

3745 Communication Controller Models A
3746 Nways Multiprotocol Controller
Models 900 and 950



NetView Console APPN Command Reference Guide



3745 Communication Controller Models A
3746 Nways Multiprotocol Controller
Models 900 and 950



NetView Console APPN Command Reference Guide

Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page vii.

First Edition (July 1999)

This edition applies to the 3745 Controller Models A, and the 3746 Nways Multiprotocol Controller Models 900 and 950.

Order publications through your IBM representative or the IBM branch office serving your locality. Publications are not stocked at the address given below.

A form for readers' comments appears at the back of this publication. If the form has been removed, address your comments to:

Department CGFA
Design & Information Development
IBM Corporation
PO Box 12195
Research Triangle Park NC 27709
U.S.A.

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© **Copyright International Business Machines Corporation 1999. All rights reserved.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Figures	v
Notices	vii
Trademarks	viii
About This Guide	ix
Who Should Use this Guide	ix
How this Guide is Organized	ix
About the World Wide Web	ix
Chapter 1. Introduction	1-1
Introduction to Communication Manager/2 Service Point Functions	1-1
SPA Router and ROP Service Function	1-1
Using REXX Executable Files and Command Lists	1-2
Operating the NetView Program	1-2
Related Publications	1-2
Chapter 2. RUNCMD Implementation Specifications	2-1
Service Processor as Service Point	2-2
Enable RUNCMD	2-2
Group of Commands	2-2
Multiple NetView Management	2-3
What Have Been Implemented in the Service Point	2-4
Chapter 3. 3746 APPN, Manage NNP and CP Commands	3-1
NNP Status Command	3-2
Start CP	3-3
Stop CP	3-4
Stop and Restart the CP	3-5
Activate Configuration	3-6
Restart NNP	3-7
Chapter 4. 3746 APPN Manage Configurations Commands	4-1
List All Configurations	4-1
Activate a Configuration	4-2
Chapter 5. 3746 APPN Network Management Commands	5-1
Network Management Commands	5-1
List All Ports	5-3
List All Ports by Status	5-5
List All Ports by DLC Name	5-6
List Ports by Status and DLC	5-7
List All Ports by Wildcard Portname	5-8
Display the Details View for a Given Port Name	5-9
Display the Details View for a Given Port Number	5-10
Activate All Ports	5-12
Activate a Given Port by Name	5-13
Activate a List of Ports by Name	5-14
Activate a Given Port by Number	5-15
Activate a List of Ports By Number	5-16

Deactivate All Ports	5-17
Deactivate a Given Port by Name	5-18
Deactivate a List of Ports by Name	5-19
Deactivate a Given Port by Number	5-20
Deactivate a List of Ports by Number	5-21
List All Stations	5-22
Retrieve a Page of All Stations List with Listid	5-23
List Stations by Status	5-24
List Stations by Statname	5-25
List Stations by Partner Name	5-26
List Stations by Port Name	5-27
Display the Details View for a Given Station Name	5-28
Activate All Stations	5-29
Activate a Given Station by Name	5-30
Activate a List of Stations by Name	5-31
Deactivate All Stations	5-32
Deactivate a Given Station by Name	5-33
Deactivate a List of Stations by Name	5-34
List All Sessions	5-35
Retrieve a Page of all Sessions List with Listid	5-36
List Sessions by LU Alias Name	5-37
List Sessions by Mode Name	5-38
List Sessions by Partners Name and Alias Name	5-39
List Sessions by Station Name	5-40
Display the Details View for a Given Session ID	5-41
Network Topology Display	5-42
Retrieve a Page of Network Topology Display with Listid	5-45
Node Information Display	5-47
Directory Information Display	5-48
Connection Information Display	5-50
HPR Connection Information Display	5-51
 Appendix A. Netview Procedures (REXX)	 A-1
Where to Find Procedures Using the RUNCMD	A-4
 Appendix B. Bibliographies	 B-1
Customer Documentation for the 3745 (All Models), and 3746 (Model 900)	B-1
Additional Customer Documentation for the 3745 Models 130, 150, 160, 170, and 17A	B-7
Additional Customer Documentation for the 3746 Model 950	B-8
 List of Abbreviations	 X-1
 Glossary	 X-3
 Index	 X-5

Figures

2-1.	Structure of the RUN Command within SP/NNP	2-1
2-2.	NetView Link(s)/Reporting Customization Window	2-2

Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, are the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

ACF/VTAM	Operating System/2
APPN	OS/2
ESCON	Personal System/2
FFST/2	Presentation Manager
First Failure Support Technology	PS/2
IBM	S/390
Nways	

NetView and Tivoli are trademarks of Tivoli Systems, Inc. in the United States, or other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and/or other countries.

Other company, product, and service names may be trademarks or service marks of others.

About This Guide

This guide lists, describes and explains all the commands available to manage an APPN® network using the NetView S/390® Program.

Who Should Use this Guide

This guide has been written for anyone who wants remotely manage a network.

How this Guide is Organized

The guide consists of the following chapters and appendixes:

- | | |
|-------------------|--|
| Chapter 1 | Gives an introduction to Communication Manager/2 Service Point functions |
| Chapter 2 | Gives the RUNCMD implementation specifications |
| Chapter 3 | List the NetView™ RUNCMD commands |
| Chapter 4 | Lists the configuration commands |
| Chapter 5 | Lists all network management commands |
| Appendix A | Gives examples of REXX clist |
| Appendix B | Gives the customer documentation bibliographies |
| Appendix X | Gives the abbreviations used in this guide, the glossary of terms which may be unfamiliar, and the index |

About the World Wide Web

You can access the latest news and information about IBM network products, customer service and support via Internet at the URL:

<http://www.networking.ibm.com>

Chapter 1. Introduction

This manual describes the commands available to manage an APPN network using the NetView S/390 Program.

The NetView NCCF RUN COMMAND (RUNCMD) routes commands to service points for processing by one of the service point application. This facility is based upon usage of the **Service Point Application Router (SPA Router)** and **Remote Operations Service (ROP Service)** functions of Communication Manager/2 (CM/2).

Introduction to Communication Manager/2 Service Point Functions

To remotely manage a network, you can initiate commands from the NetView program that are processed on a workstation running Operating System/2® (OS/2). The standard output generated by a command is returned to the NetView program.

Note: Throughout this document, NetView program refers to the host NetView program, and not to the NetView/PC program.

The two components Service Point Application Router (SPA Router) and Remote Operations Service (ROP Service) provide this network management capability. SPA Router and ROP Service provide the following features:

- Support of multiple local area networks (LANs) and multiple physical units (PUs).
- Administration of large area
- A tool for system administration
- Administration of different domains.

SPA Router and ROP Service Function

SPA Router is an OS/2 program that receives a command from a NetView program to the specified application. The application can be any OS/2-based product that runs in protected mode. The advantage of having a separate program, SPA Router, that directs the applications is that multiple OS/2 applications can receive commands concurrently.

ROP Service is an application that processes (on the OS/2 workstation) the commands sent by the NetView program through SPA Router. The commands sent to ROP Service can be any OS/2 commands that have a command line interface and that do not need interactive user input.

In addition to using ROP Service, you can send commands from the NetView program through SPA Router to IBM LAN Network Manager Version 1.1 or higher, and you can use the application programming interface (API) for SPA Router to develop your own applications.

Using REXX Executable Files and Command Lists

You can use REXX executable files (execs) and command lists (CLISTs) to automate the process of issuing RUNCMDs. Operating the NetView program, provides examples of REXX execs and a CLIST that you might find useful when developing your own REXX execs and CLISTs (see Appendix A, “Netview Procedures (REXX)” on page A-1 for examples).

Operating the NetView Program

With the exception of using the format previously described, you use the NetView program with SPA Router and ROP Service the same way you use the NetView program with other applications.

Related Publications

Additional and detailed information are available in the following publications:

- *TME 10 Netview for OS/390 Customization: Using REXX and the NetView Command List Language*, SC31-8231
- *TME 10 Netview for OS/390 Command Reference*, SC31-8227
- *CM/2 Service Point Application Router and Remote Operation Service Guide*, SC31-7006
- *TME 10 Netview for OS/390 User's Guide*, GC31-8241
- *SAA Common Programming Interface REXX Level 2 Reference*, SC24-5549.

Chapter 2. RUNCMD Implementation Specifications

Based on the description in Chapter 1, "Introduction" on page 1-1 the RUNCMD implementation within the service processor and the network node processor will map the structure described as Configuration 1 but the usage of the Extended service point replaced by the Remote Procedure Call (RPC) channel already implemented between the SP and the NNP.

Each RUNCMD **3746_APPN_Management_Command** issued by NetView is processed by:

1. The **Service point** i.e the service processor
2. The **3746_APPN_Management_Command** is analyzed and mapped on the corresponding service processor and network node processor corresponding command which can be a subset of a:
 - Manage NNP command
 - CCM configuration command
 - CCM Management command
3. The mapped command is then either executed by the SP or sent to the NNP via the current RPC interface
4. The command executed in the NNP return the results to the SP
5. The results are post processed by the **3746_APPN_Management_Command** according to the parameter list.
6. The final results are sent back through the standard output to NetView via the ROP Service.

The following figure gives an outlook of the process.

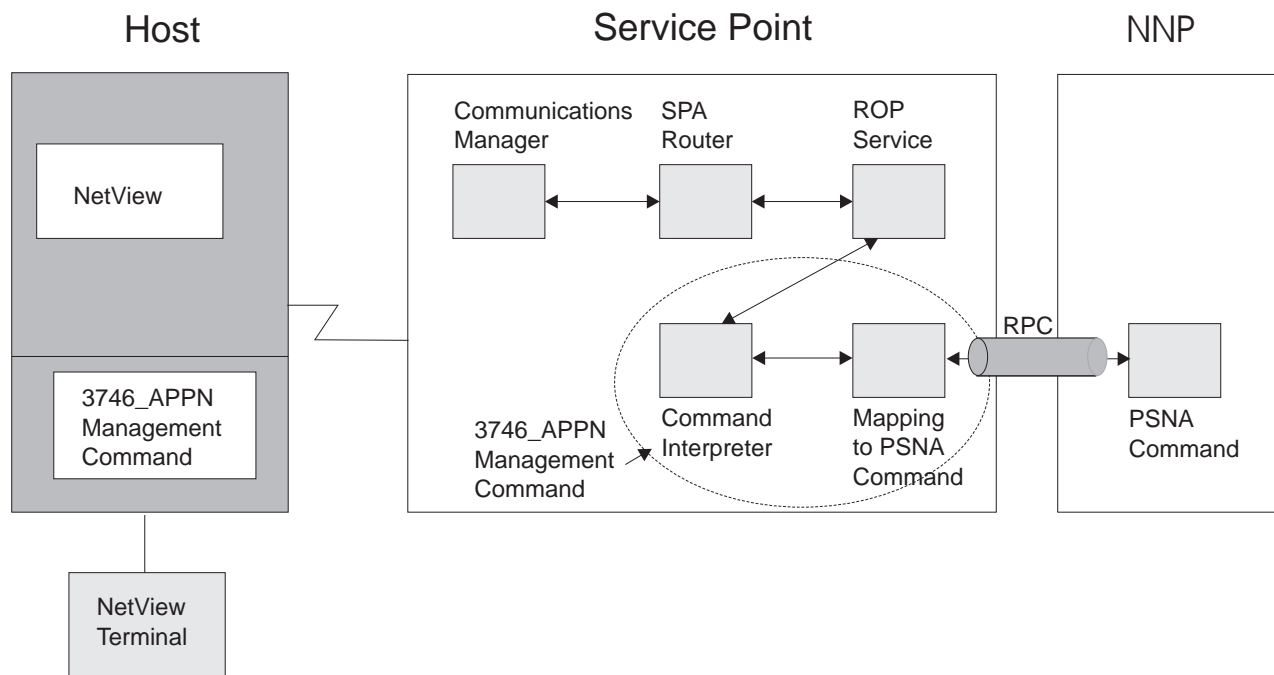
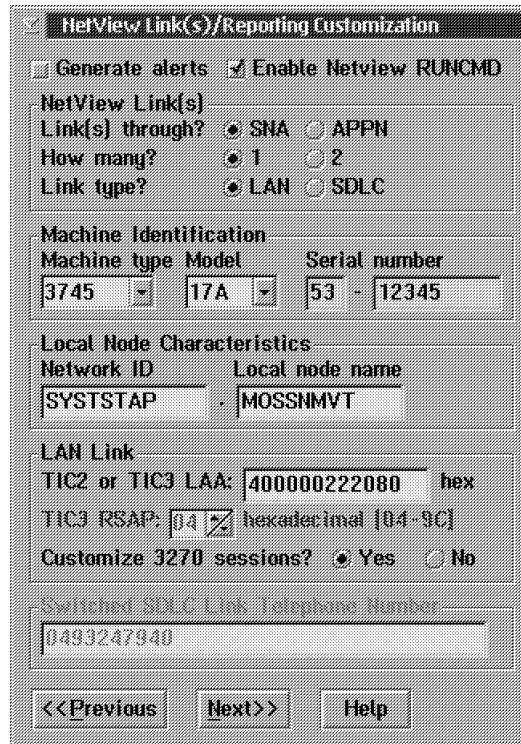


Figure 2-1. Structure of the RUN Command within SP/NNP

Note: The Communication Manager/2 limits the data length returned to the NetView program to 32 kbytes. This limitation may lead to some specific processing and commands. This is indicated when applicable.

Service Processor as Service Point

The service processor customization program allows you to enable the NetView RUN command from the SP Customization Window. This is located in the window **NetView Link(s)/Reporting Customization**, one checkbox is added to enable the **NetView RUNCMD** feature (see Figure 2-2).



The image shows a graphical user interface window titled "NetView Link(s)/Reporting Customization". It contains several sections with various controls:

- Generate alerts**: A checkbox that is checked.
- Enable Netview RUNCMD**: A checkbox that is checked.
- NetView Link(s)**: A section with three sub-items:
 - Link(s) through?**: Radio buttons for SNA (selected) and APPN.
 - How many?**: Radio buttons for 1 (selected) and 2.
 - Link type?**: Radio buttons for LAN (selected) and SDLC.
- Machine Identification**: A section with three input fields:
 - Machine type**: A dropdown menu showing "3745".
 - Model**: A dropdown menu showing "17A".
 - Serial number**: A text field showing "53 - 12345".
- Local Node Characteristics**: A section with two input fields:
 - Network ID**: A text field showing "SYSTSTAP".
 - Local node name**: A text field showing "MOSSNMVT".
- LAN Link**: A section with three items:
 - TIC2 or TIC3 LAA:** A text field showing "400000222080" followed by a "hex" label.
 - TIC3 RSAP:** A text field showing "04" followed by a checked checkbox and the label "hexadecimal (04-9C)".
 - Customize 3270 sessions?**: Radio buttons for Yes (selected) and No.
- Switched SDLC Link Telephone Number**: A text field showing "0493247940".

At the bottom of the window are three buttons: "<<Previous", "Next>>", and "Help".

Figure 2-2. NetView Link(s)/Reporting Customization Window

Enable RUNCMD

The new checkbox is available when at least one NNP is installed, otherwise it is grayed out.

Group of Commands

Three groups of commands are provided via the NETVIEW RUNCMD.

1. NNP and Control Point management commands
2. Control Point Configuration management commands
3. APPN management commands.

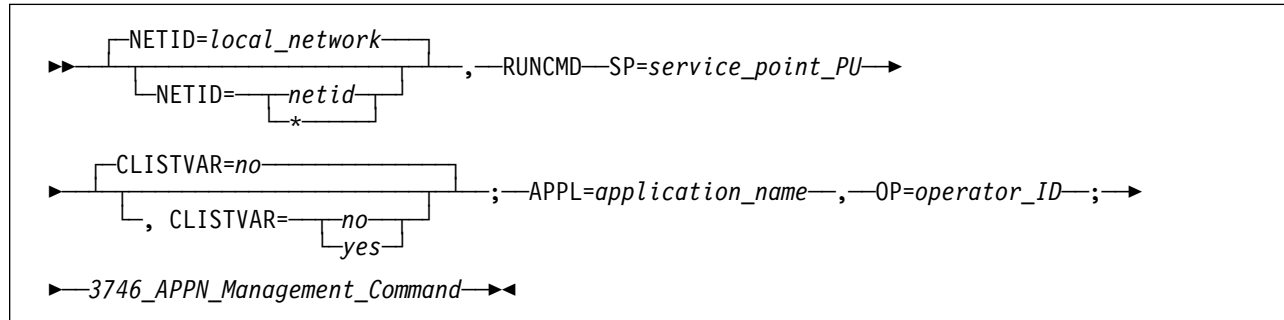
Multiple NetView Management

Several NetView programs may send the RUNCMD concurrently to the service processor. The serialization of the commands is performed by the ROP Service component that queues the commands. Each command is executed, the results are passed back, then ROP Service dequeues the next command and so on.

Conflicting commands could be issued from the different operators. This is the responsibility of the end user to manage the network.

What Have Been Implemented in the Service Point

Based on the RUNCMD the commands described use the following syntax.



Where:

NETID

Specifies the network identifier of the network in which the service point is located. If there is another node or logical unit in any connected network with the same name as the service point you specified on the SP operand, communication is allowed only if VTAM locates that service point based solely on the LU name (*spname*) of the NETID. NETID can be specified as one of the following:

local_Network

Specifies to search for the target service point only in local network. This is the default if NETID is not specified.

net_id

Specifies which network to search for the target service point. the *net_id* must be a 1-8 character value using only the EBCDIC characters 0-9 and A-Z. At least one of the characters must be alphabetic.

*

Specifies to search for the target service point in any network.

service_point_PU

Is the physical unit (PU) of the service point the command being sent to.

application_name

Is the name of the application the command is being sent to.

Note: Th

operator_ID

Is used for ROP Service only. It is the operator ID of the NetView account issuing the command.

CLISTVAR

Specifies whether to save replies in command list variables. You can only use CLISTVAR when coding the RUNCMD command in a command list. For more information, refer to "Common Operations Services Commands" in *TME 10 NetView for OS/390 customization: Using REXX and the NetView Command List Language*, SC31-8231.

NO

Does not save replies in command list variables. No is the default.

Yes

Saves replies in command list variables.

3746_APPN_Management_Command

The 3746 APPN management command being issued. Only the commands documented in this manual are supported (see Chapter 3, “3746 APPN, Manage NNP and CP Commands” on page 3-1, Chapter 4, “3746 APPN Manage Configurations Commands” on page 4-1, and Chapter 5, “3746 APPN Network Management Commands” on page 5-1).

Note

If your RUNCMD addresses a service point which is not at corresponding EC level, at least F64810, your NCCF console will no longer accept commands, because the RUNCMD is waiting for a solicited response from the service point. Use the DISPCMD and CANCMD commands to cancel the RUNCMD.

Chapter 3. 3746 APPN, Manage NNP and CP Commands

Management commands available through the NetView **RUNCMD** defined in the service processor to control the NNP, CCM configuration management and the CCM APPN management menu.

List of Commands	Refer to Page:
NNP status command	3-2
Start CP	3-3
Stop CP	3-4
Stop and Restart the CP	3-5
Activate Configuration	3-6
Restart NNP	3-7

NNP Status Command

Syntax

▶▶—NNP /STATUS—◀◀

This command returns the current status of the active NNP. The string returned may contain:

NNP DOWN
NNP STANDBY
NNP LINK WITH 3746 NOT READY
NNP LINK WITH 3746 READY
NNP LINK WITH 3746 OPERATIONAL
NNP WAITING OPERATOR ACTIVATION

Start CP

Syntax

▶▶—NNP /STARTCP—◀◀

This command starts the control program and returns string STARTING CONTROL PROGRAM when the command is accepted, or else the string COMMAND REJECTED FOR THE CURRENT NNP STATUS when the command is incompatible with the current NNP status.

Table 3-1. Rules to Accept the Command with One NNP

NNP Status	Command
NNP Down	Rejected
NNP Standby	Accepted
NNP Waiting Operator Activation	Rejected
NNP Link with 3746 Not Ready	Rejected
NNP Link with 3746 Ready	Rejected
NNP Link with 3746 Operational	Rejected

The completion of the command must be verified by issuing a **NNP /STATUS** command.

Stop CP

Syntax

▶▶—NNP /STOPCP—◀◀

This command stops the control program and returns string STOPPING CONTROL PROGRAM when the command is accepted, or else the string COMMAND REJECTED FOR THE CURRENT NNP STATUS when the command is incompatible with the current NNP status.

Note: This command should be used if the option **Link(s) through SNA** has been selected in the **NetView Link(s)/Reporting Customization** (see Figure 2-2 on page 2-2). Otherwise the link between the NetView focal point and the service processor service point is broken. In this case the link must be reestablished manually on the service processor.

Table 3-2. Rules to Accept the Command with One NNP

NNP Status	Command
NNP Down	Rejected
NNP Standby	Rejected
NNP Waiting Operator Activation	Accepted
NNP Link with 3746 Not Ready	Accepted
NNP Link with 3746 Ready	Accepted
NNP Link with 3746 Operational	Accepted

The completion of the command must be verified by issuing a **NNP /STATUS** command.

Stop and Restart the CP

Syntax

▶▶—NNP /RSTARTCP—▶▶

This command stops and restarts the control program and returns string `RESTARTING CONTROL PROGRAM` when the command is accepted, or else the string `COMMAND REJECTED FOR THE CURRENT NNP STATUS` when the command is incompatible with the current NNP status.

Table 3-3. Rules to Accept the Command with One NNP

NNP Status	Command
NNP Down	Rejected
NNP Standby	Rejected
NNP Waiting Operator Activation	Accepted
NNP Link with 3746 Not Ready	Accepted
NNP Link with 3746 Ready	Accepted
NNP Link with 3746 Operational	Accepted

The completion of the command must be verified by issuing a **NNP /STATUS** command.

Activate Configuration

Syntax

▶▶—NNP /ACTIVECP—▶▶

This command allows you to activate the current configuration when the automatic activation control is not activated.

It returns the string `ACTIVATING CONTROL PROGRAM` when the command is accepted, or else the string `COMMAND REJECTED FOR THE CURRENT NNP STATUS` when the command is incompatible with the current NNP status.

Note: Two cases:

- If the option **Link(s) through SNA** has been selected in the **NetView Link(s)/Reporting Customization** (see Figure 2-2 on page 2-2), the message `COMMAND ID x IS LONG RUNNING` is displayed. The command is longer than 60 seconds and permits to start another command.
- If the option **Link(s) through APPN** has been selected no answer is returned.

Table 3-4. Rules to Accept the Command with One NNP

NNP Status	Command
NNP Down	Rejected
NNP Standby	Rejected
NNP Waiting Operator Activation	Accepted
NNP Link with 3746 Not Ready	Rejected
NNP Link with 3746 Ready	Rejected
NNP Link with 3746 Operational	Rejected

The completion of the command must be verified by issuing a **NNP /STATUS** command.

Restart NNP

Syntax

```
►►—NNP /RESTART—►◄
```

This command shuts down the NNP and reboots it automatically. If the automatic activation is selected the control program is started.

It returns the string REACTIVATING NETWORK NODE PROCESSOR when the command is accepted, or else the string COMMAND REJECTED FOR THE CURRENT NNP STATUS when the command is incompatible with the current NNP status.

Table 3-5. Rules to Accept the Command with One NNP

NNP Status	Command
NNP Down	Rejected
NNP Standby	Accepted
NNP Waiting Operator Activation	Accepted
NNP Link with 3746 Not Ready	Accepted
NNP Link with 3746 Ready	Accepted
NNP Link with 3746 Operational	Accepted

The completion of the command must be verified by issuing a **NNP /STATUS** command.

Chapter 4. 3746 APPN Manage Configurations Commands

The commands related to the management of the configuration are:

List of Commands	Refer to Page:
List all the configurations	4-1
Activate a configuration	4-2

List All Configurations

Syntax

➡—CONF /LIST—⬅

This command gives the list of all the configuration defined with CCM.

Command Example

conf /list

Command Result

```
Start of output NBS4NMVT | CONF /LIST
Configuration name      MMM-DD-YYYY  HH:MM
- BS5 840I FR sharing I/A  Jan-04-1999  04:19
- ERS6 841P SNA/APPN/IP2/F Jan-06-1998  06:19
- ERS6 841P SNA/APPN/FRFH  Jan-07-1998  07:19
- Reg_862B_OSPF           Feb-03-1999  03:19
- DR_871A_ERIC            Feb-12-1999  12:19
- CCM basic op^rations    Feb-18-1999  18:19
A 871-E                  Mar-11-1999  11:19
- ERS6-BS5 840F FR SHR OSPF Mar-14-1997  14:19
- ERS6 840 V4.3 IP/FR      May-18-1998  18:19
- ERS6 854d scratch dav2   Jul-21-1998  21:19
- TN3270(4PU)-CC3-TKR6    Jul-22-1998  22:19
- ERS6 840V4.1 APPN       Jul-24-1997  24:19
- Reg_854F_CC3            Aug-05-1998  05:19
- Reg_862B_RIP            Aug-11-1998  11:19
- ERS6 840V3.2 FTP/APPN/SNA Oct-20-1997  20:19
- ERS6 841 K FTP/APPN/SNA  Oct-21-1997  21:19
- packet filter/2         Nov-18-1997  18:19
- ERS6 840L V2.2 FR APPN/IP Dec-02-1998  02:19
- ERS6 841K SNA/APPN/IP    Dec-09-1997  09:19
- ERS6 841 P IP filtering  Dec-12-1997  12:19
- ERS6 841V1.1 IP filtering Dec-12-1997  12:19
End of output NBS4NMVT | CONF /LIST
```

Note: The configurations listed are only the compatible configurations (same level).

Activate a Configuration

Syntax

```
►►—CONF /ACTIVATE—/NAME="configname"—►◄
```

Note: *configname* must be between quotation marks.

This command performs all the processing tasks (see “Example of Activation”) to activate a new configuration whose name is *configname*. If the configuration name *configname* is not found, the string THE CONFIGURATION IS NOT FOUND is returned.

Note: Two cases:

- If the option **Link(s) through SNA** has been selected in the **NetView Link(s)/Reporting Customization** (see Figure 2-2 on page 2-2), the message COMMAND ID x IS LONG RUNNING is displayed. The command is longer than 60 seconds and permits to start another command.
- If the option **Link(s) through APPN** has been selected no answer is returned.

Example of Activation

To activate a new configuration, retrieve and unzip the configuration files and then activate the configuration from the NetView program.

Retrieving New Configuration Files

The name of the requested configuration is taken out of the CCM.HDR file listing all the available configurations.

The configuration is a set of files. The list of files name and contents is displayed in the following example. The current activated configuration is marked with an 'A'.

Start of output NBS4NMVT | ACTIVATE /NAME

Configuration name	MMM-DD-YYYY	HH:MM
- BS5 840I FR sharing I/A	Jan-04-1999	04:19
- ERS6 841P SNA/APPN/IP2/F	Jan-06-1998	06:19
- ERS6 841P SNA/APPN/FRFH	Jan-07-1998	07:19
- Reg_862B_OSPF	Feb-03-1999	03:19
- DR_871A_ERIC	Feb-12-1999	12:19
- CCM basic operations	Feb-18-1999	18:19
A 871-E	Mar-11-1999	11:19
- ERS6-BS5 840F FR SHR OSPF	Mar-14-1997	14:19
- ERS6 840 V4.3 IP/FR	May-18-1998	18:19
- ERS6 854d scratch dav2	Jul-21-1998	21:19
- TN3270(4PU)-CC3-TKR6	Jul-22-1998	22:19
- ERS6 840V4.1 APPN	Jul-24-1997	24:19
- Reg_854F_CC3	Aug-05-1998	05:19
- Reg_862B_RIP	Aug-11-1998	11:19
- ERS6 840V3.2 FTP/APPN/SNA	Oct-20-1997	20:19
- ERS6 841 K FTP/APPN/SNA	Oct-21-1997	21:19
- packet filter/2	Nov-18-1997	18:19
- ERS6 840L V2.2 FR APPN/IP	Dec-02-1998	02:19
- ERS6 841K SNA/APPN/IP	Dec-09-1997	09:19
- ERS6 841 P IP filtering	Dec-12-1997	12:19
- ERS6 841V1.1 IP filtering	Dec-12-1997	12:19
- ERS6 2944 FR	Dec-16-1997	16:19
- ERS6: OSPF FR to BS5	Dec-19-1997	19:19

End of output NBS4NMVT | ACTIVATE /NAME

Activation Steps View from the Netview Program

1. Issue the command **CONF /ACTIVATE /NAME="configname"**.
2. Check the response THE CONFIGURATION <configname> IS BEING ACTIVATED (see note).
3. Issue the command **NNP /STATUS** to get the NNP status until the status NNP LINK WITH 3746 OPERATIONAL is returned.

Note: This operation may take up to 20 minutes.

Chapter 5. 3746 APPN Network Management Commands

The network management is based upon the CCM one related to:

1. Ports
2. Stations
3. Non intermediate sessions
4. APPN specific:
 - a. Network topology
 - b. Network node informations
 - c. Directory
 - d. Connection network informations
 - e. HPR connections

Network Management Commands

List of Commands	Refer to Page:
List all ports	5-3
List all Ports by status	5-5
List all ports by DLC name	5-6
List all ports by status and DLC name	5-7
List all ports by wildcard portname	5-8
Display the details view for a given port name	5-9
Display the details view for a given port number	5-10
Activate all ports	5-12
Activate a given port by name	5-13
Activate a list of ports by name	5-14
Activate a given port by number	5-15
Activate a list of ports by number	5-16
Deactivate all ports	5-17
Deactivate a given port by name	5-18
Deactivate a list of ports by name	5-19
Deactivate a given port by number	5-20
Deactivate a list of ports by number	5-21
List all stations	5-22
Retrieve a page of all stations list with listid	5-23
List stations by status	5-24
List stations by statname	5-25
List stations by partner name	5-26
List stations by port name	5-27
Display the details view for a given station name	5-28
Activate all stations	5-29
Activate a given station by name	5-30
Activate a list of stations by name	5-31
Deactivate all stations	5-32
Deactivate a given stations by name	5-33
Deactivate a list of stations by name	5-34
List all sessions	5-35
Retrieve a page of all Sessions list with listid	5-36
List sessions by LU alias name	5-37
List sessions by mode name	5-38
List sessions by partners name and alias name	5-39
List sessions by station name	5-40

List of Commands	Refer to Page:
Display the details view for a given session ID	5-41
Network topology display	5-42
Retrieve a page of network topology display with listid	5-45
Node information display	5-47
Directory information display	5-48
Connection information display	5-50
HPR connection information display	5-51

List All Ports

Syntax

▶▶—PORT /LIST—◀◀

This command without any optional parameter returns the list of all ports the contents of which is similar to the one displayed by CCM.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned

Command Example

Port /list

Command Result

Start of output NBS4NMVT | PORT /LIST

Port Name	Port#	LS#	Status	DLC Name	Type
TRP2304A	2304	0	ACTIVATED	IBMTRNET	SAF
FR2432AP	2432	1	ACTIVATING	FR	SAF
TRP2144A	2144	1	ACTIVATED	IBMTRNET	SAF
FR2398	2398	2	ACTIVATING	FR	SAF
TRP2688A	2688	1	ACTIVATED	IBMTRNET	SAF
TIC2592A	2592	1	ACTIVATED	IBMTRNET	SAF
SDLC2385	2385	1	ACTIVATED	SDLC	LEASED
SDLC2376	2376	1	ACTIVATED	SDLC	LEASED
SDLC2370	2370	1	ACTIVATED	SDLC	LEASED
SDLC2369	2369	1	ACTIVATED	SDLC	LEASED
SDLC2182	2182	1	ACTIVATED	SDLC	LEASED
SDLC2181	2181	1	ACTIVATED	SDLC	LEASED
SDLC2368	2368	1	ACTIVATED	SDLC	LEASED
SDLC2187	2187	1	ACTIVATED	SDLC	LEASED
HLN2240I	2240	1	ACTIVATED	ESCON_IP	SAF
SDLC2374	2374	1	ACTIVATED	SDLC	LEASED
SDLC2186	2186	1	ACTIVATED	SDLC	LEASED
SDLC2185	2185	1	ACTIVATED	SDLC	LEASED
HLN2240A	2240	2	ACTIVATED	ESCON	SAF
CBS2080A	2080	1	ACTIVATED	IBMTRNET	SAF
TR2304I	2304	0	ACTIVATED	TR_IP	SAF
PN22402	2240	1	ACTIVATED	ESCON_IP	SAF
APFR2400	2400	0	ACTIVATING	FR	SAF
TRP2624A	2624	0	ACTIVATED	IBMTRNET	SAF
TRP2720A	2720	0	ACTIVATED	IBMTRNET	SAF
TRP2720I	2720	0	ACTIVATED	TR_IP	SAF
TRP2688I	2688	0	ACTIVATED	TR_IP	SAF
TRP2656A	2656	0	ACTIVATED	IBMTRNET	SAF
TRP2560A	2560	0	ACTIVATED	IBMTRNET	SAF
TRP2336A	2336	0	ACTIVATED	IBMTRNET	SAF
PN2240A	2240	1	ACTIVATED	ESCON	SAF
CBS2080I	2080	0	ACTIVATED	TR_IP	SAF
X25I2381	2381	0	NOT_ACTIVE	IP_X25	SAF

X25A2381	2381	0	NOT_ACTIVE	X25	SAF
X2397	2397	0	NOT_ACTIVE	X25	SAF
SDLC2180	2180	0	NOT_ACTIVE	SDLC	LEASED
SDLC2379	2379	0	NOT_ACTIVE	SDLC	LEASED
APFR2464	2464	0	NOT_ACTIVE	FR	SAF

End of output NBS4NMVT | PORT /LIST

List All Ports by Status

Syntax

►►—PORT /LIST—/STATUS=*portstatus*—►►

portstatus Possible values are:

activated
activating
deactivating
not_active

This command returns the list of the ports with the status *portstatus*

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned

Command Example

Port /list /status=not_active

Command Result

Start of output NBS4NMVT | PORT /LIST /STATUS=NOT_ACTIVE

Port Name	Port#	LS#	Status	DLC Name	Type
X25I2381	2381	0	NOT_ACTIVE	IP_X25	SAF
X25A2381	2381	0	NOT_ACTIVE	X25	SAF
SDLC2180	2180	0	NOT_ACTIVE	SDLC	LEASED
SDLC2379	2379	0	NOT_ACTIVE	SDLC	LEASED
APFR2464	2464	0	NOT_ACTIVE	FR	SAF

End of output NBS4NMVT | PORT /LIST /STATUS=NOT_ACTIVE

List All Ports by DLC Name

Syntax

►►—PORT /LIST—/DLC=*dlcname*—◄◄

dlcname Possible values are:

tr_ip
fr_ip
fr
sdlc
ppp
ibmtrnet
escon
escon_ip
x25

This command returns the list of the ports with the DLC name *dlcname*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned

Command Example

port /list /dlc=fr

Command Result

Start of output NBS4NMVT | PORT /LIST /DLC=FR

PORT /LIST /DLC=FR COMMAND EXECUTED

Port Name	Port#	LS#	Status	DLC Name	Type
FR2432AP	2432	1	ACTIVATING	FR	SAF
FR2398	2398	2	ACTIVATING	FR	SAF
APFR2400	2400	0	ACTIVATING	FR	SAF
APFR2464	2464	0	NOT_ACTIVE	FR	SAF

End of output NBS4NMVT | PORT /LIST /DLC=FR

List Ports by Status and DLC

Syntax

►►—PORT /LIST—/STATUS=*portstatus* /DLC=*dlcname*—◄◄

portstatus Possible values are:

activated
activating
deactivating
not_active

dlcname Possible values are:

tr_ip
fr_ip
fr
sdlc
ppp
ibmtrnet
escon
escon_ip
x25

This command returns the list of the ports with the status *portstatus* and the DLC name *dlcname*

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned

Command Example

port /list /status=not_active /dlc=sdlc

Command Result

Start of output NBS4NMVT | **PORT /LIST /STATUS=NOT_ACTIVE /DLC=SDLC**

Port Name	Port#	LS#	Status	DLC Name	Type
SDLC2180	2180	0	NOT_ACTIVE	SDLC	LEASED
SDLC2379	2379	0	NOT_ACTIVE	SDLC	LEASED

End of output NBS4NMVT | **PORT /LIST /STATUS=NOT_ACTIVE /DLC=**

List All Ports by Wildcard Portname

Syntax

```
➡—PORT /LIST—/NAME=wildcard—➡
```

wildcard

This command returns the list of the ports matching the portname *wildcard*. The string enter for *wildcard* must be one of the following:

- *
- *xyz*
- xyz*
- *xyz

xyz may be any character.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned

Command Example

port /list /name=S*

Command Result

Start of output NBS4NMVT | PORT /LIST /NAME=S*

Port Name	Port#	LS#	Status	DLC Name	Type
SDLC2385	2385	1	ACTIVATED	SDLC	LEASED
SDLC2376	2376	1	ACTIVATED	SDLC	LEASED
SDLC2370	2370	1	ACTIVATED	SDLC	LEASED
SDLC2369	2369	1	ACTIVATED	SDLC	LEASED
SDLC2182	2182	1	ACTIVATED	SDLC	LEASED
SDLC2181	2181	1	ACTIVATED	SDLC	LEASED
SDLC2368	2368	1	ACTIVATED	SDLC	LEASED
SDLC2187	2187	1	ACTIVATED	SDLC	LEASED
SDLC2374	2374	1	ACTIVATED	SDLC	LEASED
SDLC2186	2186	1	ACTIVATED	SDLC	LEASED
SDLC2185	2185	1	ACTIVATED	SDLC	LEASED
SDLC2180	2180	0	NOT_ACTIVE	SDLC	LEASED
SDLC2379	2379	0	NOT_ACTIVE	SDLC	LEASED

End of output NBS4NMVT | PORT /LIST /NAME=S*

Display the Details View for a Given Port Name

Syntax

►►—PORT /DETAILS—/NAME=portname—◄◄

portname The *portname* may take one of the port name value returned in the list of ports of all ports.

This command returns the details view of the port name *portname*. If the port name *portname* is not found or omitted, the string THE PORT <portname> IS UNKNOWN is returned.

Command Example

port /details /name=sdlc2182

Command Result

Start of output NBS4NMVT | PORT /DETAILS /NAME=SDLC2182

Port Name	SDLC2182
DLC Name	SDLC
Port Type	LEASED
SSID	4
Port Number	2182
Port address	X'4C494331310020'
Max received BTU size	2058
Total connections	850
Inbound connections	0
Outbound connections	850
Link station role	PRIMARY
Transmit/Receive caps	TWS
Modem class	0
Target pacing count	3
Desired max send BTU size	2058
Adapter number	0
Transmit/Receive caps	IP
Service any	No
Effective capacity	19200 bits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	9.22 milliseconds (telephone)
HPR Support	No
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Nonsecure

End of output NBS4NMVT | PORT /DETAILS /NAME=SDLC2182

Display the Details View for a Given Port Number

Syntax

►►—PORT /DETAILS—/NUMBER=portnum—◄◄

<i>portnum</i>	The <i>portnum</i> may take one of the port number value returned in the list of ports of all ports.
----------------	--

This command returns the details view of the port number *portnum*. If the port number *portnum* is not found or omitted, the string THE PORT <portnum> IS UNKNOWN is returned.

Command Example

port /details /number=2304

Command Result

Start of output NBS4NMVT | PORT /DETAILS /NUMBER=2304

```

Port Name          TRP2304A
DLC Name           IBMTRNET
Port Type          SAF
SSID               6
Port Number        2304
Port address       X'400000502304080000000000000000000000000000000000
                  00000000000000000000'
Max received BTU size 8000
Total connections  1250
Inbound connections 0
Outbound connections 250
Link station role  NEGOTIABLE
Transmit/Receive caps TWA
Modem class        0
Target pacing count 3
Desired max send BTU size 8000
Adapter number      0
DLC data type       TR
Service any         Yes
Effective capacity   15999900 bits per second
Cost per connect time 0
Cost per byte       0
Propagation delay    384.00 microseconds (lan)
HPR Support         No
User defined parameter 1 0
User defined parameter 2 0
User defined parameter 3 0
Security            Nonsecure

Port Name          TR2304I
DLC Name           TR_IP
Port Type          SAF

```

Activate All Ports

Syntax

▶▶—PORT /ACT /ALL—▶▶

This command requests the activation of all ports. *portname*. The completion of the command can be verified by issuing a **PORT /LIST** command

Command Example

port /act /all

Activate a Given Port by Name

Syntax

►►—PORT /ACT—/NAME=*portname*—◄◄

portname This can take one of the values returned in the list of ports of all ports.

This command requests the activation of the port name *portname*. If the port name *portname* is not found or omitted, the string THE PORT NAME NOT SPECIFIED is returned.

Command Example

port /act /name=FR2398

Activate a List of Ports by Name

Syntax

▶▶—PORT /ACT—/NAME=*portname1*, *portname2*, ..., *portnamen*—▶▶

portnamex This can take one of the values returned in the list of ports of all ports.

This command requests the activation of the list of ports with names *portname1*, *portname2*, ..., *portnamen*. If one of the port name *portnamex* is not found or omitted, the string PORT NAME <portnamex> UNKNOWN is returned.

Command Example

port /act /name=TRP2304A, FR2398

Activate a Given Port by Number

Syntax

►►—PORT /ACT—/NUMBER=*portnum*—◄◄

portnum This can take one of the values returned in the list of ports of all ports.

This command requests the activation of the ports number *portnum*. If the port number *portnum* is not found or omitted, the string PORT NUMBER <portnum> UNKNOWN is returned.

Command Example

port /act /number=2180

Activate a List of Ports By Number

Syntax

▶▶—PORT /ACT—/NUMBER=*portnum1*, *portnum2*, ..., *portnumn*—▶▶

portnumx This can take one of the values returned in the list of ports of all ports.

This command requests the activation of the list of ports with the numbers *portnum1*, *portnum2*, ..., *portnumn*. If one of the port number *portnumx* is not found or omitted, the string PORT NUMBER <*portnumx*> UNKNOWN is returned.

Command Example

port /act /number=2304, 2380

Deactivate All Ports

Syntax

```
▶▶—PORT /DEACT /ALL—┐/F┘▶▶
```

This command requests the deactivation of all ports. *portname*. The completion of the command can be verified by issuing a **PORT /LIST** command

Note: The parameter *F* is added to submit the command in FORCE MODE.

Important Note

This command break the link between the network node processor and NetView. In order to reactivate this link the command **PORT /ACT /ALL** must be initiated from the service processor.

Command Example

```
port /deact /all
```

Deactivate a Given Port by Name

Syntax

```
▶▶—PORT /DEACT—/NAME=portname—/F—▶▶
```

portname This can take one of the values returned in the list of ports of all ports.

This command requests the deactivation of the port name *portname*. If the port name *portname* is not found or omitted, the string PORT NAME NOT SPECIFIED is returned.

Note: The parameter *F* is added to submit the command in FORCE MODE.

Command Example

```
port /deact /name=TRP2304A
```

Deactivate a List of Ports by Name

Syntax

```
▶▶—PORT /DEACT—/NAME=portname1, portname2, .., portnamen—▶  
▶  
└─/F─▶
```

portnamex This can take one of the values returned in the list of ports of all ports.

This command requests the deactivation of the list of ports with names *portname1*, *portname2*, ..., *portnamen*. If one of the port name *portnamex* is not found or omitted, the string PORT NAME <portnamex> UNKNOWN is returned.

Note: The parameter *F* is added to submit the command in FORCE MODE.

Command Example

```
port /deact /name=TRP2304A, FR2432AP
```

Deactivate a Given Port by Number

Syntax

```
▶▶—PORT /DEACT—/NUMBER=portnum—/F—◀◀
```

portnum This can take one of the values returned in the list of ports of all ports.

This command requests the deactivation of the port number *portnum*. If the port number *portnum* is not found or omitted, the string PORT NUMBER <portnum> UNKNOWN is returned.

Note: The parameter *F* is added to submit the command in FORCE MODE.

Command Example

```
port /deact /number=2304
```

Deactivate a List of Ports by Number

Syntax

The diagram shows the command syntax for deactivating ports by number. It starts with a right-pointing arrow, followed by the text 'PORT /DEACT—/NUMBER=portnum1, portnum2, ..., portnumn'. A bracketed section '[/F]' follows, and the command ends with a left-pointing arrow.

portnumx This can take one of the values returned in the list of ports of all ports.

This command requests the deactivation of the list of ports with number *portnum1*, *portnum2*, ..., *portnumn*. If one of the port number *portnumx* is not found or omitted, the string PORT NUMBER <portnumx> UNKNOWN is returned.

Note: The parameter *F* is added to submit the command in FORCE MODE.

Command Example

port /deact /number=2304, 2380

List All Stations

Syntax

```
➡➡—STATION /LIST—➡➡
```

This command returns the list of all stations similar to the CCM one. If the list output exceeds a certain size it will be displayed page per page and will be assigned a one digit list ID.

Command Example

Station /List

Command Result

Start of output NBS4NMVT | STATION /LIST

LINK NAME	#SE	TG	PARTNER NAME	TYPE STATE	ADDRESS
SI2381	0	0		LEN CONTACTED	323810
T02720	0	0		LEN CONALS PND	40000050272008
S2385001	0	0		END XID PND	0000
S2376001	0	0		END XID PND	0000
S2370001	0	0		END XID PND	0000
S2369001	0	0		END XID PND	0000
S2182001	0	0		END XID PND	0000
S2181001	0	0		END XID PND	0000
S2368001	0	0		END XID PND	0000
S2187001	0	0		END XID PND	0000
S2180001	0	0		END CONALS PND	0000
S2379001	0	0		END XID PND	0000
LS22405I	0	0		END XID PND	00050807080701
S2374001	0	0		END XID PND	0000
S2186001	0	0		END XID PND	0000
S2185001	0	0		END XID PND	0000
LS2240A3	0	0		END XID PND	00030807080701
LS2240A2	0	0		END XID PND	00020807080701
ZYX00004	0	0		LEN CONTACTED	01000807080701
ZYX00001	0	0		LEN CONTACTED	01000807080701
@@7	0	21	SYSTSTAP.SR3	NET CONTACTED	40000030214408
SA2381	0	25	SYSTSTAP.SR3	NET CONTACTED	323810
TOSR32	0	24	SYSTSTAP.SR3	NET CONTACTED	40000030214408
TOMAE	0	21	SYSTSTAP.MAERS6	NET CONTACTED	40000050249708
FRSR3	0	0		LRN NOT ACTIVE	00200000010864
P3970012	0	0		LRN NOT ACTIVE	11001400
P3970011	0	0		LRN NOT ACTIVE	11001400
P3970010	0	0		LRN NOT ACTIVE	0010

LISTID=listid

PAGE 1 of 8

End of output NBS4NMVT | STATION /LIST

Retrieve a Page of All Stations List with Listid

Syntax

```
➡—STATION /LIST—/LISTID=listid, PAGE=pagenum—➡
```

The *listid* is used to repeat the command **STATION /LIST** with the parameter **/LISTID=*listid***, **PAGE= *pagenum***.

The Netview RUNCMD repetition is under the responsibility of the Netview operator or the automaton program. The last list returned contains the following last record.

Command Example

```
station /list /listid=8, page=8
```

Command Result

Start of output NBS4NMVT | STATION /LIST /LISTID=8

LINK NAME	#SE	TG	PARTNER NAME	TYPE	STATE	ADDRESS
P3970009	0	0		LRN	NOT ACTIVE	0009
P3970008	0	0		LRN	NOT ACTIVE	0008
P3970007	0	0		LRN	NOT ACTIVE	0007
P3970006	0	0		LRN	NOT ACTIVE	0006
P3970005	0	0		LRN	NOT ACTIVE	0005
P3970004	0	0		LRN	NOT ACTIVE	0004
P3970003	0	0		LRN	NOT ACTIVE	0003
P3970002	0	0		LRN	NOT ACTIVE	0002
P3970001	0	0		LRN	NOT ACTIVE	0001
ST239802	0	0		LRN	NOT ACTIVE	00110000010464
ST239801	0	0		LRN	NOT ACTIVE	00100000010464
SPMOSSE	0	0		LRN	NOT ACTIVE	40000050111104
LISTID=8						PAGE 8 of 8

End of output NBS4NMVT | STATION /LIST /LISTID=8

List Stations by Status

Syntax

►►—STATION /LIST—/STATUS=*stationstatus*—►►

stationstatus Possible values are:

not_active
conals pnd
xid_pnd
contactpnd
contacted
disc_pnd

This command returns the list of the stations with the status *stationstatus*. If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

station /list /status=not_active

Command Result

Start of output NBS4NMVT | STATION /LIST /STATUS=NOT_ACTIVE

LINK NAME	#SE	TG	PARTNER NAME	TYPE	STATE	ADDRESS
FRSR3	0	0		LRN	NOT ACTIVE	00200000010864
P3970001	0	0		LRN	NOT ACTIVE	0001
P3970002	0	0		LRN	NOT ACTIVE	0002
ST239802	0	0		LRN	NOT ACTIVE	00110000010464
P3970003	0	0		LRN	NOT ACTIVE	0003
P3970004	0	0		LRN	NOT ACTIVE	0004
P3970005	0	0		LRN	NOT ACTIVE	0005
P3970006	0	0		LRN	NOT ACTIVE	0006
P3970007	0	0		LRN	NOT ACTIVE	0007
P3970008	0	0		LRN	NOT ACTIVE	0008
P3970009	0	0		LRN	NOT ACTIVE	0009
P3970010	0	0		LRN	NOT ACTIVE	0010
P3970011	0	0		LRN	NOT ACTIVE	11001400
P3970012	0	0		LRN	NOT ACTIVE	11001400
S2180001	0	0		LRN	NOT ACTIVE	0000
S2379001	0	0		LRN	NOT ACTIVE	0000
SPMOSSE	0	0		LRN	NOT ACTIVE	40000050111104
ST239801	0	0		LRN	NOT ACTIVE	00100000010464

End of output NBS4NMVT | STATION /LIST /STATUS=NOT_ACTIVE

List Stations by Statname

Syntax

```
►►—STATION /LIST—/NAME=statname—►◄
```

This command returns the list of the stations with the name *statname*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

```
station /list /name=st239801
```

Command Result

Start of output NBS4NMVT | STATION /LIST /NAME=ST239801

LINK NAME	#SE	TG	PARTNER NAME	TYPE STATE	ADDRESS
ST239801	0	0		LRN NOT ACTIVE	00100000010464

End of output NBS4NMVT | STATION /LIST /NAME=ST239801

List Stations by Partner Name

Syntax

►►—STATION /LIST—/PARTNER=*partnername*—►◄

This command returns the list of the stations with the partner name *partnername*. If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

station /list /partnerame=syststap.sr3

Command Result

Start of output NBS4NMVT | STATION /LIST /PARTNERNAME=SYSTSTAP.SR3

LINK NAME	#SE	TG	PARTNER NAME	TYPE STATE	ADDRESS
@@7	0	21	SYSTSTAP.SR3	NET CONTACTED	40000030214408
SA2381	0	25	SYSTSTAP.SR3	NET CONTACTED	323810
TOSR32	0	24	SYSTSTAP.SR3	NET CONTACTED	40000030214408

End of output NBS4NMVT | STATION /LIST /PARTNERNAME=SYSTSTAP.SR3

List Stations by Port Name

Syntax

```
➡—STATION /LIST—/PORTNAME=portname—➡
```

This command returns the list of the stations defined with the port name *portname*. If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

```
station /list /portname=SA2381
```

Command Result

```
Start of output NBS4NMVT | STATION /LIST /PORTNAME=SA2381
```

LINK NAME	#SE	TG	PARTNER NAME	TYPE STATE	ADDRESS
SA2381	0	25		NET CONTACTED	323810

```
End of output NBS4NMVT | STATION /LIST /PORTNAME=SA2381
```

Display the Details View for a Given Station Name

Syntax

```
➡—STATION /DETAILS—/NAME=linkname—⬅
```

linkname This can take be one of the station name value returned in the list of stations.

This command returns the details view of the station name *linkname*. If the station *linkname* is not found, or omitted the string THE STATION <linkname> IS UNKNOWN is returned.

Command Example

```
station /details /name=st239801
```

Command Result

Start of output NBS4NMVT | STATION /DETAILS /NAME=ST239801

Link Name	ST239801
Adjacent node CP name	
Adjacent node type	Learn
DLC Name	FR
Port Name	FR2398
CP-CP session support	Yes
Preferred NN server	No
Auto-activate link	Yes
Transmission group number	0
Limited ressource	NO
Solicit SSCP	No
Init self	No
BIND support	Yes
Link station role	Negotiable
Line type	SAF
HPR Support	No
Effective capacity	19200 bits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	0.00 seconds (minimum)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Nonsecure

End of output NBS4NMVT | STATION /DETAILS /NAME=ST239801

Activate All Stations

Syntax

```
▶▶—STATION /ACT /ALL—▶▶
```

This command requests the activation of all stations.

The completion of the command can be verified by issuing a **STATION /LIST** command

Command Example

```
station /act /all
```

Activate a Given Station by Name

Syntax

►►—STATION /ACT—/NAME=*linkname*—►◄

linkname This can take one of the station name value returned in the list of stations.

This command request the activation of the station *linkname*.

If the linkname name *linkname* is not found, the string STATION NAME <linkname> IS UNKNOWN is returned.

If the linkname name *linkname* is omitted the string STATION NAME NOT SPECIFIED is returned.

Command Example

station /act /name=

Activate a List of Stations by Name

Syntax

```
►►—STATION /ACT—/NAME=linkname1, linkname2, .., linknamen—►◄
```

linknamex This can take one of the station name value returned in the list of stations.

This command requests the activation of the list of stations with the names *linkname1*, *linkname2*, .., *linknamen*.

If one of the linkname name *linknamex* is not found, the string STATION <*linknamex*> IS UNKNOWN is returned.

Command Example

```
station /act /name= , ,
```

Deactivate All Stations

Syntax

```
▶▶—STATION /DEACT /ALL—▶▶
```

This command requests the deactivation of all stations.

The completion of the command can be verified by issuing a **STATION /LIST** command

Command Example

```
station /deact /all
```

Deactivate a Given Station by Name

Syntax

```
➤—STATION /DEACT—/NAME=linkname—➤
```

linkname This can take one of the station name value returned in the list of stations.

This command requests the deactivation of the station name *linkname*.

If the linkname name *linkname* is not found, the string STATION <linkname> IS UNKNOWN is returned.

If the linkname name *linkname* is omitted the string STATION NAME NOT SPECIFIED is returned.

When the deactivation is complete, the string STATION <linkname> IS DEACTIVATED is returned.

Command Example

station /deact /name=

Deactivate a List of Stations by Name

Syntax

►►—STATION /DEACT—/NAME=*linkname1, linkname2, .., linknamen*—►◄

linknamex This can take one of the station name value returned in the list of stations.

This command requests the deactivation of the list of stations with the names *linkname1, linkname2, .., linknamen*.

If one of the linkname name *linknamex* is not found, the string STATION <*linknamex*> IS UNKNOWN is returned.

Command Example

station /deact /name= , ,

List All Sessions

Syntax

»—SESSION /LIST—«

This command returns the list of all sessions similar to the one displayed by CCM.

If no session the string NO SESSION is returned.

Command Example

session /list

Command Result

Start of output NBS4NMVT | SESSION /LIST

LU	ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU	Size	SessionId
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A1AD8	2	16	512		X'D493172E7FEC5A2E'
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8	512		X'D49FA72E64936455'
BS5		CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	1	512		X'D49FA72E64937AC3'
BS5		CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	39	512		X'EA5F3DE7945AF875'

End of output NBS4NMVT | SESSION /LIST

Note: The SessionID is given in alphabetical order.

Retrieve a Page of all Sessions List with Listid

Syntax

▶▶—SESSION /LIST—/LISTID=*listid*, PAGE=*pagenum*—▶▶

The *listid* is used to repeat the command **SESSION /LIST** with the parameter **/LISTID=*listid*, PAGE=*pagenum***. The Netview RUNCMD repetition is under the responsibility of the Netview operator or the automaton program. The last list returned contains the following last record.

Command Example

session /list /listid=8 , page=8

Command Result

Start of output NBS4NMVT | SESSION /LIST /LISTID=8, PAGE=8

LU	ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU	Size	SessionId
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A1AD8	2	16		512	X'D493172E7FEC5A2E'
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8		512	X'D49FA72E64936455'
BS5		CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	1		512	X'D49FA72E64937AC3'
BS5		CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	39		512	X'EA5F3DE7945AF875'
LISTID=8									PAGE 8 of 8

End of output NBS4NMVT | SESSION /LIST /LISTID=8, PAGE=8

Note: The SessionID is given in alphabetical order.

List Sessions by LU Alias Name

Syntax

```
▶▶—SESSION /LIST—/LUALIAS=aliasname—◀◀
```

This command returns the list of all sessions with the lualias name *lualias*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

```
session /list /lualias=BS5
```

Command Result

Start of output NBS4NMVT | SESSION /LIST /LUALIAS=BS5

LU ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU	Size	SessionId
BS5	CPSVCMG	SYSTST.BS6 @I070422	0A1A1AD8	2	16	512		X'D493172E7FEC5A2E'
BS5	CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8	512		X'D49FA72E64936455'
BS5	CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	1	512		X'D49FA72E64937AC3'
BS5	CPSVRMGR	SYSTST.CDRM11 @I070490	0A35E090	2	42	512		X'EA5F3DE7945AF875'

End of output NBS4NMVT | SESSION /LIST /LUALIAS=BS5

Note: The SessionID is given in alphabetical order.

List Sessions by Mode Name

Syntax

►►—SESSION /LIST—/MODE=modename—►◄

This command returns the list of all sessions with the mode name *modename*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

session /list /mode=CPSVCMG

Command Result

Start of output NBS4NMVT | SESSION /LIST /MODE=CPSVMG

LU	ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU	Size	SessionId
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A1AD8	2	16		512	X'D493172E7FEC5A2E'
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8		512	X'D49FA72E64936455'

End of output NBS4NMVT | SESSION /LIST /MODE=CPSVMG

Note: The SessionID is given in alphabetical order.

List Sessions by Partners Name and Alias Name

Syntax

▶▶—SESSION /LIST—/PARTNER=*partnername*, ALIAS=*aliasname*—▶▶

This command returns the list of all sessions with the partner name *partner* and the alias name *aliasname*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

session /list /partner=SYSTST.BS6, alias=EI070422

Command Result

Start of output NBS4NMVT | SESSION /LIST /PARTNER=SYSTST.BS6

LU	ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU	Size	SessionId
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A1AD8	2	16		512	X'D493172E7FEC5A2E'
BS5		CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8		512	X'D49FA72E64936455'

End of output NBS4NMVT | SESSION /LIST /PARTNER=SYSTST.BS6

Note: The SessionID is given in alphabetical order.

List Sessions by Station Name

Syntax

```
▶▶—SESSION /LIST—/STATION=linkname—▶▶
```

This command returns the list of all sessions with the station name *linkname*.

If there is no resource found, the string THE RESOURCES LIST IS EMPTY is returned.

Command Example

```
session /list /station=0A1A3E40
```

Command Result

Start of output NBS4NMVT | SESSION /LIST /STATION=0A1A3E40

LU ALIAS	MODE	FQ PARTNER NAME and ALIAS	LINK	SPW	RPW	RU Size	SessionId
BS5	CPSVCMG	SYSTST.BS6 @I070422	0A1A3E40	2	8	512	X'D49FA72E64936455'

End of output NBS4NMVT | SESSION /LIST /STATION=0A1A3E40

Note: The SessionID is given in alphabetical order.

Display the Details View for a Given Session ID

Syntax

```
▶▶—SESSION /DETAILS—/SESSIONID=sessionid—▶▶
```

This command returns the details view of the session with sessionid name *sessionid*.

If the *sessionid* is not found, the string THE SESSION <sessionid> IS UNKNOWN is returned.

Command Example

session /details /sessionid=D49FA72E64938D51

Note: The sessionid could be entered in small or capital but without prefix X and quotes.

Command Result

Start of output NBS4NMVT | SESSION /DETAILS /SESSIONID=D49FA72E64938D51

Session ID	X'D49FA72E64938D51'
Conversation ID	X'00000000'
LU alias	BS5
Partner LU alias	@I080922
Mode name	CPSVCMG
Send maximum RU size	512
Receive maximum RU size	512
Send pacing window	2
Receive pacing window	8
Link name	0A19BF68TCID
Outbound destination address (DAF)	X'00'
Outbound origin address (OAF)	X'01'
OAF-DAF assignor indicator (ODAI)	B'32'
Session type	LU-LU session
Connection type	Peer
Procedure correlator ID (PCID)	X'2EA79FD4518D9364'
PCID generator CP name	SYSTST.BS5
Conversation group ID	X'DE180537'
LU name	SYSTST.BS5
Partner LU name	SYSTST.BS6
Pacing type	Adaptive

End of output NBS4NMVT | SESSION /DETAILS /SESSIONID=D49FA72E64938D51

Network Topology Display

Syntax

▶▶—APPN /TOPOLOGY—◀◀

This command returns network node topology informations.

Command Example

appn /topology

Command Result

Start of output NBS4NMVT | APPN /TOPOLOGY

```
1> Network node CP name          SYSTSTAP.CDRM10
   Route additional resistance    128
   Congested?                    No
   Quiescing?                    No
   ISR depleted                  No
   Cent Direct Support           No
1.1> TG partner CP name          SYSTSTAP.RT830
    Transmission group number    21
    TG partner node type         Real
    Quiescing?                   No
    Topology                     Network
    Effective capacity            31.95 Megabits per second
    Cost per connect time        0
    Cost per byte                 0
    Propagation delay            384.00 microseconds (lan)
    User defined parameter 1     128
    User defined parameter 2     128
    User defined parameter 3     128
    Security                     Nonsecure

2> Network node CP name          SYSTSTAP.CDRM11
   Route additional resistance    128
   Congested?                    No
   Quiescing?                    No
   ISR depleted                  No
   Cent Direct Support           No
2.1> TG partner CP name          SYSTSTAP.SR3
    Transmission group number    21
    TG partner node type         Real
    Quiescing?                   No
    Topology                     Network
    Effective capacity            31.95 Megabits per second
    Cost per connect time        0
    Cost per byte                 0
    Propagation delay            384.00 microseconds (lan)
    User defined parameter 1     128
    User defined parameter 2     128
    User defined parameter 3     128
```

Security	Nonsecure
3> Network node CP name	SYSTSTAP.MAERS6
Route additional resistance	128
Congested?	No
Quiescing?	No
ISR depleted	No
Cent Direct Support	No
3.1> TG partner CP name	SYSTSTAP.SR3
Transmission group number	21
TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	15.97 Megabits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	384.00 microseconds (lan)
User defined parameter 1	128
User defined parameter 2	128
User defined parameter 3	128
Security	Nonsecure
5> Network node CP name	SYSTSTAP.RT830
Route additional resistance	128
Congested?	No
Quiescing?	No
ISR depleted	No
Cent Direct Support	No
5.4> TG partner CP name	SYSTSTAP.MAERS6
Transmission group number	21
TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	15.97 Megabits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	384.00 microseconds (lan)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Nonsecure
5.1> TG partner CP name	SYSTSTAP.SR3
Transmission group number	21
TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	15.97 Megabits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	384.00 microseconds (lan)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Nonsecure
5.2> TG partner CP name	SYSTSTAP.SR3
Transmission group number	24

TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	15.97 Megabits per second
Cost per connect time	0
Cost per byte	0
Propagation delay	384.00 microseconds (lan)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Nonsecure

5.3> TG partner CP name	SYSTSTAP.SR3
Transmission group number	25
TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	249.60 Kilobits per second
Cost per connect time	0
Cost per byte	64
Propagation delay	147.46 milliseconds (packet switched network)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Public switched network

PAGE 1 of 7

End of output NBS4NMVT | APPN /TOPOLOGY

Retrieve a Page of Network Topology Display with Listid

Syntax

▶▶—APPN /TOPOLOGY—/LISTID=*listid*, PAGE=*pagenum*—◀◀

The *listid* is used to repeat the command **APPN /TOPOLOGY** with the parameter **/LISTID=*listid*, PAGE=*pagenum***. The Netview RUNCMD repetition is under the responsibility of the Netview operator or the automaton program. The last list returned contains the following last record.

Command Example

appn /topology /listid=7 , page=7

Command Result

Start of output NBS4NMVT | APPN /TOPOLOGY /LISTID=7, PAGE=7

```
4> Network node CP name          SYSTSTAP.SR3
Route additional resistance      128
Congested?                      No
Quiescing?                      No
ISR depleted                    No
Cent Direct Support             No
4.3> TG partner CP name          SYSTSTAP.RT830
Transmission group number       21
TG partner node type            Real
Quiescing?                      No
Topology                        Network
Effective capacity               15.97 Megabits per second
Cost per connect time           0
Cost per byte                   0
Propagation delay                0.00 seconds (minimum)
User defined parameter 1        0
User defined parameter 2        0
User defined parameter 3        0
Security                        Nonsecure

4.1> TG partner CP name          SYSTSTAP.RT830
Transmission group number       34
TG partner node type            Real
Quiescing?                      No
Topology                        Network
Effective capacity               15.97 Megabits per second
Cost per connect time           0
Cost per byte                   0
Propagation delay                384.00 microseconds (lan)
User defined parameter 1        0
User defined parameter 2        0
User defined parameter 3        0
Security                        Nonsecure
```

4.2> TG partner CP name	SYSTSTAP.RT830
Transmission group number	35
TG partner node type	Real
Quiescing?	No
Topology	Network
Effective capacity	249.60 Kilobits per second
Cost per connect time	0
Cost per byte	64
Propagation delay	147.46 milliseconds (packet switched network)
User defined parameter 1	0
User defined parameter 2	0
User defined parameter 3	0
Security	Public switched network

LISTID=7

PAGE 7 of 7

End of output NBS4NMVT | APPN /TOPOLOGY /LISTID=7, PAGE=7

Node Information Display

Syntax

▶▶—APPN /NETNODE—▶▶

This command returns the network node informations.

Command Example

appn /netnode

Command Result

Start of output NBS4NMVT | APPN /NETNODE

```
Route additional resistance      128
Maximum directory cache entries 255
Current directory cache entries  2
Directory save interval         20
```

End of output NBS4NMVT | APPN /NETNODE

Directory Information Display

Syntax

➡—APPN /DIR—➡

This command returns the directory informations.

Command Example

appn /dir

Command Result

Start of output NBS4NMVT | APPN /DIR

```
1> Network node CP name          SYSTSTAP.RT830
Number of associated LUs          65
  LU name                        Owning CP name      LU entry type
1.1> SYSTSTAP.EN06FR05 SYSTSTAP.EN06FR05 Register
1.1> SYSTSTAP.EN06FR05 SYSTSTAP.EN06FR05 Register
1.2> SYSTSTAP.LU06FR05 SYSTSTAP.EN06FR05 Register
1.3> SYSTSTAP.EN06FR04 SYSTSTAP.EN06FR04 Register
1.4> SYSTSTAP.LU06FR04 SYSTSTAP.EN06FR04 Register
1.5> SYSTSTAP.EN06FR03 SYSTSTAP.EN06FR03 Register
1.6> SYSTSTAP.LU06FR03 SYSTSTAP.EN06FR03 Register
1.7> SYSTSTAP.EN06FR01 SYSTSTAP.EN06FR01 Register
1.8> SYSTSTAP.LU06FR01 SYSTSTAP.EN06FR01 Register
1.9> SYSTSTAP.EN06FR02 SYSTSTAP.EN06FR02 Register
1.10> SYSTSTAP.LU06FR02 SYSTSTAP.EN06FR02 Register
1.11> SYSTSTAP.EN191028 SYSTSTAP.EN191028 Register
1.12> SYSTSTAP.LU191028 SYSTSTAP.EN191028 Register
1.13> SYSTSTAP.EN191026 SYSTSTAP.EN191026 Register
1.14> SYSTSTAP.LU191026 SYSTSTAP.EN191026 Register
1.15> SYSTSTAP.EN191024 SYSTSTAP.EN191024 Register
1.16> SYSTSTAP.LU191024 SYSTSTAP.EN191024 Register
1.17> SYSTSTAP.EN191022 SYSTSTAP.EN191022 Register
1.18> SYSTSTAP.LU191022 SYSTSTAP.EN191022 Register
1.19> SYSTSTAP.EN191020 SYSTSTAP.EN191020 Register
1.20> SYSTSTAP.LU191020 SYSTSTAP.EN191020 Register
1.21> SYSTSTAP.EN191018 SYSTSTAP.EN191018 Register
1.22> SYSTSTAP.LU191018 SYSTSTAP.EN191018 Register
1.23> SYSTSTAP.EN191016 SYSTSTAP.EN191016 Register
1.24> SYSTSTAP.LU191016 SYSTSTAP.EN191016 Register
1.25> SYSTSTAP.EN191014 SYSTSTAP.EN191014 Register
1.26> SYSTSTAP.LU191014 SYSTSTAP.EN191014 Register
1.27> SYSTSTAP.EN191012 SYSTSTAP.EN191012 Register
1.28> SYSTSTAP.LU191012 SYSTSTAP.EN191012 Register
1.29> SYSTSTAP.EN191010 SYSTSTAP.EN191010 Register
1.30> SYSTSTAP.LU191010 SYSTSTAP.EN191010 Register
1.31> SYSTSTAP.EN191008 SYSTSTAP.EN191008 Register
1.32> SYSTSTAP.LU191008 SYSTSTAP.EN191008 Register
1.33> SYSTSTAP.EN191006 SYSTSTAP.EN191006 Register
```


1.34>	SYSTSTAP.LU191006	SYSTSTAP.EN191006	Register
1.35>	SYSTSTAP.EN191004	SYSTSTAP.EN191004	Register
1.36>	SYSTSTAP.LU191004	SYSTSTAP.EN191004	Register
1.37>	SYSTSTAP.EN191002	SYSTSTAP.EN191002	Register
1.38>	SYSTSTAP.LU191002	SYSTSTAP.EN191002	Register
1.39>	SYSTSTAP.EN237400	SYSTSTAP.EN237400	Register
1.40>	SYSTSTAP.LU237400	SYSTSTAP.EN237400	Register
1.41>	SYSTSTAP.EN218000	SYSTSTAP.EN218000	Register
1.42>	SYSTSTAP.LU218000	SYSTSTAP.EN218000	Register
1.43>	SYSTSTAP.EN237900	SYSTSTAP.EN237900	Register
1.44>	SYSTSTAP.LU237900	SYSTSTAP.EN237900	Register
1.45>	SYSTSTAP.EN237600	SYSTSTAP.EN237600	Register
1.46>	SYSTSTAP.LU237600	SYSTSTAP.EN237600	Register
1.47>	SYSTSTAP.EN238500	SYSTSTAP.EN238500	Register
1.48>	SYSTSTAP.LU238500	SYSTSTAP.EN238500	Register
1.49>	SYSTSTAP.EN218600	SYSTSTAP.EN218600	Register
1.50>	SYSTSTAP.LU218600	SYSTSTAP.EN218600	Register
1.51>	SYSTSTAP.EN218500	SYSTSTAP.EN218500	Register
1.52>	SYSTSTAP.LU218500	SYSTSTAP.EN218500	Register
1.53>	SYSTSTAP.EN236900	SYSTSTAP.EN236900	Register
1.54>	SYSTSTAP.LU236900	SYSTSTAP.EN236900	Register
1.55>	SYSTSTAP.EN236800	SYSTSTAP.EN236800	Register
1.56>	SYSTSTAP.LU236800	SYSTSTAP.EN236800	Register
1.57>	SYSTSTAP.EN237000	SYSTSTAP.EN237000	Register
1.58>	SYSTSTAP.LU237000	SYSTSTAP.EN237000	Register
1.59>	SYSTSTAP.EN218700	SYSTSTAP.EN218700	Register
1.60>	SYSTSTAP.LU218700	SYSTSTAP.EN218700	Register
1.61>	SYSTSTAP.EN218100	SYSTSTAP.EN218100	Register
1.62>	SYSTSTAP.LU218100	SYSTSTAP.EN218100	Register
1.63>	SYSTSTAP.EN218200	SYSTSTAP.EN218200	Register
1.64>	SYSTSTAP.LU218200	SYSTSTAP.EN218200	Register
1.65>	SYSTSTAP.RT830	SYSTSTAP.RT830	Home
2>	Network node CP name	SYSTSTAP.CDRM10	
	Number of associated LUs	2	
	LU name	Owning CP name	LU entry type
2.1>	SYSTSTAP.L10REP02	SYSTSTAP.CDRM10	Cache
2.1>	SYSTSTAP.L10REP02	SYSTSTAP.CDRM10	Cache
2.2>	SYSTSTAP.CNM10	SYSTSTAP.CDRM10	Cache

End of output NBS4NMVT | APPN /DIR

Connection Information Display

Syntax

▶▶—APPN /CONNECT—◀◀

This command returns the network connection informations.

Command Example

appn /connect

Command Result

Start of output NBS4NMVT | APPN /CONNECT

Connection network definitions 0

End of output NBS4NMVT | APPN /CONNECT

HPR Connection Information Display

Syntax

▶▶—APPN /HPR—◀◀

This command returns the HPR connection informations.

Command Example

appn /hpr

Command Result

Start of output NBS4NMVT | APPN /HPR

TCID	Partner Name	COS	ISR#	Status	Port#
A197720	SYSTST.BS6	RSETUP.B	0	Active	NNP
A19BF68	SYSTST.BS6	CPSVCMGB	1	Active	NNP
A197BC0	SYSTST.BS6	CPSVCMGB	1	Active	NNP
FF6C7CF0	SYSTST.CDRM11	#CONNECT	0	Active	2112/2144

End of output NBS4NMVT | APPN /HPR

Appendix A. Netview Procedures (REXX)

The RUNCMD command support in the 3746 service processor allows the user to issue APPN network management commands towards the service processor from the NetView NCCF console. In order to simplify the usage of the NetView RUNCMD in this particular case, a set of REXX procedures have been developed. Each procedure has a **mnemonic name** that indicates an **action** to be performed towards an **object** or a **set of objects** selected using a **criteria**.

The following three tables give the naming conventions for objects, actions and selection criteria, while the Table A-1 on page A-2 gives the commands-to-procedures relationships.

Object	Code
APPN	APPN
Configuration	CO
NNP Control Point (CP)	NNCP
NNP	NN
Port	PO
Session	SE
Station	ST

Action	Code
Activate	AC
Deactivate	DE
Details	DT
List	LI
Restart	RE
Start	S
Status	ST
Stop	P

Object Selection Criteria	Code
LU Alias Name	LU
Mode Name	MO
Name	NA
Partner	PA
Station	ST

Table A-1 (Page 1 of 2). Command-to-Procedure Relationship

APPN Network Command	Procedure name and <i>parameters</i>
NNP /STATUS	NNST <i>sname</i>
NNP /STARTCP	NNCPS <i>sname</i>
NNP /STOPCP	NNCPP <i>sname</i>
NNP /RSTARTCP	NNCPRE <i>sname</i>
NNP /ACTIVECP	NNCPAC <i>sname</i>
NNP /RESTART	NNRE <i>sname</i>
CONF /LIST	COLI <i>sname</i>
CONF /ACTIVATE	COAC <i>sname configname</i>
PORT /LIST PORT /LIST /STATUS=portstatus PORT /LIST /DLC=dlcname PORT /LIST /DLC=dlcname /STATUS=portstatus PORT /LIST /NAME=portname	POLI <i>sname</i> POLI <i>sname portstatus</i> POLI <i>sname dlcname</i> POLI <i>sname dlcname portstatus</i> POLI <i>sname portname</i> (With or without wildcard)
PORT /DETAILS /NAME=portname PORT /DETAILS /NUMBER=portnumber	PODT <i>sname portname</i> PODT <i>sname portnumber</i>
PORT /ACT /ALL PORT /ACT /NAME=portname1 [,portname2...] PORT /ACT /NUMBER=portnumber1 [,portnumber2...]	POAC <i>sname all</i> POAC <i>sname portname1 [portname2 [portname3]]</i> POAC <i>sname portnumber1 [portnumber2 [portnumber3]]</i>
PORT /DEACT /ALL PORT /DEACT /NAME=portname1[,portname2...][/F] PORT /DEACT /NUMBER=portnumber1&lbracket,portnumber2... /F]	PODE <i>sname all</i> PODE <i>sname portname1 [portname2 [portname3]] [/F]</i> PODE <i>sname portnumber1 [portnumber2 [portnumber3]] [/F]</i>
STATION /LIST STATION /LIST /LISTID=listid, PAGE=pagenum	STLI <i>sname</i> STLI <i>sname listid pagenum</i>
STATION /LIST /STATUS=stationstatus	STLIST <i>sname stationstatus</i>

<i>Table A-1 (Page 2 of 2). Command-to-Procedure Relationship</i>	
APPN Network Command	Procedure name and <i>parameters</i>
STATION /LIST /NAME=linkname	STLINA <i>sname linkname</i>
STATION /LIST /PARTNER=partnename	STLIPA <i>sname partnename</i>
STATION /LIST /PORTNAME=portname	STLIPO <i>sname portname</i>
STATION /DETAILS /NAME=linkname	STDT <i>sname linkname</i>
STATION /ACT /ALL STATION /ACT /NAME=linkname1 [,linkname2...]	STAC <i>sname all</i> STAC <i>sname linkname1 [linkname2 [linkname3]]</i>
STATION /DEACT /ALL STATION /DEACT /STATION=linkname1 [,linkname2...]	STDE <i>sname all</i> STDE <i>sname linkname1 [linkname2 [linkname3]]</i> [/F]
SESSION /LIST SESSION /LIST /LISTID=listid, PAGE=pagenum	SELI <i>sname</i> SELI <i>sname listid pagenum</i>
SESSION /LIST /LUALIAS=lualiasname	SELILU <i>sname lualiasname</i>
SESSION /LIST /MODE=modename	SELIMO <i>sname modename</i>
SESSION /LIST /PARTNER=partnename, ALIAS=aliasname	SELIPA <i>sname partnename aliasname</i>
SESSION /LIST /STATION=linkname	SELIST <i>sname linkname</i>
SESSION /DETAILS /SESSIONID=sessionid	SEDT <i>sname sessionid</i>
APPN /TOPOLOGY APPN /TOPOLOGY /LISTID=listid, PAGE=pagenum	APPN <i>sname t</i> APPN <i>sname t listid pagenum</i>
APPN /NETNODE	APPN <i>sname n</i>
APPN /DIR	APPN <i>sname d</i>
APPN /CONNET	APPN <i>sname c</i>
APPN /HPR	APPN <i>sname h</i>

Where to Find Procedures Using the RUNCMD

All the REXX clist are available in the EULRUSMP.ZIP file located in F:\SP_RW\.

Download the Procedures

1. From the netView console, using DCAF or JAVA™ remote console file transfer, download the EULRUSMP.ZIP file.
2. Unzip the file.

Configuring the Procedure

The *sname* used in the procedures must be changed according to your own 3746-9xx identification.

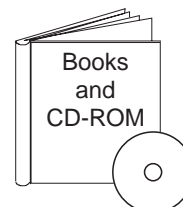
Note: The *sname* is a 3 or 4 3746-9xx identification to which is appended the string 'NMVT' to form what must be the PU name of the NetView service point. The validity checking of the *sname* is performed in a procedure named SP name validation (SPNVAL) which is invoked by every procedure (NNST, COLI, and so on). The contents of SPNVAL may be adapted to the user's need.

Appendix B. Bibliographies

Customer Documentation for the 3745 (All Models), and 3746 (Model 900)

Table B-1 (Page 1 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

This customer documentation has the following formats:



Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Evaluating and Configuring



GA33-0092

IBM 3745 Communication Controller Models 210, 310, 410, and 610

Introduction

Gives an introduction of the IBM Models 210 to 610 capabilities.
For Models A, refer to the *Overview*, GA33-0180.



GA33-0180

IBM 3745 Communication Controller Models A and 170² IBM 3746 Nways Multiprotocol Controller Models 900 and 950

Overview

Gives an overview of connectivity capabilities within SNA, APPN, and IP networking.



GA27-4234

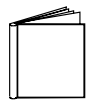
IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Models 900 and 950

Planning Series: Overview, Installation, and Integration

Provides information for:

- Overall 3746 planning
- Installation and upgrade scenarios
- Controller and service processor network integration
- Related MOSS-E and CCM worksheets for these tasks.

Table B-1 (Page 2 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900



GA27-4235

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Serial Line Adapters

Provides information for:

- Serial line adapter descriptions
- Serial line adapter line weights and connectivity
- Types of SDLC support
- Configuring X.25 lines
- Performance tuning for frame-relay, PPP, X.25, and NCP lines.
- ISDN adapter description and configuration.



GA27-4236

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Token Ring and Ethernet

Provides information for:

- Token-ring adapter description and configuration
- Ethernet adapter description and configuration.



GA27-4237

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
ESCON Channels

Provides information for:

- ESCON adapter descriptions
- ESCON configuration and tuning information
- ESCON configuration examples.



GA27-4238

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Physical Planning

Provides information for:

- 3746 and MAE physical planning details
- 3746 and MAE cable information
- Explanation of installation sheets
- 3746 plugging sheets.

Table B-1 (Page 3 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

	GA27-4239	<p>IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Models 900 and 950</p> <p>Planning Series: Management Planning</p> <p>Provides information for:</p> <ul style="list-style-type: none"> • Overview for 3746 • 3746 APPN/HPR, IP router, and X.25 • NetView Performance Monitor (NPM), remote consoles, and RSF • MAE APPN/HPR management.
	GA27-4240	<p>IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Models 900 and 950</p> <p>Planning Series: Multiaccess Enclosure Planning</p> <p>Provides information for:</p> <ul style="list-style-type: none"> • MAE adapters details • MAE ESCON planning and configuration • ATM and ISDN support.
	GA27-4241	<p>IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Models 900 and 950</p> <p>Planning Series: Protocols Description</p> <p>Provides information for:</p> <ul style="list-style-type: none"> • Overview and details about APPN/HPR and IP.
	On-line information	<p>IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Models 900 and 950</p> <p>Planning Series: Controller Configuration and Management Worksheets</p> <p>Provides planning worksheets for ESCON, Multiaccess Enclosure, serial line, and token-ring definitions.</p>
Preparing Your Site		
	GC22-7064	<p>IBM System/360™, System/370™, 4300 Processor</p> <p>Input/Output Equipment Installation Manual-Physical Planning (Including Technical News Letter GN22-5490)</p> <p>Provides information for physical installation for the 3745 Models 130 to 610.</p> <p>For 3745 Models A and 3746 Model 900, refer to the <i>Planning Guide</i>, GA33-0457.</p>

Table B-1 (Page 4 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

	GA33-0127	IBM 3745 Communication Controller Models 210, 310, 410, and 610 Preparing for Connection
		<p>Helps for preparing the 3745 Models 210 to 610 cable installation.</p> <p>For 3745 Models A refer to the <i>Connection and Integration Guide</i>, SA33-0129.</p>
Preparing for Operation		
	GA33-0400	IBM 3745 Communication Controller All Models³ IBM 3746 Nways Multiprotocol Controller Models 900 and 950 Safety Information¹
		Provides general safety guidelines.
	SA33-0129	IBM 3745 Communication Controller All Models³ IBM 3746 Nways Multiprotocol Controller Model 900 Connection and Integration Guide¹
		Contains information for connecting hardware and integrating network of the 3745 and 3746-900 after installation.
	SA33-0416	Line Interface Coupler Type 5 and Type 6 Portable Keypad Display Migration and Integration Guide
		Contains information for moving and testing LIC types 5 and 6.
	SA33-0158	IBM 3745 Communication Controller All Models³ IBM 3746 Nways Multiprotocol Controller Model 900 Console Setup Guide¹
		<p>Provides information for:</p> <ul style="list-style-type: none"> • Installing local, alternate, or remote consoles for 3745 Models 130 to 610 • Configuring user workstations to remotely control the service processor for 3745 Models A and 3746 Model 900 using: <ul style="list-style-type: none"> – DCAF program – Telnet Client program – Java Console support.
Customizing Your Control Program		
	SA33-0178	Guide to Timed IPL and Rename Load Module
		<p>Provides VTAM procedures for:</p> <ul style="list-style-type: none"> • Scheduling an automatic reload of the 3745 • Getting 3745 load module changes transparent to the operations staff.
Operating and Testing		

Table B-1 (Page 5 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900








	SA33-0098	IBM 3745 Communication Controller All Models⁴ Basic Operations Guide¹ Provides instructions for daily routine operations on the 3745 Models 130 to 610.
	SA33-0177	IBM 3745 Communication Controller Models A² IBM 3746 Nways Multiprotocol Controller Model 900 Basic Operations Guide¹ Provides instructions for daily routine operations on the 3745 Models 17A to 61A, and 3746 Model 900 operating as an SNA node (using NCP), APPN/HPR Network Node, and IP Router.
	SA33-0097	IBM 3745 Communication Controller All Models³ Advanced Operations Guide¹ Provides instructions for advanced operations and testing, using the 3745 MOSS console.
	On-line Information	Controller Configuration and Management Application Provides a graphical user interface for configuring and managing a 3746 APPN/HPR Network Node and IP Router, and its resources. It is also available as a stand-alone application, using an OS/2 workstation. Defines and explains all the 3746 Network Node and IP Router configuration parameters through its online help.
	SH11-3081	IBM 3746 Nways Multiprotocol Controller Models 900 and 950 Controller Configuration and Management: User's Guide⁵ Explains how to use CCM and gives examples of the configuration process.
	GA33-0479	IBM 3745 Communication Controller Models A IBM 3746 Nways Multiprotocol Controller Models 900 and 950 NetView Console APPN Command Reference Guide Explains how to use the RUN COMMAND from the NetView S/390 Program and gives examples.
Managing Problems		
	SA33-0096	IBM 3745 Communication Controller All Models³ Problem Determination Guide¹ A guide to perform problem determination on the 3745 Models 130 to 61A.

Table B-1 (Page 6 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900



On-line Information

Problem Analysis Guide

An online guide to analyze alarms, events, and control panel codes on:

- IBM 3745 Communication Controller Models A²
- IBM 3746 Nways Multiprotocol Controller Models 900 and 950.



SA33-0175

IBM 3745 Communication Controller Models A²

IBM 3746 Expansion Unit Model 900

IBM 3746 Nways Multiprotocol Controller Model 950

Alert Reference Guide

Provides information about events or errors reported by alerts for:

- IBM 3745 Communication Controller Models A²
- IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

¹ Documentation shipped with the 3745.




² 3745 Models 17A to 61A.

³ 3745 Models 130 to 61A.

⁴ Except 3745 Models A.

⁵ Documentation shipped with the 3746-900.

Additional Customer Documentation for the 3745 Models 130, 150, 160, 170, and 17A

Table B-2. Additional Customer Documentation for the 3745 Models 130 to 17A		
This customer documentation has the following format:		
		
Finding Information		
<p>3745 Models A and 3746 Books</p> <p>All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.</p>		
Evaluating and Configuring		
	GA33-0138	<p>IBM 3745 Communication Controller Models 130, 150, 160, and 170</p> <p>Introduction</p> <p>Gives an introduction about the IBM Models 130 to 170 capabilities, including Model 160.</p> <p>For Model 17A refer to the <i>Overview</i>, GA33-0180.</p>
Preparing Your Site		
	GA33-0140	<p>IBM 3745 Communication Controller Models 130, 150, 160, and 170</p> <p>Preparing for Connection</p> <p>Helps for preparing the 3745 Models 130 to 170 cable installation.</p> <p>For 3745 Model 17A refer to the <i>Connection and Integration Guide</i>, SA33-0129.</p>
¹ Documentation shipped with the 3745.		

Additional Customer Documentation for the 3746 Model 950

Table B-3. Additional Customer Documentation for the 3746 Model 950

This customer documentation has the following format:

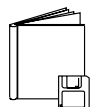


Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Operating and Testing



SA33-0356

IBM 3746 Nways Multiprotocol Controller Model 950

User's Guide¹

Explains how to:

- Carry out daily routine operations on Nways Controller
- Install, test, and customize the Nways controller after installation
- Configure user's workstations to remotely control the service processor using:
 - DCAF program
 - Telnet client program
 - Java console support.

¹ Documentation shipped with the 3746-950.

List of Abbreviations

APPN	Advanced Peer-to-Peer Networking	MAE	Multiaccess Enclosure
ASCII	American Standard Code for Information Interchange	MOSS	Maintenance and Operator Subsystem
ATM	Asynchronous Transfer Mode	MOSS-E	Maintenance and Operator Subsystem - Extended
CCM	Controller Configuration and Management	NCP	Network Control Program
CDF-E	Configuration Data File-Extended	NMVT	Network Management Vector Transport
CLI	Command Language Interface	NN	Network Node
CM/2		NNP	Network Node Processor
CP	Control Program (SNA environment) Control Point (APPN environment)	OS	Operating System
DBCS	Double Byte Character Set	PPP	Point-to-Point Protocol
DCAF	Distributed Console Access Facility	PU	Physical Unit
DLC	Data Link Control	PSNA	
FFST/2	First Failure Support Technology for OS/2	RPC	Remote Procedure Call
HPR	High Performance Routing	RU	R
IEEE		SDLC	Synchronous Data Link Control
ID	Identifier	SNA	Systems Network Architecture
IP	Internet Protocol	SP	Service Processor
ISDN	Integrated Services Digital Network	SPNVAL	Service Point Name Validation
kbps	kilobits per second	TCP/IP	Transmission Control Protocol/Internet Protocol
LAN	Local Area Network	TFTP	Trivial File Transfer Protocol
LU	Logical Unit	UPM	User Profile management
		URL	Uniform Resource Locator
		WSID	Workstation Identifier

Glossary

This glossary defines all new terms used in this manual. It also includes terms and definitions from the *IBM Dictionary of Computing*, SC20-1699.

Advanced Peer-to-Peer Networking (APPN). Data communication support that routes data in a network between two or more advanced program-to-program communications (APPC) systems that do not need to be adjacent.

configuration data file (CDF). A MOSS file that contains a description of all the hardware features (presence, type, address, and characteristics) of the 3745 controller.

configuration data file-extended (CDF-E). A MOSS-E file that contains a description of all the hardware features (presence, type, address, and characteristics) of the 3746 Model 900 controller.

control point (CP). A collection of tasks, which provide directory and route selection functions for APPN. An end node control point provides its own configuration, session, and management services with assistance from the control point in its serving network node. A network node control point provides session and routing service.

control program. A computer program designed to schedule and to supervise the execution of programs of the controller.

Distributed Console Access Facility (DCAF). An IBM licensed program that enables a user at one workstation to remotely control, monitor, and operate another workstation.

focal point (FP). An APPN network node that receives alerts. A focal point allows a customer to centrally manage a network.

host processor. (1) A processor that controls all or part of a user application network. (2) In a network, the processing unit in which the access method for the network resides. (3) In an SNA network, the processing unit that contains a system services control point (SSCP). (4) A processing unit that executes the access method for attached communication controllers. Also called *host*.

integrated services digital network (ISDN). A digital end-to-end telecommunication network that supports multiple services including, but not limited to, voice and data.

Internet Protocol (IP). In TCP/IP, a protocol that routes data from its source to its destination in an Internet environment.

local area network (LAN). A computer network located on a user's premises within a limited geographical area. Communication within a LAN is not subject to external regulation; however, communication across the LAN boundary may be subject to some form of regulation.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs). An LU can support at least two sessions, one with an SSCP and one with another LU, and may be capable of supporting many sessions with other logical units.

Maintenance and Operator Sub-System (MOSS). The part of the controller that provides operating and servicing facilities to the user's operator and the IBM service representative.

Maintenance and Operator Sub-System-Extended (MOSS-E). The licensed internal code loaded on the service processor fixed disk to provide maintenance and operator facilities to the user and IBM service representative.

Multiaccess Enclosure (MAE). A super processor for the 3746-9x0 with a direct hardware attachment to the controller connectivity switch. The MAE houses eight adapter slots with up to eight ports per adapter, and handles multiple traffic routing for TCP/IP, SNA/DLUR, APPN, and HPR protocols.

NCCF. Network Communications Control Facility

NetView Performance Monitor (NPM). An IBM licensed program that collects, monitors, analyses, and displays data relevant to the performance of a VTAM telecommunication network. It runs as an on-line VTAM application program.

NetView S/390 program. An IBM licensed program network. It runs as an on-line VTAM application program on S/390 System.

network. See *user application network*.

Network Control Program (NCP). An IBM licensed program that provides communication controllers supports for single-domain, multiple domain, and interconnected network capability.

Glossary

ROP Service. Application that processes (under OS/2 workstation) the commands sent by the NetView program through SPA Router.

SPA Router. It is an OS/2 program that receives a command from a NetView program to the specified application.

REXX. Restructured Extended Executor. A general-purpose, procedural language for end-user personal programming, designed for ease by both casual general users and computer professionals.

Synchronous Data Link Control (SDLC). A discipline conforming to subsets of the Advanced Data Communication Control Procedures (ADCCP) of the American National Standards Institute (ANSI) and High-level Data Link Control (HDLC) of the International Organization for Standardization (IOS), for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or nonswitched links. The configuration of the link connection may be point-to-point, multipoint, or loop.

Index

C

Command

- APPN command
 - connection information display 5-50
 - directory information display 5-48
 - network topology display 5-42
 - node information display 5-47
 - retrieve a page of network topology display with listid 5-45
- configuration command
 - activate a configuration 4-2
 - list all configurations 4-1
- NNP and CP commands
 - activation configuration 3-6
 - NNP status command 3-2
 - restart NNP 3-7
 - start CP 3-3
 - stop and restart the CP 3-5
 - stop CP 3-4
- port command
 - activate a given port by name 5-13
 - activate a given port by number 5-15
 - activate a list of ports by name 5-14
 - activate a list of ports by number 5-16
 - activate all ports 5-12
 - deactivate a given port by name 5-18
 - deactivate a given port by number 5-20
 - deactivate a list of ports by name 5-19
 - deactivate a list of ports by number 5-21
 - deactivate all ports 5-17
 - display the details view for a given port name 5-9
 - display the details view for a given port number 5-10
 - list all ports 5-3
 - list all ports by DLC name 5-6
 - list all ports by status 5-5
 - list all ports by wildcard portname 5-8
 - list ports by status and DLC 5-7
- session command
 - display the details view for a given session ID 5-41
 - list all sessions 5-35
 - list sessions by LU alias name 5-37
 - list sessions by mode name 5-38
 - list sessions by partners mode and alias name 5-39
 - list sessions by station name 5-40
 - retrieve a page of all sessions list with listid 5-36
- station command
 - activate a given station by name 5-30
 - activate a list of stations by name 5-31

Command (continued)

- station command (continued)
 - activate all stations 5-29
 - deactivate a given station by name 5-33
 - deactivate a list of stations by name 5-34
 - deactivate all stations 5-32
 - display the details view for a given station name 5-28
 - list all stations 5-22
 - list stations by partner name 5-26
 - list stations by port name 5-27
 - list stations by statname 5-25
 - list stations by status 5-24
 - retrieve a page of all stations list with listid 5-23

Tell Us What You Think!

**3745 Communication Controller Models A
3746 Nways Multiprotocol Controller
Models 900 and 950
NetView Console
APPN Command Reference Guide
Publication No. GA33-0479-00**

We hope you find this publication useful, readable, and technically accurate, but only you can tell us! Your comments and suggestions will help us improve our technical publications. Please take a few minutes to let us know what you think by completing this form. If you are in the USA, you can mail this form postage free or fax it to us at 1-800-253-3520. Elsewhere, your local IBM branch office or representative will forward your comments or you may mail them directly to us.

Overall, how satisfied are you with the information in this book?	Satisfied	Dissatisfied
	<input type="checkbox"/>	<input type="checkbox"/>

How satisfied are you that the information in this book is:	Satisfied	Dissatisfied
Accurate	<input type="checkbox"/>	<input type="checkbox"/>
Complete	<input type="checkbox"/>	<input type="checkbox"/>
Easy to find	<input type="checkbox"/>	<input type="checkbox"/>
Easy to understand	<input type="checkbox"/>	<input type="checkbox"/>
Well organized	<input type="checkbox"/>	<input type="checkbox"/>
Applicable to your task	<input type="checkbox"/>	<input type="checkbox"/>

Specific comments or problems:

Please tell us how we can improve this book:

Thank you for your comments. If you would like a reply, provide the necessary information below.

Name	Address
Company or Organization	
Phone No.	



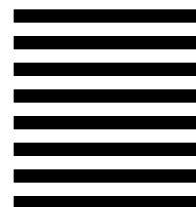
Fold and Tape

Please do not staple

Fold and Tape



NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

Design & Information Development
Dept. CGF/Bldg. 656
International Business Machines Corporation
PO BOX 12195
RESEARCH TRIANGLE PARK NC 27709-9990



Fold and Tape

Please do not staple

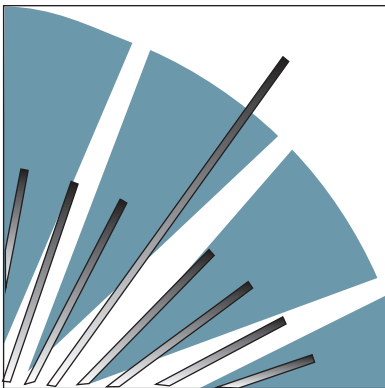
Fold and Tape



Part Number: 10K8549



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.



GA33-0479-00



10K8549

