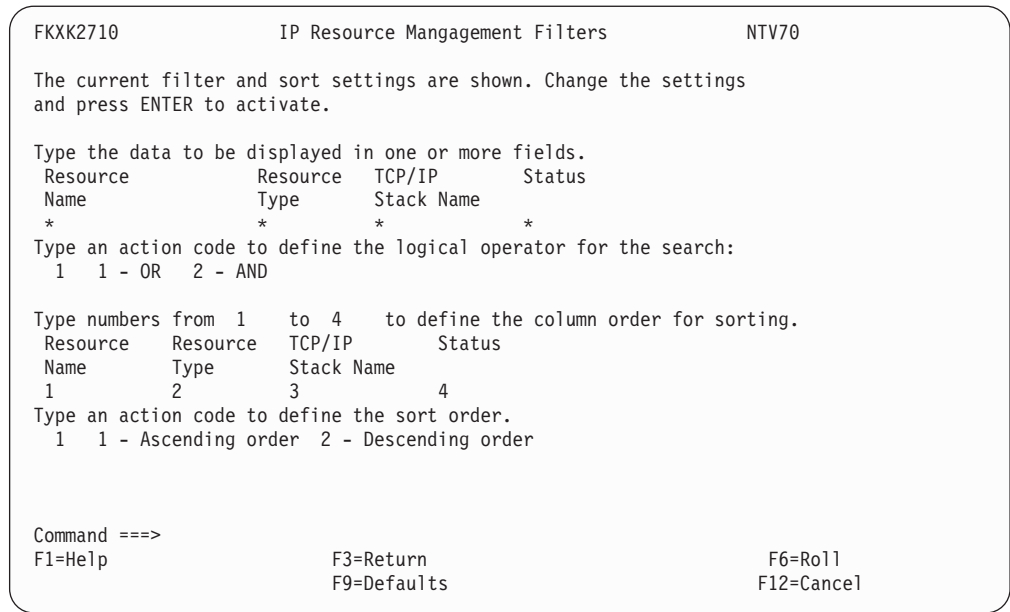


Figure 159. IP Resource Management Filters Panel

Use this panel to select the resources you want to display. The settings selected are saved on a task basis and will apply in future queries. You can specify filter criteria for exact names or names starting with specific characters, if the criteria is followed by an asterisk (\*). The following fields can be filtered:

**Resource Name**

Specify criteria for the resource name.

**Resource Type**

Specify criteria for the resource type.

**TCP/IP**

Specify criteria for the TCP/IP stack name.

**Status**

Specify criteria based on resource status.

For filter options, specify the relationship between these options as 1 - OR as 2 - AND.

For sort options, specify 1–4 in any order. The four fields are then sorted based on the specified sort order. Indicate whether these sorts are to be done in ascending or descending order by entering a 1 or 2 in the last input field.

Pressing **Enter** causes the filter and sort entries to be validated and saved for use by the IP Resource Manager.

Pressing **F9** restores the default filter and sort settings.

Press **F3** to exit or **F12** to cancel.

## IP for 390 Resource Management Command Pop-up Window

To display the COMMAND pop-up window press **F4** from the IP for 390 Resource Management main panel or the SNMP Details panel. The information displayed depends on the resource type of the resource that has been selected.

```
FKXXK2740          TCP/IP for 390 Resource Management

Select a command and press Enter

Resource          Resource Type : COMMANDS (based on Resource Type) :
-----          ----- : ----- :
- CIP3270         IPTN3270 : 1- Autoview :
- DFWTIV21        IPINFC  : 2- Display Details Panel :
- DFWTIV21        IPINFC  : 3- Display Timers :
- DSITCPIP        IPPORT  : 4- Ping :
- DSIWBTSK        IPPORT  : 5- Session Management :
- FTPD            IPPORT  : 6- SNMP :
- GULLIVER        IPHOST  : 7- Tracerte :
- IBM2210         IPTN3270 : 8- SNMPView :
- MLRITE          IPHOST  : :
- NMPIPL10        TCP390  : :
- NMPIPL10B       TCP390  : :
- NMPIPL10C       TCP390  : :
                  NMPIPL10C          A NORMAL

Command ==>
F1=Help      F2=Main Menu  F3=Return          F6=Ro11
                          F12=Cancel
```

Figure 160. TCP/IP for 390 Resource Management Panel with Commands Pop-up Window

## Using SNMPView

In general, the data displayed by SNMPView is retrieved from SNMP MIB variables. Any data field, with the underscore (\_) next to it, can be set by performing the following steps:

1. Enter a non-blank character in place of the underscore.
2. Change the MIB data to be displayed.
3. Press **Enter**.

You can use the SNMPView function to display system wide and interface specific MIB data for your TCP/IP stacks and network resources.

To navigate through the panels, and display information about a resource, select option **8** from the MVS TCP/IP Commands Menu shown in Figure 125 on page 154. Type **8** and press **Enter**. The panel shown in Figure 161 on page 183 is displayed.



```

FKXX2800      TCP/IP for 390 SNMP Resource View      B63NV

Host Name or IP Address: _____
(blank: Use Stack Name) _____

  X MVS Stack      _ IP Resource

TCP/IP Stack Name: _____ (? for Selection list)

_ Go Directly to the Interface List
_ Go to the details for Interface ___ IP Address _____
_ Go to the Connection List for IP Address _____

Community Name:

Command ==>
F1=Help      F2=Main Menu  F3=Return

                                           F6=Roll
                                           F12=Cancel

```

Figure 161. TCP/IP for 390 SNMP Resource View Panel

### IP Resource Data

To display IP Resource MIB data for NMPIPL25, fill in the text fields in Figure 161 as follows:

1. In the Host Name or IP Address field, type **NMPIPL25**.
2. Delete the X from the default MVS Stack selection.
3. Type **X** to select **IP Resource** view.
4. In the TCP/IP Stack Name field, type **?** and press **Enter**. A selection list is displayed.
5. Type **/** in front of the selection you want and press **Enter**.

```

FKXXK2800      TCP/IP for 390 SNMP Resource View      B63NV

  Host Name or IP Address: NMPIPL25_____
(blank: Use Stack Name)  _____

  MVS Stack      X IP Resource

TCP/IP Stack Name: NMPIPL25 (? for Selection list)

_ Go Directly to the Interface List
_ Go to the details for Interface ___ IP Address _____
_ Go to the Connection List for IP Address _____

Community Name:

Command ==>
F1=Help      F2=Main Menu  F3=Return
                                           F6=Ro11
                                           F12=Cancel

```

Figure 162. TCP/IP for 390 SNMP Resource View Sample Panel

When you press **Enter** from the Resource View panel, shown in Figure 162, System MIB data is displayed on the Resource View: System panel, shown in Figure 163.

```

FKXXK2810      TCP/IP for 390 SNMP Resource View: System      NTV70

SYSTEM DATA for:
NMPIPL25

_ System Name      = NMPIPL25 Test System for AON Development w/v2r5
_ Location         = D214/503
Object ID         = 1.3.6.1.4.1.2.3.13
UP Time          = 24270200
_ Contact         = operator

Services         = PHYSICAL DL/SUBNET INTERNET E to E  APPL

Description      = AON NetView Test System NMPIPL25

Set Community Name:

Command ==>
F1=Help  F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Ro11
                                           F11=Interfaces  F12=Cancel

```

Figure 163. TCP/IP for 390 SNMP Resource View: System Panel

From the system panel shown in Figure 163, press **F4** to issue commands. The panel shown in Figure 164 on page 185, containing a pop-up window, is displayed.



```

FKXXK281T    TCP/IP for 390 SNMP Resource View: System    NTV70

TCP DATA
NMPIPL25

Retransmit Algorithm = vanj(4)
Min. Retransmit Timeout = 500
Max. Retransmit Timeout = 120000
Maximum TCP Connections = -1
Active Open Connections = 1
Passive Open Connections = 1
Falied Connect Attempts = 0
Establish Resets = 0
Current Established Conn = 2
Segments Received = 40
Segments Sent = 41
Retransmitted Segments = 0
Bad TCP CHKSUMS = 0
RST Flagged Segments = 0

UDP DATA

Datagrams Recieved = 5587
No Destination Ports = 998
Error Datagrams Received = 0
Datagrams Sent = 6627

Command ==>
F1=Help    F2=Main Menu    F3=Return    F5=Refresh    F6=Roll
F12=Cancel

```

Figure 166. TCP/IP for 390 SNMP Resource View: System Panel

Press **F3** to return to panel shown in Figure 164 on page 185. Choose option 7 and press **Enter**. The Resource View: System Panel with Commands Pop-up panel is displayed, as shown in Figure 167.

```

FKXXK281I    TCP/IP for 390 SNMP Resource View: System    NTV70

ICMP DATA for:
NMPIPL25

                IN                OUT

Messages        1003                998
Errors          0                    997
Destination Unreachable 999                997
Time Exceeded   0                    0
Parameter Problems 0                    0
Source Quenches 0                    0
Redirect        0                    0
Echo Requests   1                    0
Echo Replies    3                    1
Timestamp Requests 0                    0
Timestamp Replies 0                    0
Address Mask Requests 0                    0
Address Mask Replies 0                    0

Command ==>
F1=Help    F2=Main Menu    F3=Return    F5=Refresh    F6=Roll
F12=Cancel

```

Figure 167. TCP/IP for 390 SNMP Resource View: System Panel with Commands Pop-up Panel

Return to the panel shown in Figure 163 on page 184 and press **F11**. The panel shown in Figure 168 on page 187 is displayed.



```

FKXX2820      TCP/IP for 390 SNMP Resource View: Interfaces      NTV9D

INTERFACES for:
pkoch.raleigh.tivoli.com
Status
IF Desired Actual  IP Address      Description
1  ACTIVE  ACTIVE  127.0.0.1      MS TCP Loopback interface
2  ACTIVE  ACTIVE  146.84.164.103 IBM PCI Token-Ring Family Adapter

Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Commands  F5=Refresh   F6=Roll
              F9=Details    F11=Connections F12=Cancel

```

Figure 170. TCP/IP for 390 SNMP Resource View: Interfaces Panel

To display interface details, Tab to an interface, and press **F9**. The (IP resource) interface detail panel, shown in Figure 171, is displayed.

```

FKXX282D      TCP/IP for 390 SNMP Resource View: Interfaces      NTV9D
INTERFACE DETAILS for:
pkoch.raleigh.tivoli.com
IF Name      : N/A
IP ADDRESS   : 146.84.164.103 Physical Address: '0006291612d3'h
Description:  IBM PCI Token-Ring Family Adapter

_ Desired Status: ACTIVE      Actual Status: ACTIVE

Interface Type      = iso88025TokenRing(9)

Max Datagram Size  = 4056           Interface Speed     = 1600000
Last Status Change = 0             TCP Connections    = N/A
Network Mask       = 255.255.252.0 Reassemble Max Size = 65535
IF Specific        = 0.0
Connector Present  = N/A           Link Traps Enabled  = N/A
High Speed         = N/A           Accept Any Packets  = N/A

Set Community Name:

Command ==>
F1=Help      F2=Main Menu  F3=Return    F5=Refresh   F6=Roll
              F8=Statistics F11=Connections F12=Cancel

```

Figure 171. TCP/IP for 390 SNMP Resource View: Interfaces Panel

### MVS Stack Data

To display MVS Stack data for NMPIPL27, perform the following steps:

1. In the Host Name or IP Address field, type **NMPIPL27**.
2. If the current default is IP Resource, then delete the X from the IP Resource selection.
3. Type **X** to select **MVS Stack** view.
4. In the TCP/IP Stack Name field, type **?** and press **Enter**. A selection list is displayed.

5. Type / in front of the selection you want and press **Enter**.

The TCP/IP for 390 SNMP Stack View: System panel, shown in Figure 172 is displayed.

```
FKXK28M0      TCP/IP for 390 SNMP Stack View: System      NTV9D

SYSTEM DATA for MVS Stack:
NMPIPL27

  Proc Name = TCP38      ASID = 60      _ Primary IF Index = 4
                    _ Primary IP ADDRESS = 9.67.50.41
_ System Name = SNMPBASE - Unspecified

UP Time      = 2000-4-17,10:2:28.8

Services     = Physical DL/Subnet Internet E to E Appl

Description  = Sysname: OS/390 Nodename: F79MVS Release: 08.00 Vers
              ion: 02 Machine: 9672

Set Community Name:

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F8=Page 2    F9=Page 3     F11=Interfaces  F12=Cancel
```

Figure 172. TCP/IP for 390 SNMP Stack View: System Panel

From the panel shown in Figure 172, press **F11**. The TCP/IP Stack View: Interfaces panel is displayed with the interfaces defined for your TCP/IP stack.

```
FKXK282M      TCP/IP for 390 SNMP Stack View: Interfaces      NTV9D

INTERFACES for:
NMPIPL27

      Status
IF GWY Desired Actual IP Address Description
|_ 1 N ACTIVE ACTIVE Loopback Device
|_ 2 N ACTIVE ACTIVE 127.0.0.1 Loopback
|_ 3 N ACTIVE ACTIVE Channel to channel Device
|_ 4 Y ACTIVE ACTIVE 9.67.50.41 Channel to channel (3088)

Command ==>
F1=Help      F2=Main Menu  F3=Return  F4=Commands  F5=Refresh  F6=Roll
F9=Details   F11=Connections  F12=Cancel
```

Figure 173. TCP/IP for 390 SNMP Stack View: Interfaces Panel

To display interface details, **Tab** to an interface, and press **F9**. The (MVS Stack) interface detail panel, shown in Figure 174 on page 190, is displayed.

```

FKXX28MK      TCP/IP for 390 SNMP Stack View: Interfaces      NTV9D
INTERFACE DETAILS for:
NMPIPL27
IF Name       : TCPLNK9D                IP ADDRESS: 9.67.50.41
Device Base Number: 270      on IF: 3
Description: Channel to channel (3088)

_ Desired Status: ACTIVE      Actual Status: ACTIVE

Interface Type      = channel(70)
Link Type           = ctc(2)
Max Datagram Size  = 32760          Interface Speed     = 450000
Last Status Change = 2787          TCP Connections    = N/A
Network Mask       = 255.0.0.0     Reassemble Max Size = 0
IF Specific        = 0.0
Connector Present  = NO(2)         _ Link Traps Enabled = YES(1)
High Speed        = 3,500,000 - 4,499,999 _ Accept Any Packets = NO(2)

Set Community Name:

Command ==>
F1=Help      F2=Main Menu  F3=Return          F5=Refresh      F6=Roll
F8=Statistics F9=Gateway      F11=Connections  F12=Cancel

```

Figure 174. TCP/IP for 390 SNMP Stack View: Interfaces (Detail) Panel

## TCP/IP for 390 Trace Control Center

You can use IP Trace to perform diagnostic traces to help resolve TCP/IP problems. Two types of traces are available, component trace (CTRACE) and packet trace (PKTTRACE). *Component trace* is used to trace data processing problems between the client and the server. *Packet trace* is used for IP data flow problems, enabling you to copy IP packets as they enter or leave TCP/IP.

If your IP Trace diagnostics are not customized, add the following statement to the CNMSTYLE of the remote domain where you want to trace packets that flow in and out of the remote service point:

```
auxInitCmd.OBEY=FKXERINI rmsp YES UNIX
```

Where *rmsp* is the remote service point to trace. Restart NetView for the change to take effect.

An external writer must be established before using IP Trace. The trace data is written to the writer. Refer to *z/OS MVS Diagnosis: Tools and Service Aids* for more information about creating source JCL for an external writer, or for more details about trace functions.

## Accessing IP Trace

There are two ways to access IPTRACE. You can either issue the IPTRACE command from the command line or select option **10** from the panel shown in Figure 125 on page 154.

If you do not specify a service point/stack name, then you are prompted with the panel in Figure 175 on page 191 to select one.



Service Point/ Stack	Proc Name	NetView Domain	Ctrace	PktTrace
NMPIPL10	TCP38	NTV70	DELAY	*NOTCOM*
NMPIPL25	TCP34	NTVA0	*NOTCOM*	*NOTCOM*
NMPIPL27	TCP38	LOCAL	NONE	NONE

Command ==>

F1=Help      F2=Main Menu      F3=Return      F6=Roll  
F7=Backward      F8=Forward      F12=Cancel

Figure 175. TCP/IP for 390 IPTrace Control Center Panel

Descriptions of the fields on the panel shown in Figure 175 are as follows:

**Service Point/Stack**

The service points for which TCP/IP services are traced. These are defined in the DSIPARM member FKXCFG01 configuration file TCP390 definition.

**Proc Name**

The member name of the catalogued procedure used to start the TCP/IP address space. This is defined in FKXCFG01, TCP390 TCPNAME definition for the stack.

**NetView Domain**

The NetView domain to which the trace command processing is sent. This is defined in FKXCFG01, TCP390 DOMAIN definition for the stack.

**Ctrace and PktTrace**

Displays status of the TCP/IP procedure for the SYSTCPIP (CTRACE) or SYSTCPDA (PKTTRACE) component, as follows:

**ACTIVE**

The trace is active (ON).

**NONE**

The trace is either minimum (MIN) or OFF.

**\*NOTCOM\***

No session is established with the associated remote domain.

**NA**

The time has expired in collecting trace status.

Fields displayed in blue are not active and cannot be selected. Active entries are highlighted in green. To select a service point, tab to it, press **Enter**, and the panel shown in Figure 176 on page 192 is displayed.

FKXK2A01		TCP/IP for 390 IPTrace Control Center		NTV9D	
Service Point/Stack: NMPIPL27		Proc: TCP38		Domain: LOCAL	
		Status/Owner	Start	For	Writer
-	CTRACE SYSTCPIP	NONE/NA	NA	NA	*NONE*
-	PKTTRACE SYSTCPDA	NONE/NA	NA	NA	*NONE*
	LOOPBACK	OFF			
	TCPLNK9D	OFF			
Command ==>					
F1=Help	F2=Main Menu	F3=Return	F5=Refresh	F6 =Roll	
F7=Backward	F8=Forward			F12=Cancel	

Figure 176. TCP/IP for 390 IPTrace Control Center — Example of IPTrace Control Center Panel

Descriptions of the fields on the panel shown in Figure 176 are as follows:

**Service Point/Stack**

The service point or stack to be traced. This is defined in the DSIPARM member FKXCFG01 configuration file, TCP390 definition.

**Proc** The member name of the catalogued procedure used to start the TCP/IP address space. This is defined in FKXCFG01, TCP390 DOMAIN definition for the stack.

**Domain**

The NetView domain where the service point resides, TCP390 TCPNAME definition for the stack.

**SYSTCPIP**

The trace component associated with the component trace data.

**SYSTCPDA**

The trace component associated with the packet trace data.

**Status/Owner**

The trace status associated with the component specified and the owner of the trace. This field is correlated to the Start and For fields. Trace status can be one of the following:

**ACTIVE**

The trace is active (ON).

**DELAY**

A delayed trace has been set for this component.

**NONE**

The trace is either minimum (MIN) or OFF.

**\*NOTCOM\***

No session is established with the associated remote domain.

**NA** The time has expired in collecting trace status.

**ON/OFF**

The packet trace status associated with the link names.

**Start** The time the trace started or the time the delayed trace will start.

**For** The length of time the trace runs. This is only applicable when the trace is in ACTIVE or DELAY mode. The format is HH.MM.SS.

**Writer** The source JCL to create the external writer where trace data is to be stored.

For more information on controlling traces, see the “Component Tracing” section or “Packet Tracing” on page 198

## Component Tracing

For component tracing, select CTRACE, by using any non-blank character, from the panel shown in Figure 176 on page 192. For a service point with no scheduled tracing, the panel shown in Figure 177 is displayed. For a service point with active or delayed tracing, the panel shown in Figure 180 on page 197 is displayed.

### Scheduling a Component Trace

From the panel in Figure 175 on page 191, select the service point for which you want to schedule the trace (for example, NMPIPL27). From the panel in Figure 176 on page 192, select CTRACE. The panel shown in Figure 177 is displayed.

```
FKXK2A12      TCP/IP for 390 CTRACE Control SYSTCPIP      NTV9D
Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL
Delay Start Until: YYYY-MM-DD-HH.MM.SS      On Task: OPER4___
Set a Timer for HH.MM.SS      Writer: CTTCP___

OPTIONS:
- Engine      - AFP      - IOCTL      - Queue      - Telnet
- Internet    - ARP      - Message    - Raw      - Timer
- PFS        - Claw     - LCS        - Serial    - UDP
- Socket     - Config  - Opcmds     - SNMP     - Vtam
- TCP       - Firewall - Opmsgs     - Storage  - Workunit
- Vtamdata  - ICMP    - PASAPI    - Syscall  - XCF

- LISTS (IPAdrs, Ports, Job Names, ASIDs)

Command ==>
F1=Help      F2=Main Menu      F3=Return      F5=(OPTIONS = ALL)      F6 =Roll
F4=Start Trace      F12=Cancel
```

Figure 177. CTRACE Control SYSTCPIP Panel

In the Delay Start Until field, enter the date or date and time you want tracing to begin. The time must be entered in a 24 hour format. If the date portion YYYY-MM-DD is omitted and the input HH.MM.SS is earlier than the current time, the trace is started on the next day at the input time. For example, if the current

time on the system clock is 9:33 a.m. and you enter 07.45.00 as the time to begin component tracing, the trace is scheduled to begin the following day at 7:45 a.m.

If you do not enter a time, the trace begins immediately.

**Note:** When you press **F4** to begin or schedule the trace, it can take several minutes due to system processing. The trace might also begin a couple of minutes past the specified time, depending on system processing.

You can enter a time in the Set a Timer field to specify how long the trace is to run. If you leave the Set a Timer field blank, the trace runs until it is manually stopped.

The On Task field contains your operator ID. If you want the trace to run on another task, enter any valid operator ID as defined in DSIOPF. On Task is only valid for delayed traces.

**Note:** If you specify another operator ID, that operator must be logged on at the time the trace runs.

The Writer field contains the source JCL to create an external writer where trace data is stored. The writer must be established before the trace runs. Refer to *z/OS MVS Diagnosis: Tools and Service Aids* for more information about creating source JCL for an external writer. The writer name for component tracing can be customized. Copy the following entry in CNMSTYLE to CNMSTGEN, then change to the desired name. An example is as follows:

```
COMMON.EZLTCPcTRACEwriter = new_CTTCP // AON TCP component writer name
```

If the NetView program has been started, issue the RESTYLE COMMON command to pick up the change.

The Options field contains a list of defined options. You can select them individually or use **F5** to select all of them. At least one option must be selected. The options cannot be changed once the trace is scheduled.

**Note:** When **F5** is pressed, all options shown are selected except Serial, Storage, and Timer. These options degrade performance if you choose all of them simultaneously.

The LISTS field includes IP addresses, IP ports, job names, and address space identifiers (ASIDs) that are traced. To view or change these options, select one and press **Enter**. The panel shown in Figure 178 on page 195 is displayed.



When you press F4 to begin or schedule the trace, it can take several minutes due to system processing. When the trace is successfully scheduled, a panel like the one shown in Figure 179, is displayed.

```

FKXK2A01          TCP/IP for 390 IPTrace Control Center          NTV9D

Service Point/Stack: NMPIPL27          Proc: TCP38          Domain: LOCAL

                Status/Owner  Start                For          Writer
_  CTRACE  SYSTCPIP  ACTIVE/OPER4  2000-05-19-13:08:48  NA          CTTCP
_  PKTTRACE SYSTCPDA  NONE/NA      NA                NA          *NONE*
                LOOPBACK  OFF
                TCPLNK9D  OFF

FKX400I CTRACE - TRACE SUCCESSFULLY SCHEDULED FOR SP NMPIPL27 BY OPERATOR OPER4
Command ==>
F1=Help      F2=Main Menu  F3=Return    F5=Refresh   F6 =Roll
F7=Backward  F8=Forward   F12=Cancel

```

Figure 179. TCP/IP for 390 IPTrace Control Center Panel

This example shows the message when an immediate trace was scheduled. Message FKX401I is received for delayed traces.

### Displaying a Component Trace

To view the details of an active or scheduled component trace, select the service point from panel FKXK2A01 (Figure 179). For more information on the displayed data, see “Scheduling a Component Trace” on page 193.

### Stopping an Active or Cancelling a Delayed Component Trace

From the panel in Figure 175 on page 191, select the service point for which you want to stop or cancel tracing (for example, NMPIPL27). From the panel in Figure 176 on page 192, select CTRACE. Depending on whether the trace is active or delayed, either the panel in Figure 180 on page 197 or the panel shown in Figure 181 on page 197 is displayed.

The panel shown in Figure 180 on page 197 displays an active trace.

```

FKXK2A10      TCP/IP for 390 CTRACE Control SYSTCPIP      NTV9D
Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL

Start Time: 2000-05-19-13:08:48      Duration: NA
Timer ID: NONE                        Writer: CTTCP

OPTIONS:
_ MINIMUM
x Engine      x AFP      x IOCTL      x Queue      x Telnet
x Internet    x ARP      x Message    x Raw        _ Timer
x PFS         x Claw     x LCS        _ Serial     x UDP
x Socket      x Config   x Opcmds     x SNMP       x Vtam
x TCP         x Firewall x Opmsgs     _ Storage    x Workunit
x Vtamdata    x ICMP     x PASAPI     x Syscall    x XCF

_ LISTS (IPAddr, Ports, Job Names, ASIDs )

Command ==>
F1=Help      F2=Main Menu  F3=Return    F4=Stop Trace      F6 =Ro11
F12=Cancel

```

Figure 180. TCP/IP for 390 CTRACE Control SYSTCPIP Panel

Press **F4** to stop the trace.

When **F4** is pressed, the system can take several minutes to respond, due to system processing. When a delayed trace is successfully stopped, message DSI205I is received. When an active trace is successfully stopped, the IPTrace Control Center panel, as shown in Figure 181 is displayed.

```

FKXK2A01      TCP/IP for 390 IPTrace Control Center      NTV9D
Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL

Status/Owner  Start      For      Writer
_ CTRACE SYSTCPIP NONE/NA    NA        NA        *NONE*
_ PKTTRACE SYSTCPDA NONE/NA    NA        NA        *NONE*
          LOOPBACK OFF
          TCPLNK9D OFF

FKX403I CTRACE - TRACE SUCCESSFULLY STOPPED FOR SP NMPIPL27 BY OPERATOR OPER4
Command ==>
F1=Help      F2=Main Menu  F3=Return    F5=Refresh      F6 =Ro11
F7=Backward  F8=Forward    F12=Cancel

```

Figure 181. IPTrace Control Center Panel

The prompt above the command line, shows that the trace is successfully stopped.





**Note:** If you specify another operator ID, that operator must be logged on at the time the trace is to be run.

The Writer field contains the source JCL to create an external writer where trace data is to be stored. The writer must be established before the trace is run. Refer to *z/OS MVS Diagnosis: Tools and Service Aids* for more information about creating source JCL for an external writer. The writer name for packet tracing can be customized. Copy the following entry in CNMSTYLE to CNMSTGEN, then change to the desired name. An example is as follows:

```
COMMON.EZLTCPpTRACEwriter = new_PKTCP // AON TCP packet trace writer name
```

If the NetView program has been started, you must issue the RESTYLE COMMON command to pick up the change.

The following fields can also be edited and are described as follows:

**Link** The device on the service point for which to trace. This is a required field. If subsequent link names are entered, they must follow on the next line with no blank lines between them.

**Len** Specifies that a truncated portion of the IP packet can be traced. You can specify a length in the range of 1–65535. The maximum value is FULL, which captures the entire packet.

**Prot** The protocol for data collection. Valid values are:

- Asterisk (\*), which specifies that packets of any protocol are traced
- ICMP
- RAW
- TCP
- UDP
- *number* (in the range 0–255)

#### **IPAddress**

The IP address that is compared with both the source and destination addresses of inbound and outbound packets. If either the source or destination address of a packet matches the specified IP address, the packet is traced. The IP address is specified in dotted decimal notation. If the IP option is blank or an asterisk (\*) is specified, all IP addresses are traced.

#### **Subnet**

The subnet mask that applies to the host and network portions of the IP address shown on the corresponding IP parameter.

**Src** The port number that is compared with the source port of inbound and outbound packets. The port number is an integer in the range 1–65535. If the source port of a packet is the same as the specified port number, the packet is traced. This comparison is only performed for packets using either the TCP or UDP protocol. Packets using other protocols are not traced. If the source port is not specified, there is no checking of the source port of packets. If an asterisk (\*) is specified, packets of any protocol and any source port are traced.

**Dest** The port number that is compared with the destination port of inbound and outbound packets. The port number is an integer in the range 1–65535. If the destination port of a packet is the same as the specified port number, the packet is traced. This comparison is only performed for packets using either the TCP or UDP protocol. Packets using other protocols are not traced. If the destination port is not specified, there is no checking of the

destination port of packets. If an asterisk (\*) is specified, packets of any protocol and any destination port are traced.

You can enter up to eight entries in each field. If you want additional entries, press F8 to go to the next panel.

When you press F4 to begin or schedule the trace, it can take several minutes due to system processing. When the trace is successfully scheduled, you are returned to the IPTrace Control Center panel, as shown in the following example:

The example shows the message when an immediate trace is scheduled. Message FKX401I is received for delayed traces.

```
FKXK2A01          TCP/IP for 390 IPTrace Control Center          NTV9D

Service Point/Stack: NMPIPL27          Proc: TCP38          Domain: LOCAL

                Status/Owner  Start                For          Writer
-  CTRACE  SYSTCPIP  DELAY/OPER4  2000-05-19-17.00.00  NA          CTTCP
-  PKTTRACE SYSTCPDA  ACTIVE/OPER4  2000-05-19-12:49:44  NA          PKTCP
                LOOPBACK  ON
                TCPLNK9D  ON

FKX400I PKTTRACE - TRACE SUCCESSFULLY SCHEDULED FOR SP NMPIPL27 BY OPERATOR OPE
Command ==>>
F1=Help      F2=Main Menu  F3=Return    F5=Refresh   F6 =Roll
F7=Backward  F8=Forward   F12=Cancel
```

### Displaying a Packet Trace

To view the details of an active trace, select the service point from panel (Figure 175 on page 191), then select PKTTRACE from panel (Figure 176 on page 192). The following panel is displayed:



outbound packets. If either the source or destination address of a packet matches the specified IP address, the packet is traced. The IP address is shown in dotted decimal notation. If the IP option is blank or an asterisk (\*) is shown, all IP addresses are traced.

<b>Subnet</b>	The subnet mask that applies to the host and network portions of the IP address shown on the corresponding IP address.
<b>Src</b>	The port number that is compared with the source port of inbound and outbound packets. The port number is an integer in the range 1–65535. If the source port of a packet is the same as the specified port number, the packet will be traced. This comparison is only performed for packets using either the TCP or UDP protocol. Packets using other protocols are not traced. If the source port is not shown, there is no checking of the source port of packets. If an asterisk (*) is present, packets of any protocol and any source port is traced.
<b>Dest</b>	The port number that is compared with the destination port of inbound and outbound packets. The port number is an integer in the range of 1–65535. If the destination port of a packet is the same as the shown port number, the packet will be traced. This comparison is only performed for packets using either the TCP or UDP protocol. Packets using other protocols are not traced. If the destination port is not shown, there is no checking of the destination port of packets. If an asterisk (*) is displayed, packets of any protocol and any destination port are traced.
<b>Record Count</b>	The number of data records collected for this trace.

For assistance on options, press **F9**. The panel shown in Figure 184 on page 203 is displayed.

```

FKXX2A29      TCP/IP for 390 PKTTRACE Control Assistant      NTV9D
Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL
LINK Name: LOOPBACK

Options:
Length: x Full      Protocol: x ALL(*)
      _ Abbrev _____      _ TCP
      _ Abbrev _____      _ UDP
      _ Abbrev _____      _ ICMP
      _ Abbrev _____      _ Number ____

IP Address: _ ALL(*)      Subnet: x 255.255.255.255
      x 0.0.0.0      _ _____

Src. Port: x ALL(*)      Dest. Port: x All(*)
      _ _____      _ _____

Command ==>>>
F1=Help      F2=Main Menu      F3=Return      F4=Stop Trace      F6=Roll
F12=Cancel

```

Figure 184. PKTTRACE Control Assistant Panel

This panel displays the individual links from previous panels, along with the options, to enable you to view or set various packet trace options for a particular link. Only one check mark can be used for each group.

**Note:** You cannot edit this panel when the trace is in ACTIVE or DELAY mode.

**Stopping an Active or Cancelling a Delayed Packet Trace**

From the panel shown in Figure 175 on page 191, select the service point for which you want to stop or cancel tracing (for example, NMPIPL27). From the panel shown in Figure 176 on page 192, select PKTTRACE. Depending on whether the trace is active or delayed, one of the following panels is displayed.

The first panel, as shown in Figure 185 on page 204 displays an active trace.

```

FKXK2A20      TCP/IP for 390 PKTTRACE Control SYSTCPDA      NTV9D

Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL

  Start Time: 2000-05-19-12:49:44  Duration: NA
  Timer ID: FKX00112              Writer: PKTCP

Link   Len  Prot  IP Address      Subnet      Ports      Record
      Src  Dest Count
LOOPBACK FULL *      0.0.0.0 255.255.255.255 * * 00000000
TCPLNK9D FULL *      0.0.0.0 255.255.255.255 * * 00000000

Command ==>
F1=Help      F2=Main Menu  F3=Return      F4=Stop Trace      F6=Roll
F7=Backward  F8=Forward    F9=Assist      F12=Cancel

```

Figure 185. PKTTRACE Control SYSTCPDA Panel with an Active Trace

Press **F4** to stop the trace.

The panel shown in Figure 186 displays a delayed trace.

```

FKXK2A20      TCP/IP for 390 PKTTRACE Control SYSTCPDA      NTV9D

Service Point/Stack: NMPIPL27      Proc: TCP38      Domain: LOCAL

  Start Time: 2000-05-23-16.00.00  Duration: 00.20.00  On Task: OPER4
  Timer ID: FKX00020              Writer: PKTCP

Link   Len  Prot  IP Address      Subnet      Ports      Record
      Src  Dest Count
LOOPBACK FULL *      *      255.255.255.255 * * NA
TCPLNK9D FULL *      *      255.255.255.255 * * NA

Command ==>
F1=Help      F2=Main Menu  F3=Return      F4=Cancel Delay Start  F6=Roll
F7=Backward  F8=Forward    F9=Assist      F12=Cancel

```

Figure 186. PKTTRACE Control SYSTCPDA Panel with a Delayed Trace

Press **F4** to cancel the trace.

When **F4** is pressed, it can take several minutes to cancel the trace due to system processing. When a delayed trace is successfully cancelled, message DSI205I is

received. When an active trace is successfully stopped, the IPTrace Control Center panel, as shown in Figure 187 is displayed.

```

FKXK2A01          TCP/IP for 390 IPTrace Control Center          NTV9D

Service Point/Stack: NMPIPL27          Proc: TCP38          Domain: LOCAL

                Status/Owner  Start                For          Writer
-  CTRACE  SYSTCPIP  DELAY/OPER4  2000-05-19-17.00.00  NA          CTTCP
-  PKTTRACE SYSTCPDA  NONE/NA      NA                  NA          *NONE*
                LOOPBACK  OFF
                TCPLNK9D  OFF

FKX403I  PKTTRACE - TRACE SUCCESSFULLY STOPPED FOR SP NMPIPL27 BY OPERATOR OPER4
Command ==>
F1=Help      F2=Main Menu  F3=Return    F5=Refresh   F6 =Roll
F7=Backward  F8=Forward   F12=Cancel

```

Figure 187. IPTrace Control Center Panel

The prompt above the command line shows that the trace was successfully stopped.





---

## **Part 4. Appendixes**



---

## Appendix A. Implementing X.25 Monitoring Support

AON/SNA X.25 enhances problem determination for packet networks connected to your SNA network. AON/SNA X.25 provides support for the X.25 interface between data terminal equipment and packet switching networks.

AON/SNA X.25 provides an exit to trap hardware alerts from X.25 resources and translate them into meaningful alerts. These alerts give the operator a clear interpretation of the error, including the meaning of the error bytes, and more specific recommended action. The AON/SNA Help Desk provides NPSI diagnostic and cause code translation. AON/SNA X.25 monitors LUDRPOOLS in NCPs for threshold availability. Users can view a full-screen display of AON/SNA X.25 virtual circuits being monitored by AON/SNA X.25. Thresholding can be done in the number of sessions on a switched virtual circuit (SVC). Threshold exceptions and status changes are reflected in DDF and the NetView log.

AON/SNA X.25 also inserts a message in the NetView log. This message correlates the INOP message generated by VTAM and the corresponding NPSI alert. Additionally, the operator can display the available number of LU control blocks. An alert is sent to the hardware monitor each time an incorrect XID problem is encountered.

Users can monitor switched connections through full-screen panels. Each connection or disconnection, related to a monitored line, updates the panel. Switched group lines are defined in the control file.

---

## Understanding the NPSI Hardware Monitor Enhancement

This section describes the FKVXITAN exit routine and the BNJ146 message automation.

### Using the FKVXITAN Exit Routine

The FKVXITAN user exit plays a role in the generic alerts generation from NPSI alerts. This user exit traps alerts from NPSI and translates the diagnostic, clear, and cause codes. The AON/SNA X.25 code then issues a GENALERT with the translated information so that operators can more easily understand X.25 NPSI alerts in the NetView hardware monitor.

### Understanding the CNM Interface

All unsolicited communication network management (CNM) messages are sent by VTAM to NetView as part of the specialized DELIVER RU (x'810812') through the CNM interface. This includes the alerts coming from X.25 NPSI. The DSICRTR NetView subtask is the CNM Router task which gets those unsolicited CNM messages and later dispatches them to other tasks (for example, the hardware monitor).

### Understanding the XITCI Exit Routine for the DSICRTR DST

The XITCI exit routine for the DSICRTR DST receives control for each incoming unsolicited CNM message. The user exit routine must be defined in the DSICRTTD initialization member for the DSICRTR task.

## Understanding the FKVXITAN User Exit

A XITCI user exit routine is coded for the DSICRTR subtask, FKVXITAN. The FKVXITAN exit is used for each unsolicited CNM message, including the RECFMS type 00 (alerts) coming from X.25 NCP Packet Switching Interface (NPSI).

## Understanding FKVXITAN Logic

The following list explains the flow of the FKVXITAN exit:

1. The DELIVER RU is parsed to recognize the embedded RU and the block ID (identifying the originating product). If it is not a RECFMS coming from NPSI, no processing occurs and the exit returns control to normal NetView processing.
2. If it is an alert record, the rest of the input is parsed and the following fields are extracted:
  - alert type
  - major code
  - minor code
  - action code
  - text (when present),
  - three qualifiers
  - resource hierarchy

Format conversions take place so you can display these fields in a message.

3. The BNJ146I message is created with exactly the same format as the standard NetView BNJ146I message for RECFMS except that the token 2 and 3 (date and time) are not inserted.
4. The message is sent to the X.25 network management task for further automation.
5. The RECFMS that triggered the FKVXITAN user exit is suppressed by setting the return code to 4. The alert RECFMS coming from NPSI disappears and does not go to the hardware monitor.

## Understanding BNJ146 Message Automation

Figure 188 shows a sample entry that automates message BNJ146.

```
IF MSGID = 'BNJ146I'
  & TOKEN(2) = 'R'
  & TEXT =. 'BKID=FEF'.
  & TEXT =. 'TYPE='BKID=FEF'. 'ACT='ACT'QUAL='
    QUAL'TEXT='VCN 'HIER='HIER
    'DOMID='.
THEN EXEC (CMD('FKVEOG01 T' TYPE ACT 'Q('QUAL')Q' 'T('VCN')T'
HIER) ROUTE(ONE *)) DISPLAY(N) NETLOG(Y) SYSLOG(N);
*
IF MSGID = 'BNJ146I'
  & TOKEN(2) = 'R'
  & TEXT =. 'BKID=FEF'.
  & TEXT =. 'TYPE='TYPE'BKID=FEF'. 'ACT='ACT'QUAL='
    QUAL 'HIER='HIER
    'DOMID='.
THEN EXEC (CMD('FKVEOG01 Q ' TYPE ACT 'Q('QUAL')Q' HIER)
ROUTE(ONE *)) DISPLAY(N) NETLOG(Y) SYSLOG(N);
```

Figure 188. Automation Member Entries for BNJ146I

The first entry corresponds to alerts sent by NPSI V2/V3 and the second entry to alerts sent by NPSI V1. The parameters from the BNJ146I message that are needed by the program are extracted from the message and passed as variables to the program.

## Understanding Code Point Tables

The following code points are part of these tables:

- BNJ92UTB alert description code points
- BNJ93UTB probable cause code points
- BNJ94UTB user cause code points
- BNJ95UTB install cause code points
- BNJ96UTB failure cause code points
- BNJ81UTB recommended action code points

NPSI sends basic alerts (RECFMS type 00). Only a few IBM-supplied codes are provided to cover the range of possible AON/SNA X.25 problems. This package provides user code points to complement IBM supplied code. The code point range reserved for the user is between x'E000' and x'EEEE'. The range of code points used in this package is from x'EE00' to x'EEEE'. Thus, AON/SNA provides more details and more advice on the possible causes and solutions for an alert.

---

## Describing the Correlation between INOP Messages and NPSI Alerts

When alerts are sent against the virtual circuit line resources, the station (PU) is not owned at the time the alert is sent. This makes utilizing the NPSI alerts difficult.

This difficulty affects the outgoing call refused alerts (either refused by NPSI or cleared by the AON/SNA X.25 PSDN or the DTE). AON/SNA X.25 NPSI sends on the SSCP-PU (the NCP PU) session, first an INOP type 1 on the address of the station, then a RECFMS on the address of the VC line. As a result, on the host side, a message is received:

```
IST259I INOP RECEIVED FOR nodename CODE = 01
```

The *nodename* is the name of the switched PU that attempted to call out. This message identifies neither the path nor the link on which the call out failed. An NPSI alert gives the hierarchy down to the virtual circuit and indicates why the outgoing failure occurred, but it does not give the name of the switched PU that attempted to call out and is affected by the failure.

For installations that frequently make outgoing calls on AON/SNA X.25 switched virtual circuits (SVCs), trying to correlate INOP messages and corresponding NPSI alerts is a challenge. AON/SNA X.25 responds to this need, but due to the asynchronous nature of this process, the tool cannot be considered as absolutely reliable.

Message IST259I is automated in the automation table and puts the switched PU name into a task global variable. A queue of 10 such global variables (X25PU0 to X25PU9) is necessary because several IST259I messages can arrive before the corresponding BNJ146I messages arrive and AON/SNA X.25 can pick up the PU names. This occurs when several PATHS statements are active for a switched PU, leading to successive outgoing call failures. If you need to store more than 10 PU names in global variables, you can easily modify the FKVEOI00 and FKVEOG02 routines. Replace the number 10 with the new value. One statement is in FKVEOI00 and two are statements in FKVEOG02.

A sample message automation member statement follows:

```
IF MSGID = 'IST259I' & TEXT = 'FOR X'.  
  & TEXT = 'FOR' PUN 'CODE = 01'  
THEN EXEC (CMD('FKVE0I00 ' PUN) ROUTE(ONE *))  
  NETLOG(Y) SYSLOG(N) DISPLAY(Y);
```

AON/SNA X.25 generates the generic alerts from the NPSI alerts on virtual circuits. It retrieves the oldest switched PU name in the queue, if one is present. It inserts the PU name at the end of the hierarchy, behind the line name if no PU name is currently in the hierarchy.

AON/SNA X.25 records the time together with the PU name in a queue. When a PU name has been in the queue for more than three minutes, AON/SNA assumes the correspondence between the INOP messages and the alerts has been lost. It then cleans up the whole queue.

A message is written to the NetView log that shows the diagnostic code, the cause code, and all the hierarchies for the problem.

Figure 189 shows an example of the message written to the NetView log.

```
NCCF      N E T V I E W   L O G      CNM01      02/06/00 14:05:44  
  
C CNM01   CLEARCAUSE BYTE = 05, DIAG BYTE = 00 RECEIVED FOR  
          FOLLOWING RESOURCE HIER=RADNCPE,NPSI,MCH01,MCH,000001,VCN,  
          XL01002,V.C.,X.25PUT,RDTE
```

Figure 189. NetView Log

---

## Monitoring Switched Virtual Circuit (SVC) Resource Utilization

An AON/SNA X.25 subscription supplies, with one physical link, a number of virtual circuits, both *private virtual circuits* (PVCs) and *switched virtual circuits* (SVCs). These switched virtual circuits (SVCs) are often used for frequent and short duration connections. The number of switched virtual circuits (SVCs) in use increase and decrease with starting and ending calls from programs.

The primary purpose of this monitoring facility is to provide one screen that displays the number of switched virtual circuit (SVC) lines as available or busy. The system automatically updates this information, but the operator manually refreshes the screen to receive the current information.

Other features of this facility include the ability to:

- Apply threshold values for the number of free switched virtual circuits (SVCs) to highlight switched virtual circuit (SVC) shortages
- Add, change, or delete a temporary link definition
- Define individual timers for critical links to refresh status information on a fixed interval
- Link to DDF to enable DDF monitoring of link availability and threshold status

---

## Understanding the X25INIT Command

To start the switched virtual circuit (SVC) monitoring facility, initialize the environment by running the X25INIT command. Call this command from the configuration file at AON startup. The X25INIT command performs the following:

- reads the X25MONIT control file entries in the configuration file
- checks these entries for validity
- sets up timers for links that you request
- obtains status information for the links

If X25INIT detects errors while validating the parameters for a link, AON/SNA issues a message and bypasses that link.

Switched virtual circuit (SVC) monitoring only works with the naming conventions given by NPSI for the group name and the VC line name. The NPSI naming convention follows:

*pLxxxlcn*

The name of the VC line.

*p25Sxxxxy*

The name of the switched virtual circuit group name.

where:

*p* Is the prefix coded in the X25BUILD macro.

*xxx* Is the address specified in the ADDRESS operand of the X25MCH macro.

*lcn* Is the logical channel number.

*y* Is the group sequence on the physical link.

---

## Understanding the LUDRPOOL Command

The LUDRPOOL routine is based on the NCP control blocks structure and works with different versions of NCP. The supported versions are NCP V4R2 through V7.

If you specify a time interval, AON/SNA X.25 issues a NetView EVERY command to run the LUDRPOOL check at regular intervals. It sets a threshold as a global variable so that an alert is sent when the pool of available LUs falls under the threshold.

---

## Monitoring LUDRPOOL Utilization

One of the critical resources in switched SNA is the pool of LU control blocks created within the NCP to be used dynamically for dynamic reconfiguration and switched data links.

The pool of LU blocks is defined by the NCP LUDRPOOL macro:

```
DRPOOLPU PUDRPOOL NUMBER=0
```

```
DRPOOLLU LUDRPOOL NUMTYP1=10, RESERVE 10 LUS ON PU.T1 PUS
              NUMTYP2=90, RESERVE 90 LUS ON PU.T2 PUS
              NUMILU=20 RESERVE 20 LUS FOR IND.LU
```

The PUDRPOOL statement is necessary to use the LUDRPOOL utilization counters.

AON/SNA X.25 is more generally used for switched virtual circuits (SVCs). LUDRPOOL is one of the resources that major AON/SNA X.25 NPSI users want to monitor, especially if they have hundreds or thousands of available switched virtual circuits (SVCs), controlled by one NPSI.

PU Type 2 represents the vast majority of devices. In the previous example, the pool of LUs for switched PU 2 (operand NUMTYP2) is a common installation. PU Type 1 is relevant for NPSI (non-SNA connections), but there is always one simulated LU per virtual channel.

---

## Understanding Security Alerts for an Incorrect XID

A frequent cause of failure in switched SNA connections occurs in the XID exchange, when the SNA ID (IDBLK + IDNUM) sent by the device attempting a switched connection is not recognized by the host.

VTAM compares the station ID it receives in the XID with the values coded for the IDBLK and IDNUM parameters of the PU statements in the switched major nodes.

When VTAM does not find a match, the call is refused and a message issued:

```
IST690I CONNECTION REQUEST DENIED - INVALID STATION ID = aaaaxxyyyyy
```

The message may be an indication of:

- A security violation. Somebody may have tried to break into your network.
- An operations error. A switched major node may not have been activated.
- A system programming error. The good values of IDBLK-IDNUM may not have been specified in a switched major node.

All of these events are likely to happen regularly with AON/SNA X.25 NPSI switched virtual circuits (SVCs), in particular when the number of connections is high.

A specific NPSI difficulty with IDBLK-IDNUM is encountered for non-SNA AON/SNA X.25 connections (PCNE, PAD, GATE, DATE). In this case, the IDBLK and IDNUM do not come from the remote DTE but are generated by NPSI, according to the virtual circuit on which the call is received and according to the order of the virtual circuit definitions in the NCP generation.

---

## Implementing an Alert through GENALERT

In the following example, the IST690I message is automated in the automation table and causes an alert through GENALERT. The security type is (SCUR).

```
IF MSGID = 'IST690I' & TEXT = '.'=' STATID  
THEN EXEC (CMD('FKVEOSEC ' STATID) ROUTE(ONE *)) DISPLAY(N)  
NETLOG(Y) SYSLOG(N);
```



---

## Appendix B. Using the Browse Facility

AON uses the NetView browse facility, which enables certain commands and functions that you can use to browse log files. When you display any of the AON logs, AON enables certain commands and function keys to help you to browse the logs more efficiently.

In addition to the function keys used throughout NetView and described in “Function Keys (F Keys)” on page 8, the browse facility provides the following additional function keys to help you browse log files:

**F4 Top**

Moves to the top of the information being browsed.

**F5 Bottom**

Moves to the bottom of the information being browsed.



## Appendix C. AON Command Synonyms

The following tables show how to use fastpaths to reach each AON panel.

*Table 4. Fastpath Commands Reference Table*

Command	FastPath	Panel
AON	AON	AON: Operator Commands Main Menu panel
AONINFO	AON 0	AON tutorial panel
	AON 1	AON: Base Functions panel
	AON 1.0	AON Base Functions tutorial panel
AONHD	AON 1.1	AON: Help Desk panel
AUTOVIEW	AON 1.2	AON: AutoView panel
DDF	AON 1.3	Data Center Networks panel
	AON 1.4	AON: Automation Settings panel
SETAUTO	AON 1.4.1	Recovery Settings panel
DISAUTO	AON 1.4.1	Recovery Settings panel
DELAUTO	AON 1.4.1	Recovery Settings panel
SETNTFY	AON 1.4.2	Notification Operators panel
DELNTFY	AON 1.4.2	Notification Operators panel
SETTHRES	AON 1.4.3	Thresholds panel
DELTHRES	AON 1.4.3	Thresholds panel
SETMONIT	AON 1.4.4	Monitor Intervals panel
DELMONIT	AON 1.4.4	Monitor Intervals panel
ACTMON	AON 1.4.5	Active Monitor Settings panel
	AON 1.5	AON: Cross Domain Functions panel
CDLOG	AON 1.5.1	AON: Cross Domain Logon panel
AONGW	AON 1.5.2	AON: Cross Domain Gateway Display panel
AONTAF	AON 1.5.3	AON: Terminal Access Facility Menu panel
TIMER	AON 1.6	AON: Timer Management panel
AONMAINT	AON 1.7	AON: Task and Log Maintenance panel
DSPCFG	AON 1.7.1	AON: Configuration Data Display panel
DSPSTS	AON 1.7.2	Display Status Data panel
	AON 1.7.3	NetView log panel
NLOG	AON 1.7.4	Automation log panel
DBMAINT	AON 1.7.5	AON: Database Maintenance panel
STARTEZL	AON 1.7.6	AON: Start Automation Components panel
STOPEZL	AON 1.7.6	AON: Start Automation Components panel
AONTASK	AON 1.7.7	AON: Task/Operator Display panel
	AON 1.8	AON: Support Functions panel
AONTRACE	AON 1.8.1	AON: Set Trace panel
AONINIT	AON 1.8.2	AON: Reinitialize Automation panel

Table 4. Fastpath Commands Reference Table (continued)

Command	FastPath	Panel
AONENABL	AON 1.8.3	AON: Enable/Disable Automation panel
CGED	AON 1.8.4	AON: Common Global Editor panel
	AON 1.8.5	AON: Automation Table panel
LOADTBL	AON 1.8.6	AON: Loader Tables panel
ILOG	AON 1.9	Inform Log Utility panel
MARK		DDF mark
UNMARK		DDF unmark
DM		Clear held message
AONAIP		Set or reset the AIP operator status
AONSNA	AON 2	SNA Automation: Menu panel
	AON 2.0	Tutorial
SNAHD	AON 2.1	SNA Help Desk panel
SNAMAP	AON 2.2	SNAMAP panel
VTAMOPT	AON 2.3	VTAM Options Management panel
NETSTAT	AON 2.4	NetStat panel
VTAMCMD	AON 2.5	VTAM Commands panel
APPN	AON 2.6	APPN Commands Menu panel
	AON 2.6.0	APPN Tutorial panel
	AON 2.6.1	APPN Issue Checkpoint Commands panel
	AON 2.6.2	APPN Display Control Points panel
	AON 2.6.3	APPN Display Directory panel
	AON 2.6.4	APPN Display Transmission Group Profiles panel
SNBU	AON 2.7	Switched Network Backup Menu panel
	AON 2.7.0	SNBU Tutorial
LISTSNBU	AON 2.7.1	Display SNBU Resource List panel
DISSNBU	AON 2.7.2	Display Information on SNBU Resources panel
SETSNBU	AON 2.7.3	Control SNBU Resources panel
DISPOOL	AON 2.7.4	Display Modem Pools panel
SETPOOL	AON 2.7.5	Add or Delete Modem Pool Resources panel
CHGSNBU	AON 2.7.6	Control SNBU Connections Manually panel
CHGSPEED	AON 2.7.7	Change Modem Speed Manually panel
QRYSNBU	AON 2.7.8	Display SNBU Status panel
X25	AON 2.8	X.25 Menu panel
	AON 2.8.0	X.25 Tutorial
X25MONIT	AON 2.8.1	X.25 SVC Monitoring panel
LUDRPOOL	AON 2.8.2	X.25 LUDR Pool Management panel
DSPSNBU		Displays SNBU Status Data from status file
SNAVIEW		Displays the AutoView resources for AON/SNA
X25INIT		Initializes X.25
AONTCP	AON 3	TCP/IP Automation: Commands Menu panel

Table 4. Fastpath Commands Reference Table (continued)

Command	FastPath	Panel
	AON 3.1	TCP/IP Automation: Ping a Service Point panel
NV6KPING	AON 3.1.1	TCP/IP Automation: Ping a resource through an AIX service point
NV6KCMD	AON 3.1.2	TCP/IP Automation: Issue an AIX command to a service point
NV6KRPNG	AON 3.1.3	TCP/IP Automation: Issue a remote ping between 2 AIX nodes
NV6KPERF	AON 3.1.4	TCP/IP Automation: Performance Thresholds panel
NV6KLIST	AON 3.1.5	TCP/IP Automation: Display the TCP/IP Critical Resource List panel
	AON 3.2	TCP/IP Automation: Issue Command to Service Point panel
MVSPING	AON 3.2.1	TCP/IP Automation: Ping a resource through TCP/IP for MVS
IPSTAT	AON 3.2.2	TCP/IP Automation: Manager Telnet and FTP sessions through TCP/IP for MVS
TRACERTE	AON 3.2.3	TCP/IP Automation: Issue a TCP/IP MVS TRACERTE (trace route) command
NVSNMP	AON 3.2.5	TCP/IP Automation: Display the SNMP Menu
	AON 3.2.6	TCP/IP Automation: Server Management
IPMAN	AON 3.2.7	TCP/IP Automation: IP Resource Management
TCPLIST	AON 3.2.7	TCP/IP Automation: IP Resource Management
NV6KVIEW		TCP/IP Automation: AutoView panel



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## Appendix D. Customizing the SNMP Group Definitions File (FKXSNMP)

Rules for creating new entries in the SNMP Group definition file FKXSNMP are:

- The Group name must be from 1—15 characters and must start in column 1.
- The Group name can not be duplicated.
- There must be at least 1 space between the Group Name, the GROUP, the Group type, and the base MIB for Table type Groups.
- There can be up to 3 lines of abstract definition for a Group. The abstract lines can be up to 72 positions and must start with a question mark (?) in column 1.
- The Abstract lines for a Group must follow the GROUP statement for the group.
- Valid Group types are:
  - LIST
  - LIST+
  - TABLE
  - WALK

A **LIST** group type must include the EXACT MIB variable names to be collected.

A **LIST+** group works almost the same as a LIST type Group, but enables the definition of variable data.

The LIST+ group enables you to specify a variable field to be appended to the list of MIB objects in the group. This enables a single group definition to be used for a variety of MIB object groups. For example, a group can contain objects that relate to a specific interface number. If you use traditional LIST type groups, you need multiple groups, one to define each interface. A LIST+ group can be defined to ask prompt for an interface number, when selected, enabling only one group definition to be needed. LIST+ adds keywords which are used to set up the variable data. All of these keywords must start in column 1.

### PANELINPUT

Defines this as a LIST+ group

### PANELCONST

A user customizable field which is displayed in the input panel and must be delineated with double quotes (")

### PANELVAR

An input field where the data is collected from the screen, example:

```
PANELCONST "PLEASE ENTER AN INTERFACE NUMBER:  
"PANELVAR " _"
```

Displays as:

```
PLEASE ENTER AN INTERFACE NUMBER:
```

```
—
```

VAR keywords in LIST and LIST+ groups indicate the starting of varbind lists. This helps in parsing in UNIX. VAR must start in column 1.

A **TABLE** group type must have a base variable to start the search. This is the index variable for the table. A Table group type does not need to have variables listed. The table is Walked and all variables in the table are collected. MIB variables listed in this group are for documentation only.

A **WALK** group type must be a well known group name (defined in an existing RFC). A walk command will be issued against the name. MIB variables listed in this group are for documentation only. Walk groups, as defined in some RFCs, may be much larger than the 15 character limit. To work with this limit, the Full Name for the Walk Group may be entered on the Group line after the WALK type (for example: groupname GROUP WALK veryLongGroupName).

Comments must have an asterisk (\*) in column 1.



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