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# PREFACE About This Book

This book is intended to help network operators use VTAM(\*) commands and messages to control and maintain a telecommunication network. It contains descriptions of VTAM commands.

Subtopics:

- [PREFACE.1 Who Should Use This Book](#)
- [PREFACE.2 How to Use This Book](#)
- [PREFACE.3 What Is New in This Book](#)
- [PREFACE.4 Where to Find Information about VTAM](#)



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## PREFACE.1 Who Should Use This Book

This book is primarily a reference manual for network operators. It also contains introductory material intended for a new operator. The system programmer can use this manual as a reference about command syntax and function to write a local operating procedure.

To make the best use of this manual, both the operator and the system programmer should be familiar with the local operating system.

As a VTAM operator, you should have background knowledge of VTAM as well as a background knowledge of IBM's network programs. Information in *System Network Architecture Technical Overview* might also be of use to a new operator.

A more experienced operator might want to consult:

- [Planning for NetView, NCP, and VTAM](#)
- [VTAM Network Implementation Guide](#).

A system programmer preparing a local operating procedure should know how to plan a VTAM installation, include VTAM in an MVS, VM, or VSE operating system, and define a VTAM domain. Prerequisite publications for system programmers who use this manual are:

- [Planning for NetView, NCP, and VTAM](#)
- [VTAM Network Implementation Guide](#).



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## PREFACE.2 How to Use This Book

You can use this book as a reference for specific operator commands and as background reading to help understand how to operate VTAM.

**VM,VSE** Use this book in conjunction with the *VTAM Overview for VM/ESA* and *VSE/ESA* flyer included with this book.

Subtopics:

- [PREFACE.2.1 How This Book Is Organized](#)
  - [PREFACE.2.2 Terms Used in the VTAM Library](#)
  - [PREFACE.2.3 Symbols Used in the VTAM Library](#)
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## PREFACE.2.1 How This Book Is Organized

The manual is divided into three basic sections:

- The first chapter, [Chapter 1, "Introducing an Operator to VTAM,"](#) provides an overview of how an operator controls VTAM.
- The following chapters contain VTAM operator command descriptions and the syntax required to enter these commands. The description of each command includes the command format, a summary of the purpose of the command, and a description of each operand. The commands are arranged within each chapter alphabetically by operation and operand. (For example, VARY is considered an operation, and ACT in VARY ACT is considered the operand.) These chapters are:
  - [Chapter 2, "VTAM Operator Commands,"](#) which contains descriptions and the syntax of VTAM operator commands.
  - [Chapter 3, "Logon Manager Operator Commands \(MVS\),"](#) which contains descriptions and the syntax of logon manager operator commands.
  - [Chapter 4, "VSCS Operator Commands \(VM\),"](#) which contains descriptions and the syntax of VSCS operator commands.
- The final section of the book includes the appendix, bibliography, and index.
  - [Appendix A, "Cross-Reference for VTAM DISPLAY Commands"](#) contains a cross-reference of the output from VTAM operator commands.
  - ["Bibliography"](#) describes the books in the VTAM library and lists the titles and order numbers of other books related to this book or cited by name in this book.
  - ["Index"](#) helps you find information in this book.



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## PREFACE.2.2 Terms Used in the VTAM Library

Clarification of some terms used in the VTAM library follows:

- The term *Advanced Peer-to-Peer Networking(\*)* (*APPN(\*)*) represents VTAM's implementation of APPN.
- The terms *CPCP* and *CP-CP* are similar but have different meanings. *CPCP* is the name of a start option or operand. *CP-CP* refers to CP-CP sessions between control points.
- The term *end node* represents an APPN end node.
- The term *integrated communication adapter (ICA)* is used to represent all of the following, except where it is necessary to use the specific term:
  - Communication adapter
  - Telecommunications Subsystem Controller
  - IBM Token-Ring Subsystem Controller
  - Workstation Subsystem Controller
  - Multi-Protocol Communication Subsystem Controller.
- The term *network node* represents an APPN network node.
- The term *VTAM* refers to the VTAM program for V4R2 unless otherwise stated.



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## PREFACE.2.3 Symbols Used in the VTAM Library

The following symbols are used in the VTAM library to indicate information that applies only to a particular operating system:

**MVS** Indicates information that applies only to MVS/ESA(\*).

**VM** Indicates information that applies only to VM/ESA(\*).

**VSE** Indicates information that applies only to VSE/ESA(\*).

These symbols either precede or follow unique information in the VTAM library. Following is an example of how these symbols are used:

**VM** VSCS is a VTAM application program and must be defined to VTAM.



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## PREFACE.2.4 Artwork Used in This Book

Figure 1 shows the conventions used in this book to illustrate the parts of a network.

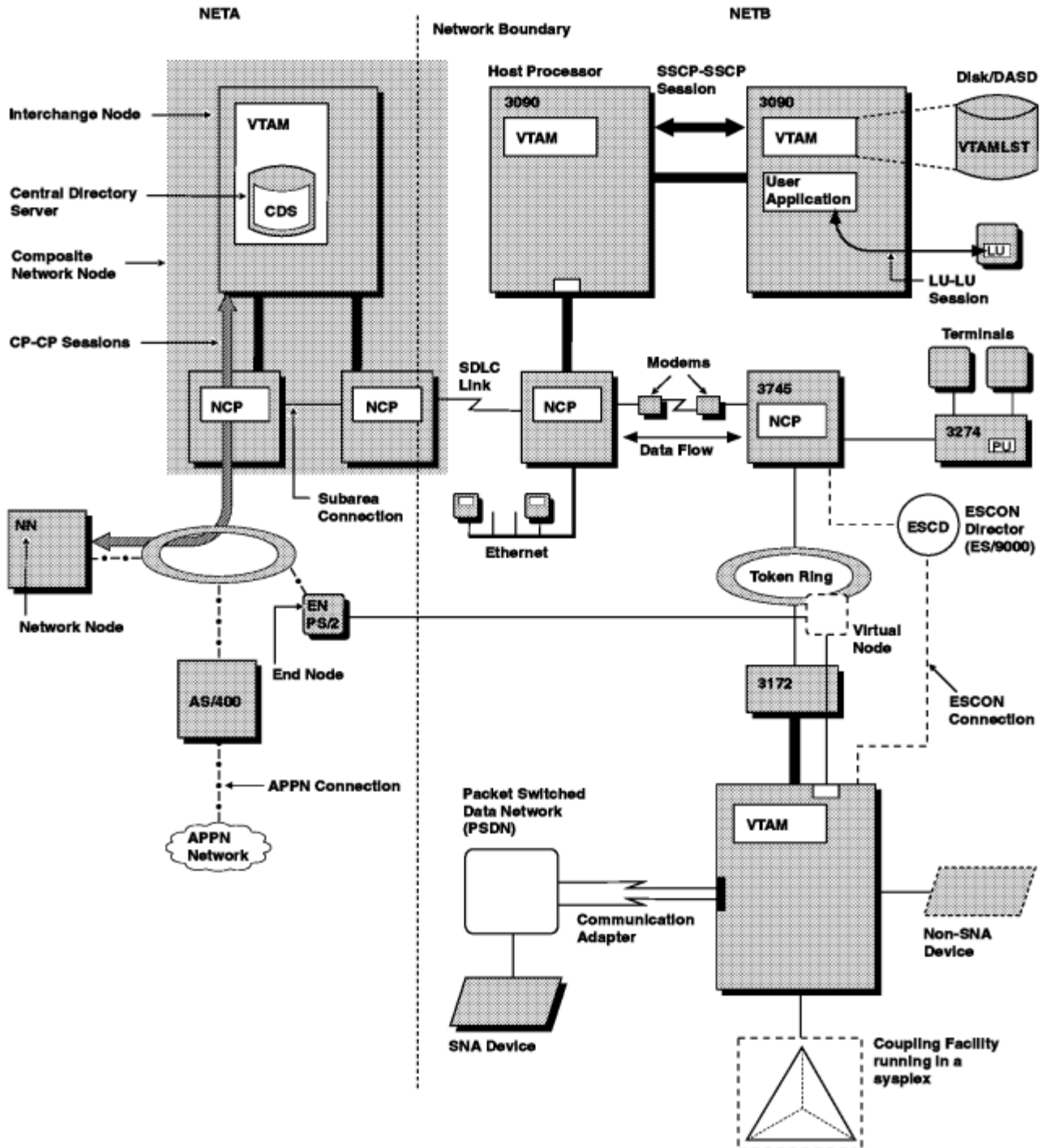




Figure 1. Conventions Used in Network Illustrations

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## PREFACE.3 What Is New in This Book

**MVS** This book was last published in May 1994 with order number SC31-6495-0.

**VM,VSE** This book was last published in March 1992 with order number SC31-6435-1.

The glossary has been deleted from this publication. For definitions of the terms and abbreviations used in this book, refer to the *VTAM Glossary*.

Information has been added to this book to reflect the new commands and operands in VTAM V4R2 that have been added since the last publication of this book for each operating system. Refer to [Table 1](#) to determine where the new, changed, or deleted commands are listed for your operating system. Further information about the commands can be found in the places referred to in these lists. ["Usability Changes"](#) describes usability changes that have been made to this book.

Table 1. New, Changed, and Deleted Commands for VTAM V4R2	
	topic number
New Commands for MVS	<a href="#">PREFACE.3.1</a>
Changed Commands for MVS	<a href="#">PREFACE.3.2</a>
New Commands for VM	<a href="#">PREFACE.3.3</a>
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Changed Commands for VSE	<a href="#">PREFACE.3.7</a>

Subtopics:

- [PREFACE.3.1 New Commands \(MVS\)](#)
- [PREFACE.3.2 Changed Commands \(MVS\)](#)
- [PREFACE.3.3 New Commands \(VM\)](#)
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## **PREFACE.3.1 New Commands (MVS)**

These commands are available to you if the appropriate program temporary fixes (PTFs) have been applied.

### **MODIFY LINEDEF**

is new for dynamic definition of SDLC lines. It allows you to dynamically change the definition of a redefinable line. A redefinable line is an SDLC line that has been defined in an NCP major node with USE=REDEF or USE=SPARE.

For more information about this command, see topic [2.1.66](#).

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## PREFACE.3.2 Changed Commands (MVS)

The changes to these commands are available to you if the appropriate program temporary fixes (PTFs) have been applied.

### DISPLAY CLSTRS

has a new operand, OWNER, to specify whether information is to be displayed about lines that are currently defined with in an NCP major node with the OWNER operand.

For more information about this command, see topic [2.1.10](#).

### DISPLAY LINES

has the following new operands:

- OWNER specifies whether information is to be displayed about lines that are currently defined with in an NCP major node with the OWNER operand.
- USE specifies whether information is to be displayed about lines that are currently designated as DEFINED or SPARE.

For more information about this command, see topic [2.1.21](#).

### MODIFY VTAMOPTS

has a new operand, CDRDYN, to support enabling of dynamic definition of cross-domain resources.

For more information about this command, see topic [2.1.89](#).

### START

has been expanded as shown below.

For more information about this command, see topic [2.1.90](#). See [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference* for descriptions of these start options.

- The CDRDYN start option is new to support enabling of dynamic definition of cross-domain resources.
- The CPCDRSC start option is new to support the session enhancement for LEN CP ILU nodes.







## PREFACE.3.3 New Commands (VM)

### **DISPLAY ADJCLUST**

is new for border node functions. It displays the adjacent cluster table definitions in the current ADJCLUST table.

For more information about this command, see topic [2.1.2](#).

### **DISPLAY ADJCP**

is new for APPN. It displays information about an adjacent control point. For more information about this command, see topic [2.1.3](#).

### **DISPLAY BNCOSMAP**

is new for border node functions. It displays native and nonnative COS mappings defined for a border node.

For more information about this command, see topic [2.1.7](#).

### **DISPLAY DIRECTRY**

is new for APPN. It displays information from the directory database for the specified resource.

For more information about this command, see topic [2.1.15](#).

### **DISPLAY DLURS**

is new for dependent LU server functions. It displays all DLURS for which this host acts as dependent LU server (DLUS). Only DLURS that have an SSCP-PU session with the host are displayed.

For more information about this command, see topic [2.1.17](#).

### **DISPLAY EXIT**

is new for the user-written exit routine enhancements. It displays information about installation-wide exit routines.

For more information about this command, see topic [2.1.18](#).

### **DISPLAY NETSRVR**

is new for APPN. It displays information about network node servers.

For more information about this command, see topic [2.1.27](#).

### **DISPLAY RSCLIST**

is new to display information about resources whose names match a particular pattern.

For more information about this command, see topic [2.1.32](#).

**DISPLAY STATS**

is new to display storage-related information.

For more information about this command, see topic [2.1.35](#).

**DISPLAY TGPS**

is new for APPN. It displays transmission group profiles.

For more information about this command, see topic [2.1.39](#).

**DISPLAY TOPO**

is new for APPN. It displays information about the topology of an APPN network.

For more information about this command, see topic [2.1.40](#).

**DISPLAY TRL**

is new for multipath channel support for APPN. It displays information about the transport resource list (TRL) major node or about a single TRLE definition statement.

For more information about this command, see topic [2.1.42](#).

**DISPLAY VTAMOPTS**

is new to display the value that was used during VTAM initialization for each start option, and the source of that value, in addition to the current value.

For more information about this command, see topic [2.1.45](#).

**MODIFY CHKPT**

is new for APPN. It saves a copy of the directory database or the topology database (or both) to a checkpoint data set.

For more information about this command, see topic [2.1.52](#).

**MODIFY COMPRESS**

is new for data compression. It allows you to change the data compression level for the VTAM host and application programs.

For more information about this command, see topic [2.1.54](#).

**MODIFY DIRECTORY**

is new for APPN. It deletes resources or changes the association of resources in the directory database.

For more information about this command, see topic [2.1.58](#).

**MODIFY IOPURGE**

is new to support the recovery of lost I/O. It sets the time interval after which outstanding I/O is assumed to be lost and recovery steps are taken.

For more information about this command, see topic [2.1.65](#).

**MODIFY LINEDEF**

is new for dynamic definition of SDLC lines. It allows you to dynamically change the definition of a redefinable line. A redefinable line is an SDLC line that has been defined in an NCP major node with USE=REDEF or USE=SPARE.



For more information about this command, see topic [2.1.66](#).

#### **MODIFY RESOURCE**

is new to support adjacent SSCP selection enhancements and search reduction. It allows you to change:

- The current value of the DLOGMOD operand of a definition statement for a resource
- The current value of the DISCNTIM operand for disconnection of a switched PU
- The current value of the ADJLIST operand of a definition statement for a cross-domain resource
- The current value of search reduction start options for a resource without changing the value of the start options for the major node, or to reset the search reduction entry for a resource.

For more information about this command, see topic [2.1.78](#).

#### **MODIFY TGP**

is new for APPN. It changes the transmission group profile associated with a type 2.1 connection.

For more information about this command, see topic [2.1.84](#).

#### **MODIFY TOPO**

is new for APPN. It deletes resources from the topology database.

For more information about this command, see topic [2.1.86](#).



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## PREFACE.3.4 Changed Commands (VM)

### DISPLAY ADJSSCPS

has the following new operands and operand values:

- ADJLIST displays the adjacent CDRMs that are defined in adjacent CDRM lists.
- CDRSC displays dynamic adjacent SSCP tables.

For more information about this command, see topic [2.1.4](#).

### DISPLAY APPLS

has the following new operands and operand values:

- ID limits the display to one or more application program major nodes.  
  
The ID operand supports wildcard values for resources.
- SCOPE=ACTONLY limits the display to application program minor nodes that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to application program minor nodes that are in a connectable state.
- SCOPE=INACTONLY limits the display to application program minor nodes that are in an inactive state
- SCOPE=RESET limits the display to application program minor nodes that are in a reset state.

For more information about this command, see topic [2.1.5](#).

### DISPLAY CDRMS

has the following new operands and operand values:

- ID limits the display to one or more CDRM major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to cross-domain resource managers that are in an active state, and not pending or connectable states

- SCOPE=CONCT limits the display to cross-domain resource managers that are in a connectable state
- SCOPE=INACTONLY limits the display to cross-domain resource managers that are in an inactive state
- SCOPE=RESET limits the display to cross-domain resource managers that are in a reset state.

For more information about this command, see topic [2.1.8](#).

#### **DISPLAY CDRSCS**

has the following new operands and operand values:

- ID limits the display to one or more CDRSC major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to cross-domain resources that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to cross-domain resources that are in a connectable state
- SCOPE=INACTONLY limits the display to cross-domain resources that are in an inactive state
- SCOPE=RESET limits the display to cross-domain resources that are in a reset state.

For more information about this command, see topic [2.1.9](#).

#### **DISPLAY CLSTRS**

has the following new operands and operand values:

- ID limits the display to one or more NCP, local SNA, or switched major nodes.

The ID operand supports wildcard values for resources.

- OWNER specifies whether information is to be displayed about PUs that are currently defined with in an NCP major node with the OWNER operand.
- SCOPE=ACTONLY limits the display to subordinate physical units that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to subordinate physical units that are in a connectable state
- SCOPE=INACTONLY limits the display to subordinate physical units that are in an inactive state

- SCOPE=RESET limits the display to subordinate physical units that are in a reset state.

For more information about this command, see topic [2.1.10](#).

#### **DISPLAY GROUPS**

has the following new operands and operand values:

- ID limits the display to one or more NCP, channel-attachment, or XCA major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to line groups that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to line groups that are in a connectable state
- SCOPE=INACTONLY limits the display to line groups that are in an inactive state
- SCOPE=RESET limits the display to line groups that are in a reset state.

For more information about this command, see topic [2.1.19](#).

#### **DISPLAY ID**

has the following new operands:

- IDTYPE distinguishes between different types of resources that have the same name.
- MAX specifies the maximum number of resources to display when an asterisk (\*) is the network ID portion of the network-qualified resource name.

For more information about this command, see topic [2.1.20](#).

#### **DISPLAY LINES**

has the following new operands and operand values:

- ID limits the display to one or more NCP, channel-attachment, or XCA major nodes.

The ID operand supports wildcard values for resources.

- OWNER specifies whether information is to be displayed about lines that are currently defined with in an NCP major node with the OWNER operand.
- SCOPE=ACTONLY limits the display to lines and channel links that are in an active state, and not pending or connectable states

- SCOPE=CONCT limits the display to lines and channel links that are in a connectable state
- SCOPE=INACTONLY limits the display to lines and channel links that are in an inactive state
- SCOPE=RESET, limits the display to lines and channel links that are in a reset state.
- USE specifies whether information is to be displayed about lines that are currently designated as DEFINED or SPARE.

For more information about this command, see topic [2.1.21](#).

#### **DISPLAY PENDING**

has a new operand, ID, to limit the display to one or more major nodes, groups, lines, or PUs.

For more information about this command, see topic [2.1.30](#).

#### **DISPLAY SESSIONS**

has a new operand value, LIST=SUMMARY, to show the number of sessions with each individual status code.

For more information about this command, see topic [2.1.33](#).

#### **DISPLAY STORUSE**

allows multiple values for the POOL operand.

For more information about this command, see topic [2.1.36](#).

#### **DISPLAY TERMS**

has the following new operands and operand values:

- ID limits the display to one or more major nodes.  
  
The ID operand supports wildcard values for resources.
- SCOPE=ACTONLY limits the display to terminals that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to terminals that are in a connectable state
- SCOPE=INACTONLY limits the display to terminals that are in an inactive state
- SCOPE=RESET limits the display to terminals that are in a reset state.

For more information about this command, see topic [2.1.38](#).

#### **DISPLAY TRACES**

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- TYPE=ALL displays information about all active traces.
- TYPE=NODES displays information about BUF, GPT, IO, LINE, SIT, and TG traces for the resources named in the ID operand.
- TYPE=SMS displays information about the storage management services (SMS) buffer use trace.
- TYPE=VTAM displays information about the VTAM internal trace (VIT).

The ID operand supports wildcard values for resources.

For more information about this command, see topic [2.1.41](#).

#### **MODIFY DEFAULTS**

has a new operand, DISCNTIM, to change the delay timer for disconnection of a switched PU.

For more information about this command, see topic [2.1.56](#).

#### **MODIFY EXIT**

has a new operand, MODULE, to specify an alternate module name that contains the exit routine to be activated or replaced.

For more information about this command, see topic [2.1.62](#).

#### **MODIFY NOTRACE**

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- MODE specifies whether to stop internal or external recording of the VTAM internal trace.

For more information about this command, see topic [2.1.73](#).

#### **MODIFY TABLE**

has a new operand value, TYPE=FLDTAB, to specify that the table being modified is a message-flooding prevention table.

For more information about this command, see topic [2.1.83](#).

#### **MODIFY TRACE**

has the following new operands and operand values:

- AMOUNT (on TYPE=BUF) specifies whether the buffer contents trace is to record a maximum of 256 bytes for each buffer or the entire buffer.
- IDTYPE (on TYPE=BUF, TYPE=IO, or TYPE=GPT) distinguishes between different types of resources that have the same name.
- SAVE (on TYPE=BUF and TYPE=IO) saves a trace command that is issued for a resource.

- TRACEPT (on TYPE=SIT) allows you to limit the tracing to a single trace point if too much output is being produced. This operand specifies the point in the microcode at which tracing should be activated.

The OPTION operand for TRACE,TYPE=VTAM has a default of API, MSG, NRM, PIU, and SSCP.

For more information about this command, see topic [2.1.87](#).

#### MODIFY VTAMOPTS

has been expanded as shown below. For more information about this command, see topic [2.1.89](#).

- To support APPN, the following operands have been added to MODIFY VTAMOPTS:
  - APPNCOS
  - CONNTYPE
  - CPCP
  - DIRSIZE
  - DIRTIME
  - NUMTREES
  - RESUSAGE
  - ROUTERES
  - SORDER
  - SSEARCH.
- To support authorized transmission priority for LEN connections, the AUTHLEN operand has been added to MODIFY VTAMOPTS.
- To support automatic logon enhancements, the following operands have been added to MODIFY VTAMOPTS:
  - AUTORTRY
  - AUTOTI.
- To support border nodes, the following operands have been added to MODIFY VTAMOPTS:
  - BNDYN
  - BNORD
  - SNVC.
- To support enabling of dynamic definition of cross-domain resources, the CDRDYN operand has been added to MODIFY VTAMOPTS.
- To provide centralized support for all modifiable start options, the following operands have been added to MODIFY VTAMOPTS:
  - CSALIMIT (same as MODIFY CSALIMIT)
  - CSA24 (same as MODIFY CSALIMIT)
  - IOINT (same as MODIFY IOPD)
  - IOPURGE (same as MODIFY IOPURGE)
  - MSGMOD (same as MODIFY MSGMOD)
  - PPOLOG (same as MODIFY PPOLOG)
  - SUPP (same as MODIFY SUPP)
- To support data compression, the CMPVTAM operand has been added to MODIFY VTAMOPTS.

- To support delayed dial disconnection, the DISCNTIM operand has been added to MODIFY VTAMOPTS.
- To support DISPLAY command enhancements, the DSPLYMAX operand has been added to MODIFY VTAMOPTS.
- To support wildcard enhancements for DISPLAY commands, the DSPLYWLD operand has been added to MODIFY VTAMOPTS.
- To support session termination for sessions that are using an excessive amount of the IO buffer pool, the HOTIOTRM operand has been added to MODIFY VTAMOPTS.
- To support the new default logon mode table entry, ISTCOSDF, when an unknown logon mode is specified during session activation, the ISTCOSDF operand has been added to MODIFY VTAMOPTS.
- To modify the value of replaceable constants that were specified as start options, the following operands have been added to MODIFY VTAMOPTS:
  - ASIRFMSG
  - ESIRFMSG
  - FSIRFMSG
  - INOPDUMP
  - IOMSGLIM
  - MAXSSCPS
  - MIHTMOUT
  - PDTRCBUF
  - PLUALMSG
  - SIRFMSG
  - SLUALMSG
  - SSDTMOUT.
- To support network-qualified names, the following operands have been added to MODIFY VTAMOPTS:
  - MSGLEVEL
  - NQNMODE.
- To support specifying the search order for locating switched PUs, the SWNORDER operand has been added to MODIFY VTAMOPTS.
- To support search reduction, the following operands have been added to MODIFY VTAMOPTS:
  - SRCHRED
  - SRCOUNT
  - SRTIMER.
- To support virtual-route-based transmission groups, the following operands have been added to MODIFY VTAMOPTS:
  - VRTG
  - VRTGCPCP.

**START**

has been expanded as shown below.



For more information about this command, see topic [2.1.90](#). See [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference* for descriptions of these start options.

- The following start options are new for APPN:
  - APPNCOS
  - CACHETI
  - CDSERVR
  - CONNTYPE
  - CPCP
  - DIRSIZE
  - DIRTIME
  - DYNADJCP
  - INITDB
  - NODETYPE
  - NUMTREES
  - RESUSAGE
  - ROUTERES
  - SECLVLCP
  - SORDER
  - SSEARCH
  - VERIFYCP.
  
- The AUTHLEN start option is new to support authorized transmission priority for LEN connections.
  
- The following start options are new to support automatic logon enhancements:
  - AUTORTRY
  - AUTOTI.
  
- The following start options are new to support the border node function:
  - BN
  - BNDYN
  - BNORD
  - SNVC.
  
- The CDRDYN start option is new to support enabling of dynamic definition of cross-domain resources.
  
- The CPCDRSC start option is new to support the session enhancement for LEN CP ILU nodes.
  
- The DISCNTIM start option is new to support delayed dial disconnection.
  
- The DSPLYMAX start option is new to support DISPLAY command enhancements.
  
- The DSPLYWLD start option is new to support wildcard enhancements for DISPLAY commands.
  
- The ENHADDR start option is new to support expanded addressing.
  
- The FLDTAB start option is new to support the message flooding prevention facility.
  
- The HOTIOTRM start option is new to terminate sessions that are using an excessive amount of the IO buffer pool. (This

function was shipped previously as an APAR.)

- The IOPURGE start option is new to support the recovery of lost I/O. It sets the time interval after which outstanding I/O is assumed to be lost and recovery steps are taken.
- The IOSTOSDF start option is new to support the new default logon mode table entry, IOSTOSDF, when an unknown logon mode is specified during session activation.
- The LISTBKUP start option is new to specify how you want VTAM to react if it encounters an error while processing a start option list.
- The MAINTLVL start option is new to allow the user to specify the the current maintenance level of VTAM, if desired.
- The following start options are new to support network-qualified names:
  - MSGLEVEL
  - NQNMODE.
- The following start options are new to support setting the value of replaceable constants on start options:
  - ASIRFMSG
  - BSCTMOUT
  - CINDXSIZ
  - ESIRFMSG
  - FSIRFMSG
  - HNTSIZE
  - HSRTSIZE
  - INOPDUMP
  - IOMSGLIM
  - IRNSTRGE
  - MAXLURU
  - MAXSSCPS
  - MIHTMOUT
  - MXSAWBUF
  - MXSSCPRU
  - MXSUBNUM
  - OSRFSIZE
  - PDTRCBUF
  - PLUALMSG
  - SIRFMSG
  - SLUALMSG
  - SNAPREQ
  - SSDTMOUT
  - TRANSLAT
  - VTAMEAS.
- The SWNORDER start option is new to support specifying the search order for locating switched PUs.
- The following start options are new to support search reduction:
  - SRCOUNT
  - SRTIMER
  - SRCHRED.
- The TRACE,TYPE=BUF start option has a new operand, AMOUNT, to specify whether the buffer contents trace is to record a maximum of 256 bytes for each buffer or the entire buffer.

- The TRACE,TYPE=BUF and TRACE,TYPE=IO start options have a new operand, IDTYPE, to distinguish between different types of resources that have the same name.
- The TRACE,TYPE=SIT start option has a new operand, TRACEPT, to limit the tracing to a single trace point if too much output is being produced.
- The TRACE,TYPE=VTAM start option traces the API, MSG, NRM, PIU, and SSCP options by default.
- The following start options are new to support virtual-route-based transmission groups:
  - VRTG
  - VRTGCPCP.

#### **VARY ACT**

has the following new operands:

- CPCP overrides the value of the CPCP operand on a PU definition statement.
- DWACT dials any PUs in a switched major node that are activated when the major node is activated.
- IDTYPE distinguishes between different types of resources that have the same name.
- UPDATE updates your configuration to match the definition file (a new method of dynamic reconfiguration).
- VRTGCPCP overrides the setting of the VRTGCPCP value on the CDRM definition statement or the start option.

VARY ACT can be used to activate:

- A transport resource list (TRL) major node
- The switched major node containing PUs supported by a dependent LU requester (DLUR). The CPSVRMGR session is not activated until a VARY DIAL command is issued for the physical unit.

For more information about this command, see topic [2.1.92](#).

#### **VARY DIAL**

has a new operand, CPCP, to override the value of the CPCP operand on a PU definition statement. For more information about this command, see topic [2.1.94](#).

#### **VARY INACT**

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- SAVESESS indicates whether active LU-LU sessions should remain active when the SSCP-SSCP session is terminated.

VARY INACT can be used to deactivate the CPSVRMGR session between a dependent LU requester (DLUR) and a dependent LU Server (DLUS). This command can also be used to deactivate a PU receiving DLUR support.

For more information about this command, see topic [2.1.97](#).

#### **VSCS CHANGE**

has the following new operands and operand values:

- AQLIMIT specifies the maximum amount of storage for exception response mode PIUs queued for each LU.
- FSREAD=P specifies that VSCS saves the display screen before displaying CP messages generated by the use of a PA key.
- LEXIT specifies whether the VSCS logon exit should be given control to process logon requests.
- QDEPTH specifies the number of pending requests allowed for an LU before the LU is purged.

For more information about this command, see topic [4.1.3](#).

#### **VSCS DISPLAY**

Network-qualified names can be specified for the ID operand.

For more information about this command, see topic [4.1.4](#).

#### **VSCS DUMPLU**

Network-qualified names can be specified for the ID operand.

For more information about this command, see topic [4.1.5](#).

#### **VSCS FORCE**

Network-qualified names can be specified for the ID operand.

For more information about this command, see topic [4.1.6](#).

#### **VSCS PRINTER**

Network-qualified names can be specified for the new ID operand.

For more information about this command, see topic [4.1.7](#).

#### **VSCS TRACEON and TRACEOFF**

Have the following new operand values:

- OPTION=OPER provides an indication that a VSCS command or message is issued.
- OPTION=STAT provides storage statistics trace externally.

For more information about this command, see topic [4.1.12](#).

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## PREFACE.3.5 Deleted Commands (VM)

Following are the **deleted commands** for VTAM V4R2.

### **MODIFY FFDC**

has been deleted.

### **MODIFY NOFFDC**

has been deleted.

In addition, the FFDC start option has been deleted.

The first failure data capture function is no longer part of VTAM. This function has been replaced by the First Failure Support Technology(\*) (FFST(\*)) licensed program.



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## PREFACE.3.6 New Commands (VSE)

### DISPLAY ADJCLUST

is new for border node functions. It displays the adjacent cluster table definitions in the current ADJCLUST table.

For more information about this command, see topic [2.1.2](#).

### DISPLAY ADJCP

is new for APPN. It displays information about an adjacent control point. For more information about this command, see topic [2.1.3](#).

### DISPLAY BNCOSMAP

is new for border node functions. It displays native and nonnative COS mappings defined for a border node.

For more information about this command, see topic [2.1.7](#).

### DISPLAY DIRECTRY

is new for APPN. It displays information from the directory database for the specified resource.

For more information about this command, see topic [2.1.15](#).

### DISPLAY DLURS

is new for dependent LU server functions. It displays all DLURS for which this host acts as dependent LU server (DLUS). Only DLURS that have an SSCP-PU session with the host are displayed.

For more information about this command, see topic [2.1.17](#).

### DISPLAY EXIT

is new for the user-written exit routine enhancements. It displays information about installation-wide exit routines.

For more information about this command, see topic [2.1.18](#).

### DISPLAY NETSRVR

is new for APPN. It displays information about network node servers.

For more information about this command, see topic [2.1.27](#).

### DISPLAY RSCLIST

is new to display information about resources whose names match a particular pattern.

For more information about this command, see topic [2.1.32](#).

**DISPLAY STATS**

is new to display storage-related information.

For more information about this command, see topic [2.1.35](#).

**DISPLAY TGPS**

is new for APPN. It displays transmission group profiles.

For more information about this command, see topic [2.1.39](#).

**DISPLAY TOPO**

is new for APPN. It displays information about the topology of an APPN network.

For more information about this command, see topic [2.1.40](#).

**DISPLAY TRL**

is new for multipath channel support for APPN. It displays information about the transport resource list (TRL) major node or about a single TRLE definition statement.

For more information about this command, see topic [2.1.42](#).

**DISPLAY VTAMOPTS**

is new to display the value that was used during VTAM initialization for each start option, and the source of that value, in addition to the current value.

For more information about this command, see topic [2.1.45](#).

**MODIFY CHKPT**

is new for APPN. It saves a copy of the directory database or the topology database (or both) to a checkpoint data set.

For more information about this command, see topic [2.1.52](#).

**MODIFY COMPRESS**

is new for data compression. It allows you to change the data compression levels for the VTAM host and application programs.

For more information about this command, see topic [2.1.54](#).

**MODIFY DIRECTORY**

is new for APPN. It deletes resources or changes the association of resources in the directory database.

For more information about this command, see topic [2.1.58](#).

**MODIFY IOPURGE**

is new to support the recovery of lost I/O. It sets the time interval after which outstanding I/O is assumed to be lost and recovery steps are taken.

For more information about this command, see topic [2.1.65](#).

**MODIFY LINEDEF**

is new for dynamic definition of SDLC lines. It allows you to dynamically change the definition of a redefinable line. A redefinable line is an SDLC line that has been defined in an NCP major node with USE=REDEF or USE=SPARE.



For more information about this command, see topic [2.1.66](#).

#### **MODIFY RESOURCE**

is new to support adjacent SSCP selection enhancements and search reduction. It allows you to change:

- The current value of the DLOGMOD operand of a definition statement for a resource
- The current value of the DISCNTIM operand for disconnection of a switched PU
- The current value of the ADJLIST operand of a definition statement for a cross-domain resource
- The current value of search reduction start options for a resource without changing the value of the start options for the major node, or to reset the search reduction entry for a resource.

For more information about this command, see topic [2.1.78](#).

#### **MODIFY TGP**

is new for APPN. It changes the transmission group profile associated with a type 2.1 connection.

For more information about this command, see topic [2.1.84](#).

#### **MODIFY TOPO**

is new for APPN. It deletes resources from the topology database.

For more information about this command, see topic [2.1.86](#).



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## PREFACE.3.7 Changed Commands (VSE)

### DISPLAY ADJSSCPS

has the following new operands and operand values:

- ADJLIST displays the adjacent CDRMs that are defined in adjacent CDRM lists.
- CDRSC displays dynamic adjacent SSCP tables.

For more information about this command, see topic [2.1.4](#).

### DISPLAY APPLS

has the following new operands and operand values:

- ID limits the display to one or more application program major nodes.  
  
The ID operand supports wildcard values for resources.
- SCOPE=ACTONLY limits the display to application program minor nodes that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to application program minor nodes that are in a connectable state.
- SCOPE=INACTONLY limits the display to application program minor nodes that are in an inactive state
- SCOPE=RESET limits the display to application program minor nodes that are in a reset state.

For more information about this command, see topic [2.1.5](#).

### DISPLAY BFRUSE

displays information about 24-bit and 31-bit addressable storage.

For more information about this command, see topic [2.1.6](#).

### DISPLAY CDRMS

has the following new operands and operand values:

- ID limits the display to one or more CDRM major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to cross-domain resource managers that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to cross-domain resource managers that are in a connectable state
- SCOPE=INACTONLY limits the display to cross-domain resource managers that are in an inactive state
- SCOPE=RESET limits the display to cross-domain resource managers that are in a reset state.

For more information about this command, see topic [2.1.8](#).

#### **DISPLAY CDRSCS**

has the following new operands and operand values:

- ID limits the display to one or more CDRSC major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to cross-domain resources that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to cross-domain resources that are in a connectable state
- SCOPE=INACTONLY limits the display to cross-domain resources that are in an inactive state
- SCOPE=RESET limits the display to cross-domain resources that are in a reset state.

For more information about this command, see topic [2.1.9](#).

#### **DISPLAY CLSTRS**

has the following new operands and operand values:

- ID limits the display to one or more NCP, local SNA, or switched major nodes.

The ID operand supports wildcard values for resources.

- OWNER specifies whether information is to be displayed about PUs that are currently defined with in an NCP major node with the OWNER operand.
- SCOPE=ACTONLY limits the display to subordinate physical units that are in an active state, and not pending or connectable states

- SCOPE=CONCT limits the display to subordinate physical units that are in a connectable state
- SCOPE=INACTONLY limits the display to subordinate physical units that are in an inactive state
- SCOPE=RESET limits the display to subordinate physical units that are in a reset state.

For more information about this command, see topic [2.1.10](#).

#### **DISPLAY GROUPS**

has the following new operands and operand values:

- ID limits the display to one or more NCP, channel-attachment, or XCA major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to line groups that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to line groups that are in a connectable state
- SCOPE=INACTONLY limits the display to line groups that are in an inactive state
- SCOPE=RESET limits the display to line groups that are in a reset state.

For more information about this command, see topic [2.1.19](#).

#### **DISPLAY ID**

has the following new operands:

- IDTYPE distinguishes between different types of resources that have the same name.
- MAX specifies the maximum number of resources to display when an asterisk (\*) is the network ID portion of the network-qualified resource name.

For more information about this command, see topic [2.1.20](#).

#### **DISPLAY LINES**

has the following new operands and operand values:

- ID limits the display to one or more NCP, channel-attachment, or XCA major nodes.

The ID operand supports wildcard values for resources.

- OWNER specifies whether information is to be displayed about lines that are currently defined with in an NCP major node with the OWNER operand.
- SCOPE=ACTONLY limits the display to lines and channel links that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to lines and channel links that are in a connectable state
- SCOPE=INACTONLY limits the display to lines and channel links that are in an inactive state
- SCOPE=RESET, limits the display to lines and channel links that are in a reset state.
- USE specifies whether information is to be displayed about lines that are currently designated as DEFINED or SPARE.

For more information about this command, see topic [2.1.21](#).

#### **DISPLAY PENDING**

has a new operand, ID, to limit the display to one or more major nodes, groups, lines, or PUs.

For more information about this command, see topic [2.1.30](#).

#### **DISPLAY SESSIONS**

has a new operand value, LIST=SUMMARY, to show the number of sessions with each individual status code.

For more information about this command, see topic [2.1.33](#).

#### **DISPLAY STORUSE**

Displays information about storage usage for applications, application jobs, and data spaces, and storage pools

allows multiple values for the POOL, APPL, DSPNAME, and JOBNAME operands.

For more information about this command, see topic [2.1.36](#).

#### **DISPLAY TERMS**

has the following new operands and operand values:

- ID limits the display to one or more major nodes.

The ID operand supports wildcard values for resources.

- SCOPE=ACTONLY limits the display to terminals that are in an active state, and not pending or connectable states
- SCOPE=CONCT limits the display to terminals that are in a connectable state
- SCOPE=INACTONLY limits the display to terminals that are in an inactive state

- SCOPE=RESET limits the display to terminals that are in a reset state.

For more information about this command, see topic [2.1.38](#).

#### DISPLAY TRACES

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- TYPE=ALL displays information about all active traces.
- TYPE=NODES displays information about BUF, GPT, IO, LINE, SIT, and TG traces for the resources named in the ID operand.
- TYPE=SMS displays information about the storage management services (SMS) buffer use trace.
- TYPE=VTAM displays information about the VTAM internal trace (VIT).

The ID operand supports wildcard values for resources.

For more information about this command, see topic [2.1.41](#).

#### EXEC

A start option list name can be specified on the EXEC JCL control statement. Start options do not have to be entered by the operator.

The CDRDYN start option is new to support enabling of dynamic definition of cross-domain resources.

The CPCDRSC start option is new to support the session enhancement for LEN CP ILU nodes.

The SGA24 start option is new to support 31-bit addressable storage.

For more information about this command, see topic [2.1.46](#).

#### MODIFY DEFAULTS

has a new operand, DISCNTIM, to change the delay timer for disconnection of a switched PU.

For more information about this command, see topic [2.1.56](#).

#### MODIFY EXIT

has a new operand, MODULE, to specify an alternate module name that contains the exit routine to be activated or replaced.

For more information about this command, see topic [2.1.62](#).

#### MODIFY NOTRACE

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- MODE specifies whether to stop internal or external

recording of the VTAM internal trace.

For more information about this command, see topic [2.1.73](#).

**MODIFY SGALIMIT**

has a new operand, OPTION, to distinguish between 24-bit and 31-bit addressable storage.

For more information about this command, see topic [2.1.80](#).

**MODIFY TABLE**

has a new operand value, TYPE=FLDTAB, to specify that the table being modified is a message-flooding prevention table.

For more information about this command, see topic [2.1.83](#).

**MODIFY TRACE**

has the following new operands and operand values:

- AMOUNT (on TYPE=BUF) specifies whether the buffer contents trace is to record a maximum of 256 bytes for each buffer or the entire buffer.
- IDTYPE (on TYPE=BUF, TYPE=IO, or TYPE=GPT) distinguishes between different types of resources that have the same name.
- SAVE (on TYPE=BUF and TYPE=IO) saves a trace command that is issued for a resource.
- TRACEPT (on TYPE=SIT) allows you to limit the tracing to a single trace point if too much output is being produced. This operand specifies the point in the microcode at which tracing should be activated.

The OPTION operand for TRACE,TYPE=VTAM has a default of API, MSG, NRM, PIU, and SSCP.

For more information about this command, see topic [2.1.87](#).

**MODIFY VTAMOPTS**

has been expanded as shown below. For more information about this command, see topic [2.1.89](#).

- To support APPN, the following operands have been added to MODIFY VTAMOPTS:
  - APPNCOS
  - CONNTYPE
  - CPCP
  - DIRSIZE
  - DIRTIME
  - NUMTREES
  - RESUSAGE
  - ROUTERES
  - SORDER
  - SSEARCH.
- To support authorized transmission priority for LEN

connections, the AUTHLEN operand has been added to MODIFY VTAMOPTS.

- To support automatic logon enhancements, the following operands have been added to MODIFY VTAMOPTS:
  - AUTORTRY
  - AUTOTI.
- To support border nodes, the following operands have been added to MODIFY VTAMOPTS:
  - BNDYN
  - BNORD
  - SNVC.
- To support enabling of dynamic definition of cross-domain resources, the CDRDYN operand has been added to MODIFY VTAMOPTS.
- To provide centralized support for all modifiable start options, the following operands have been added to MODIFY VTAMOPTS:
  - IOINT (same as MODIFY IOPD)
  - IOPURGE (same as MODIFY IOPURGE)
  - MSGMOD (same as MODIFY MSGMOD)
  - PPOLOG (same as MODIFY PPOLOG)
  - SGALIMIT (same as MODIFY SGALIMIT)
  - SGA24 (same as MODIFY SGALIMIT)
  - SUPP (same as MODIFY SUPP)
- To support the data compression enhancements, the following operands have been added to MODIFY VTAMOPTS:
  - CMPMIPS
  - CMPVTAM
- To support delayed dial disconnection, the DISCNTIM operand has been added to MODIFY VTAMOPTS.
- To support DISPLAY command enhancements, the DSPLYMAX operand has been added to MODIFY VTAMOPTS.
- To support wildcard enhancements for DISPLAY commands, the DSPLYWLD operand has been added to MODIFY VTAMOPTS.
- To support session termination for sessions that are using an excessive amount of the IO buffer pool, the HOTIOTRM operand has been added to MODIFY VTAMOPTS.
- To support the new default logon mode table entry, ISTCOSDF, when an unknown logon mode is specified during session activation, the ISTCOSDF operand has been added to MODIFY VTAMOPTS.
- To modify the value of replaceable constants that were specified as start options, the following operands have been added to MODIFY VTAMOPTS:
  - ASIRFMSG
  - ESIRFMSG
  - FSIRFMSG



- IOMSGLIM
  - MAXSSCPS
  - MIHTMOUT
  - PDTRCBUF
  - PLUALMSG
  - SIRFMSG
  - SLUALMSG
  - SSDTMOUT.
- To support network-qualified names, the following operands have been added to MODIFY VTAMOPTS:
- MSGLEVEL
  - NQNMODE.
- To support specifying the search order for locating switched PUs, the SWNORDER operand has been added to MODIFY VTAMOPTS.
- To support search reduction, the following operands have been added to MODIFY VTAMOPTS:
- SRCHRED
  - SRCOUNT
  - SRTIMER.
- To support virtual-route-based transmission groups, the following operands have been added to MODIFY VTAMOPTS:
- VRTG
  - VRTGCPCP.
- To support 31-bit addressable storage, the SGA24 operand has been added to MODIFY VTAMOPTS.

#### **VARY ACT**

has the following new operands:

- CPCP overrides the value of the CPCP operand on a PU definition statement.
- DWACT dials any PUs in a switched major node that are activated when the major node is activated.
- IDTYPE distinguishes between different types of resources that have the same name.
- UPDATE updates your configuration to match the definition file (a new method of dynamic reconfiguration).
- VRTGCPCP overrides the setting of the VRTGCPCP value on the CDRM definition statement or the start option.

VARY ACT can be used to activate:

- A transport resource list (TRL) major node

- The switched major node containing PUs supported by a dependent LU requester (DLUR). The CPSVRMGR session is not activated until a VARY DIAL command is issued for the physical unit.

For more information about this command, see topic [2.1.92](#).

**VARY DIAL**

has a new operand, CPCP, to override the value of the CPCP operand on a PU definition statement. For more information about this command, see topic [2.1.94](#).

**VARY INACT**

has the following new operands and operand values:

- IDTYPE distinguishes between different types of resources that have the same name.
- SAVESESS indicates whether active LU-LU sessions should remain active when the SSCP-SSCP session is terminated.

VARY INACT can be used to deactivate the CPSVRMGR session between a dependent LU requester (DLUR) and a dependent LU Server (DLUS). This command can also be used to deactivate a PU receiving DLUR support.

For more information about this command, see topic [2.1.97](#).



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The logo consists of the word "IBM" in its characteristic eight-bar font, followed by the words "Library Server" in a sans-serif font, all contained within a black rectangular box.

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## PREFACE.3.8 Usability Changes

Command syntax is depicted in "railroad track" syntax diagrams instead of the brackets-and-braces style used in previous editions of this manual. The railroad track style is being adopted by all IBM (\*) products. If you are not familiar with railroad tracks, refer to ["How to Read the Syntax Diagrams"](#) for information on how to read them.

If a command can be used for more than one purpose, this manual shows a unique syntax diagram for each task. Because the syntax diagrams portray the logic of each command more accurately than the earlier brackets-and-braces style, it is anticipated that operators and system programmers will have less difficulty understanding mutually-exclusive operands and issuing commands correctly.

If you wish to comment on the use of railroad tracks or other documentation concerns, a Reader's Comment Form is located at the back of this manual. Your feedback will be appreciated.

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## PREFACE.4 Where to Find Information about VTAM

["Bibliography"](#) describes the books in the VTAM V4R2 library, arranged according to related tasks. The bibliography also lists the titles and order numbers of books related to this book or cited by name in this book.

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# 1.1 Chapter 1. Introducing an Operator to VTAM

The most common types of operator tasks are those associated with monitoring and controlling the network. The portion of a network that you can control varies from one organization to another.

**Sphere of control** refers to the portion of the network you control and what operations you can perform on that portion of the network. Your sphere of control is limited by any restrictions on which portions of the network you can affect and which commands you can issue. Within your sphere of control, you can both monitor and control VTAM's domain. This means that you can view what is happening in your network and make changes to network status as needed.

Your individual network will differ from that of other operators. The following sections about monitoring and controlling VTAM's domain include a few examples of results of commands issued by an operator in the sample network.

Assume the sample network consists of the resources shown in [Figure 2](#). This picture shows:

- Two sessions. One is between application CICS01 and logical unit L3A3767A. The other is between CICS01 and logical unit L3A3278A.
- Two cluster controllers. They are physical units P3A3767A and P3A3274A.
- Four workstations, identified as LUs.

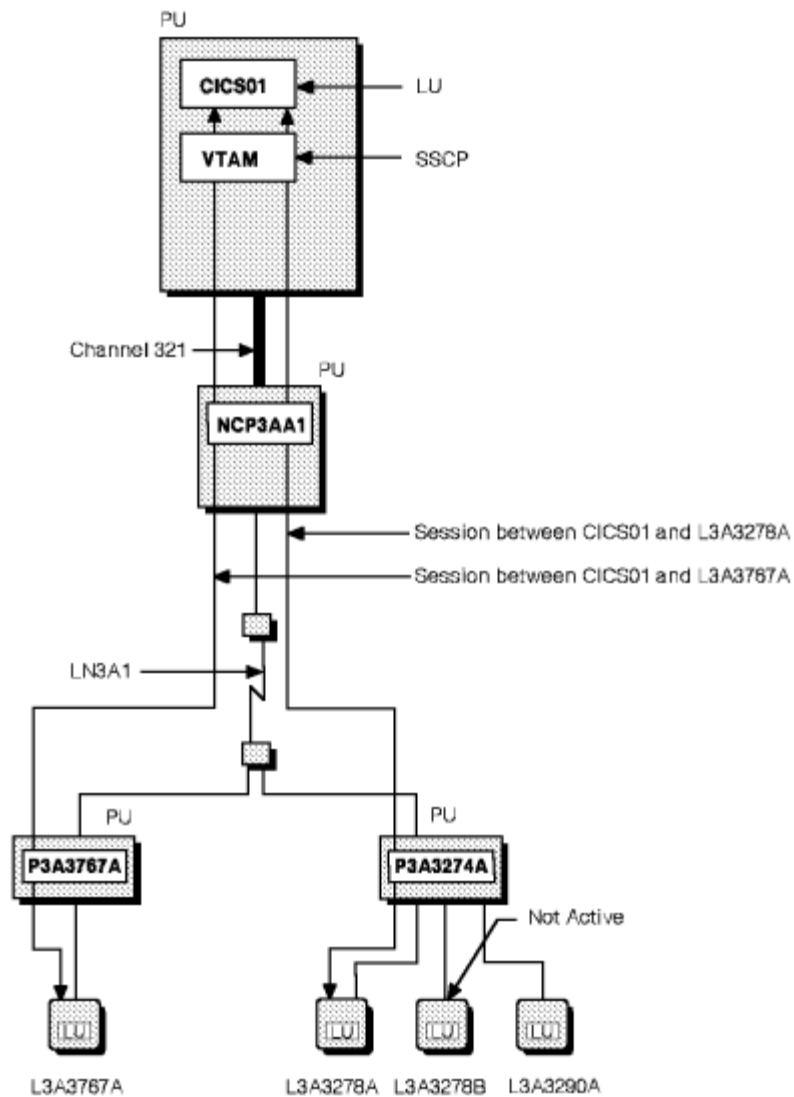


Figure 2. Sample VTAM Network

Subtopics:

- [1.1.1 Monitoring VTAM](#)
- [1.1.2 Controlling VTAM](#)



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## 1.1.1 Monitoring VTAM

The term **monitor** means to watch something change, in order to ensure that the network is operating as planned. As you monitor VTAM, you can check on the status of the sessions between resources by using the various DISPLAY commands. A DISPLAY command enables VTAM to show information on your workstation screen.

This chapter does not provide details of what each of the commands can do. You can find details about specific commands in [Chapter 2, "VTAM Operator Commands."](#)

The DISPLAY commands let you see the status of the network or its resources. Status shows whether the network or its individual resources are up (active) or down (inactive). DISPLAY commands also provide information on which resources have been defined to VTAM and where they are in the network hierarchy.

The following example illustrates the use of a DISPLAY command. The operator for the sample network shown in [Figure 2](#) enters the following DISPLAY command:

```
d net,id=CICS01,scope=all
```

**Note:** VTAM allows the operator to use the abbreviation "d" instead of "DISPLAY" in the command DISPLAY NET,ID=CICS01,SCOPE=ALL.

Within this chapter, the abbreviated forms of commands (d=DISPLAY, v=VARY, and f=MODIFY) are used. VTAM accepts commands in either lowercase or uppercase.

The displays shown in the scenarios might differ from what you would see in your network. For example, if the MSGMOD=YES start option is specified in your network, the output would differ from these samples, which reflect MSGMOD=NO.

When you enter this command, VTAM shows all active sessions with the CICS01 application program. Details about this and other commands used in this scenario are provided in [Chapter 2, "VTAM Operator Commands."](#)

The display shows VTAM's response:

```
d net,id=CICS01,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.CICS01, TYPE = APPL
IST486I STATUS= ACT/S, DESIRED STATE= ACTIV
```

```

IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = APPL1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = ECHO, STEPNAME = ECHO, DSPNAME = 0AAACIST
IST228I ENCRYPTION = OPTIONAL
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I L3A3278A ACTIV-S EAABEEC3FF8D8965 0000 0000 4 0 NETA
IST635I L3A3767A ACTIV-P F6ABEEC3028D8998 0000 0000 4 0 NETA
IST314I END

```

**Note:** The highlighted fields and values in this and later samples are explained in the text.

In this display:

- IST486I indicates that the application program is active with sessions (ACT/S) and that the desired state for this application program is active.
- IST171I shows that there are two sessions with this application program and that no session requests are pending.
- IST635I lists the logical units that are in session with this application program.

In your network, you can also display information about physical and logical resources, check to see whether your domain's VTAM is connected to any other VTAM domains, and view routes (logical connections) that are being used.

The operator enters another DISPLAY command as follows:

```
d net,id=LN3A1,scope=all
```

The operator uses this command to display line LN3A1 and the resources that are attached to the line.

The display shows VTAM's response:

```

d net,id=LN3A1,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = LN3A1, TYPE = LINE
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST087I TYPE = LEASED , CONTROL = SDLC
IST134I GROUP = GRP3A1, MAJOR NODE = NCP3AA1
IST084I NETWORK NODES:
IST089I P3A3767A TYPE = PHYSICAL UNIT , ACTIV
IST089I L3A3767A TYPE = LOGICAL UNIT , ACTIV
IST089I P3A3274A TYPE = PHYSICAL UNIT , ACTIV

```



```

IST089I L3A3278A TYPE = LOGICAL UNIT      , ACTIV
IST089I L3A3278B TYPE = LOGICAL UNIT      , NEVAC
IST089I L3A3290A TYPE = LOGICAL UNIT      , ACTIV
IST314I  END

```

In this display:

- IST087I indicates that the line is a leased (nonswitched) line.
- IST089I shows two physical units and four logical units attached to the communication controller.
- One of the logical units (L3A3278B) has never been activated (NEVAC).

The operator enters another DISPLAY command as follows:

```
d net,id=L3A3278B,scope=all
```

VTAM displays the following information about logical unit L3A3278B:

```

d net,id=L3A3278B,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.L3A3278B, TYPE = LOGICAL UNIT
IST486I STATUS= NEVAC, DESIRED STATE= INACT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=MODETAB2 USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT 00000001
IST081I LINE NAME = LN3A1, LINE GROUP = GRP3A1, MAJNOD = NCP3AA1
IST135I PHYSICAL UNIT = P3A3274A
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I  END

```

In this display, IST486I indicates that the current state of the logical unit is NEVAC, which means the logical unit was never activated, and that the desired state is INACT. It indicates that VTAM is not attempting to activate its subordinate resources because no request was made to do so.



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## 1.1.2 Controlling VTAM

The term **control**, within VTAM, means that VTAM can be started or stopped, or that VTAM and the network resources can be changed. The types of commands that you use to start, stop, or change VTAM are:

- START **MVS,VM**
- EXEC **VSE**
- HALT
- VARY
- MODIFY.

Subtopics:

- [1.1.2.1 Starting VTAM](#)
- [1.1.2.2 Stopping VTAM](#)
- [1.1.2.3 Changing VTAM with VARY Commands](#)
- [1.1.2.4 Changing VTAM with MODIFY Commands](#)



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## 1.1.2.1 Starting VTAM

You use the `START MVS,VM` or `EXEC VSE` command to activate VTAM. These commands use some defaults set by the system programmer (as part of the network definition). When you use the `START MVS,VM` or `EXEC VSE` command, you might be required to enter changes or additions to the defaults. If this is the case, your system programmer can tell you what commands to enter.

The defaults for the `START MVS,VM` or `EXEC VSE` command are contained in the configuration list and start list that are defined by the system programmer. The *configuration list* contains a list of VTAM resources. VTAM uses this list to find out what resources to activate when VTAM is first started. A network can have more than one configuration list; this allows different configurations to be brought up at start time.

The *start list* contains VTAM operating system options. For example, it defines how storage is to be used and indicates whether VTAM suppresses or shows messages. The start list also identifies which configuration list is to be used for startup.



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## 1.1.2.2 Stopping VTAM

The HALT commands allow you to shut down (deactivate) the network.

The different versions of HALT commands cause varying degrees of disruption to a network. In selecting which HALT command to use, be sure to check your local operating procedure to ensure that you use the appropriate command for your situation.

One reason for being cautious with use of the HALT command is that you could interrupt productive work for everyone using the system. The results of halting VTAM are similar to disconnecting all phone lines for an office building.

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### 1.1.2.3 Changing VTAM with VARY Commands

One way you can change VTAM is by using a VARY command. The VARY commands affect the status of each physical resource and session. They enable you to activate and deactivate individual resources or sessions. In addition to allowing you to change the status of all resources, the VARY commands let you change VTAM internal operations, such as path definitions.

In an earlier scenario, the inactive logical unit L3A3278B was shown as being downstream from NCP3AA1. To review the status of this LU, the operator enters:

```
d net,id=L3A3278B,scope=all
```

The display shows that the logical unit is still inactive.

```
d net,id=L3A3278B,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.L3A3278B, TYPE = LOGICAL UNIT
IST486I STATUS= NEVAC, DESIRED STATE= INACT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=MODETAB2 USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT 00000001
IST081I LINE NAME = LN3A1, LINE GROUP = GRP3A1, MAJNOD = NCP3AA1
IST135I PHYSICAL UNIT = P3A3274A
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END
```

To activate the previously inactive logical unit, the operator enters:

```
v net,act,id=L3A3278B
```

The display shows:

```
v net,act,id=L3A3278B
IST097I VARY ACCEPTED
IST093I L3A3278B ACTIVE
```

If the operator reissues the DISPLAY command, the display changes as shown:

```
d net,id=L3A3278B,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.L3A3278B, TYPE = LOGICAL UNIT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=MODETAB2 USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU ENABLED ,SESSION LIMIT 00000001
IST081I LINE NAME = LN3A1, LINE GROUP = GRP3A1, MAJNOD = NCP3AA1
IST135I PHYSICAL UNIT = P3A3274A
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END
```

In this display, IST486I indicates that the desired and current states are now active.



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## 1.1.2.4 Changing VTAM with MODIFY Commands

You can use the MODIFY commands to change the start list options and other operating system options, such as: mode table definitions, how storage is to be used, and what type of trace is to be used.

To display an input or output (I/O) trace for the host PU specified in the start options (in this case, ISTEPUS), the operator enters:

```
d net,id=ISTPUS,scope=all
```

The display shows:

```
d net,id=ISTPUS,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = ISTEPUS, TYPE = PU T4/5
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST596I IRN TRACE = OFF
IST484I SUBAREA = 1
IST925I DYNAMIC PATH DEFINITION PATH1A STATUS = ACTIV
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST170I LINES:
IST080I 0321-L    ACTIV----I
IST314I END
```

To start the trace, the operator enters:

```
f net,trace,type=io,id=istpus
```

**Note:** The abbreviation for MODIFY is "f" and the procedure name (procname) is NET. See ["Command Fundamentals"](#) for an explanation about the purpose and use of procname.

The display shows:

```
f net,trace,type=io,id=istpus
IST097I MODIFY ACCEPTED
```

```
IST513I TRACE INITIATED FOR NODE ISTOPUS
```

If the operator reissues the DISPLAY command, the display changes:

```
d net,id=ISTPUS,scope=all  
IST097I DISPLAY ACCEPTED  
IST075I NAME = ISTOPUS, TYPE = PU T4/5  
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV  
IST596I IRN TRACE = OFF  
IST484I SUBAREA = 1  
IST925I DYNAMIC PATH DEFINITION PATH1A STATUS = ACTIV  
IST654I I/O TRACE = ON, BUFFER TRACE = OFF  
IST170I LINES:  
IST080I 0321-L    ACTIV----I  
IST314I END
```



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## 2.1 Chapter 2. VTAM Operator Commands

This chapter is a reference to VTAM operator commands. It provides a description of the format and the applicable operands of each command. The commands are arranged alphabetically.

Subtopics:

- [2.1.1 Command Fundamentals](#)
- [2.1.2 DISPLAY ADJCLUST Command](#)
- [2.1.3 DISPLAY ADJCP Command](#)
- [2.1.4 DISPLAY ADJSSCPS Command](#)
- [2.1.5 DISPLAY APPLS Command](#)
- [2.1.6 DISPLAY BFRUSE Command](#)
- [2.1.7 DISPLAY BNCOSMAP Command](#)
- [2.1.8 DISPLAY CDRMS Command](#)
- [2.1.9 DISPLAY CDRSCS Command](#)
- [2.1.10 DISPLAY CLSTRS Command](#)
- [2.1.11 DISPLAY CNOS Command](#)
- [2.1.12 DISPLAY CONVID Command](#)
- [2.1.13 DISPLAY COS Command](#)
- [2.1.14 DISPLAY CPS Command \(VSE\)](#)
- [2.1.15 DISPLAY DIRECTRY Command](#)
- [2.1.16 DISPLAY DISK Command](#)
- [2.1.17 DISPLAY DLURS Command](#)
- [2.1.18 DISPLAY EXIT Command](#)
- [2.1.19 DISPLAY GROUPS Command](#)
- [2.1.20 DISPLAY ID Command](#)
- [2.1.21 DISPLAY LINES Command](#)
- [2.1.22 DISPLAY LMTBL Command](#)
- [2.1.23 DISPLAY LUGROUPS Command](#)
- [2.1.24 DISPLAY MAJNODES Command](#)
- [2.1.25 DISPLAY MODELS Command](#)
- [2.1.26 DISPLAY NCPSTOR Command](#)
- [2.1.27 DISPLAY NETSRVR Command](#)
- [2.1.28 DISPLAY PATHS Command](#)
- [2.1.29 DISPLAY PATHTAB Command](#)
- [2.1.30 DISPLAY PENDING Command](#)
- [2.1.31 DISPLAY ROUTE Command](#)
- [2.1.32 DISPLAY RSCLIST Command](#)
- [2.1.33 DISPLAY SESSIONS Command](#)
- [2.1.34 DISPLAY STATIONS Command](#)
- [2.1.35 DISPLAY STATS Command](#)
- [2.1.36 DISPLAY STORUSE Command](#)
- [2.1.37 DISPLAY TABLE Command](#)
- [2.1.38 DISPLAY TERMS Command](#)
- [2.1.39 DISPLAY TGPS Command](#)
- [2.1.40 DISPLAY TOPO Command](#)
- [2.1.41 DISPLAY TRACES Command](#)
- [2.1.42 DISPLAY TRL Command](#)
- [2.1.43 DISPLAY TSOUSER Command \(MVS\)](#)
- [2.1.44 DISPLAY USERVAR Command](#)
- [2.1.45 DISPLAY VTAMOPTS Command](#)
- [2.1.46 EXEC Command \(VSE\)](#)
- [2.1.47 HALT Command](#)
- [2.1.48 HALT CANCEL Command \(MVS, VM\)](#)
- [2.1.49 HALT QUICK Command](#)
- [2.1.50 MODIFY ALSLIST Command](#)
- [2.1.51 MODIFY CDRM Command](#)
- [2.1.52 MODIFY CHKPT Command](#)
- [2.1.53 MODIFY CNOS Command](#)
- [2.1.54 MODIFY COMPRESS Command](#)
- [2.1.55 MODIFY CSALIMIT Command \(MVS, VM\)](#)

- [2.1.56 MODIFY DEFAULTS Command](#)
- [2.1.57 MODIFY DEFINE Command](#)
- [2.1.58 MODIFY DIRECTRY Command](#)
- [2.1.59 MODIFY DR Command](#)
- [2.1.60 MODIFY DUMP Command](#)
- [2.1.61 MODIFY ENCR Command \(MVS\)](#)
- [2.1.62 MODIFY EXIT Command](#)
- [2.1.63 MODIFY IMR Command](#)
- [2.1.64 MODIFY IOPD Command](#)
- [2.1.65 MODIFY IOPURGE Command](#)
- [2.1.66 MODIFY LINEDEF Command](#)
- [2.1.67 MODIFY LL2 Command](#)
- [2.1.68 MODIFY LOAD Command](#)
- [2.1.69 MODIFY MSG Command \(VSE\)](#)
- [2.1.70 MODIFY MSGMOD Command](#)
- [2.1.71 MODIFY NEG POLL Command](#)
- [2.1.72 MODIFY NOTNSTAT Command](#)
- [2.1.73 MODIFY NOTTRACE Command](#)
- [2.1.74 MODIFY POLL Command](#)
- [2.1.75 MODIFY PPLOG Command](#)
- [2.1.76 MODIFY PROFILES Command \(MVS, VM\)](#)
- [2.1.77 MODIFY QUERY Command](#)
- [2.1.78 MODIFY RESOURCE Command](#)
- [2.1.79 MODIFY SESSION Command](#)
- [2.1.80 MODIFY SGALIMIT Command \(VSE\)](#)
- [2.1.81 MODIFY SUBTASK Command \(VM, VSE\)](#)
- [2.1.82 MODIFY SUPP Command](#)
- [2.1.83 MODIFY TABLE Command](#)
- [2.1.84 MODIFY TGP Command](#)
- [2.1.85 MODIFY TNSTAT Command](#)
- [2.1.86 MODIFY TOPO Command](#)
- [2.1.87 MODIFY TRACE Command](#)
- [2.1.88 MODIFY USERVAR Command](#)
- [2.1.89 MODIFY VTAMOPTS Command](#)
- [2.1.90 START Command \(MVS, VM\)](#)
- [2.1.91 VARY ACO Command](#)
- [2.1.92 VARY ACT Command](#)
- [2.1.93 VARY ANS Command](#)
- [2.1.94 VARY DIAL Command](#)
- [2.1.95 VARY DRDS Command](#)
- [2.1.96 VARY HANGUP Command](#)
- [2.1.97 VARY INACT Command](#)
- [2.1.98 VARY INOP Command](#)
- [2.1.99 VARY LOGON Command](#)
- [2.1.100 VARY NOLOGON Command](#)
- [2.1.101 VARY PATH Command](#)
- [2.1.102 VARY REL Command](#)
- [2.1.103 VARY TERM Command](#)



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## 2.1.1 Command Fundamentals

A VTAM operator command consists of the command name or its abbreviation, and various operands that describe the operation to perform. Each VTAM operator command has a procedure name, referred to as *procname* in the command syntax, which tells the operating system to route the command to VTAM for processing. Values for *procname* vary according to the command and the operating system but *procname* must always appear as the first operand of a command.

For example, the following command includes the verb (DISPLAY) and the *procname* (NET):

```
VTAM DISPLAY NET,LMTBL,ID=applname,TYPE=LUNAME,LUNAME=luname
```

**Note:** Because this command uses the prefix VTAM, it is an example of a command entered on a VM system. The MVS or VSE version of this same command would omit the prefix and be entered as:

```
DISPLAY NET,LMTBL,ID=applname,TYPE=LUNAME,LUNAME=luname
```

- **MVS** The value of *procname* for VTAM commands, other than the MODIFY command, is **NET**.

The value of *procname* for the MODIFY commands depends on the value specified in the START command:

- If *procname* was specified in the START command in the form *startname.ident*, where *startname* is the name of the VTAM start procedure and *ident* is an optional procedure name identifier, then *procname* can be specified as either *startname.ident* or simply *ident* for the MODIFY command.

For example, if the specification in the START command uses the *.ident* extension (NETID.ident), then the MODIFY command can use either of the following specifications:

```
MODIFY NETID.ident,NOTRACE,TYPE=BUF,ID=name,SCOPE=ONLY
```

```
MODIFY ident,NOTRACE,TYPE=BUF,ID=name,SCOPE=ONLY
```

- If *procname* was specified in the START command in the form *startname*, where *startname* is the name of the VTAM start procedure, then it must also be specified as *startname* for the MODIFY command.

So, if the *procname* specified in the START command is NETID, the MODIFY command shown in the following sample must also have the same *procname* specification:

```
MODIFY NETID,NOTRACE,TYPE=BUF,ID=name,SCOPE=ONLY
```

- **VM** All VTAM operator commands are implemented as subcommands of a single type of group control system (GCS) operator command. This type of GCS command consists of two parts, a prefix and a subcommand. The prefix routes the command to the VTAM operator command processor and the subcommand is directly interpreted by that processor. The VTAM command processor is loaded using the GCS LOADCMD command.

The value to be used as a prefix, usually VTAM, is determined by a parameter specified on the GCS LOADCMD command. The VTAM prefix eliminates the need for procedure names; however, to ensure consistency within networks with various operating systems, VTAM commands entered on a VM system can include **NET** as the value for *procname*. The use of **NET** as the value of *procname* is optional, but is recommended for ease and consistency of operation.

As illustration of this, note that the following commands yield the same results. The first command shows NET used as the value for *procname*.

```
VTAM DISPLAY NET,LMTBL,ID=applname,TYPE=LUNAME,LUNAME=luname
```

The next command eliminates the optional *procname*.

```
VTAM DISPLAY LMTBL,ID=applname,TYPE=LUNAME,LUNAME=luname
```

The syntax of the subcommand depends upon the operating system used. For both VM and MVS, the syntax of the subcommand is the same.

- **VSE** The value of *procname* for VTAM commands is always **NET**.

To avoid needless repetition, the NET operand is not described for every command. However, for MODIFY commands whose *procnames* depend upon the type of operating system used, each possibility is described.

Subtopics:

- [2.1.1.1 How to Read the Syntax Diagrams](#)
- [2.1.1.2 Entering Operator Commands](#)
- [2.1.1.3 Online Message Facility \(MVS, VM\)](#)
- [2.1.1.4 Command Tree/2 \(MVS, VM\)](#)
- [2.1.1.5 Controlling Operator Messages](#)
- [2.1.1.6 Using Wildcard Names](#)
- [2.1.1.7 Unformatted System Services \(USS\) Command Syntax](#)



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## 2.1.1.1 How to Read the Syntax Diagrams

This section describes how to read the syntax diagrams used in this book.

- Read the diagrams from left-to-right, top-to-bottom, following the main path line. Each diagram begins on the left with double arrowheads (>>) and ends on the right with two arrowheads facing each other (><).

```
>>__| Syntax Diagram |_____><
```

- If a diagram is longer than one line, the first line ends with a single arrowhead (>) and the second line begins with a single arrowhead.

```
>>__| First Line |_____>
```

```
>__| Second Line |_____><
```

- Required operands and values appear on the main path line.

```
>>__REQUIRED_OPERAND_____><
```

You must code required operands and values.

If there is more than one mutually exclusive required operand or value to choose from, they are stacked vertically in alphanumeric order.

```
>>__|_REQUIRED_OPERAND_OR_VALUE_1_|_____><
    |_REQUIRED_OPERAND_OR_VALUE_2_|
```

- Optional operands and values appear below the main path line.

```
>>__|_____><
    |_OPERAND_|
```

You can choose not to code optional operands and values.

If there is more than one mutually exclusive optional operand or value to choose from, they are stacked vertically in alphanumeric order below the main path line.

```
>>__|_____><
    |_OPERAND_OR_VALUE_1_|
    |_OPERAND_OR_VALUE_2_|
```

- An arrow returning to the left above an operand or value on the main path line means that the operand or value can be repeated. The comma means that each operand or value must be separated from the next by a

comma.

```
>> <_, REPEATABLE_OPERAND | _____><
```

- An arrow returning to the left above a group of operands or values means more than one can be selected, or a single one can be repeated.

```
>> _____><
| <_, REPEATABLE_OPERAND_OR_VALUE_1_ | |
| REPEATABLE_OPERAND_OR_VALUE_2_ |
```

- A word in all uppercase is an operand or value you must spell exactly as shown. In this example, you must code **OPERAND**.

**Note:** VTAM commands are not case sensitive. You can code them in uppercase or lowercase.

```
>> __OPERAND_____><
```

If an operand or value can be abbreviated, the abbreviation is discussed in the text associated with the syntax diagram.

- If a diagram shows a character that is not alphanumeric (such as parentheses, periods, commas, and equal signs), you must code the character as part of the syntax. In this example, you must code **OPERAND=(001,0.001)**.

```
>> __OPERAND=(001,0.001)_____><
```

- If a diagram shows a blank space, you must code the blank space as part of the syntax. In this example, you must code **OPERAND=(001 FIXED)**.

```
>> __OPERAND=(001 FIXED)_____><
```

- Default operands and values appear above the main path line. VTAM uses the default if you omit the operand entirely.

```
>> | _DEFAULT_ |
| _OPERAND_ | _____><
```

- A word in all lowercase italics is a *variable*. Where you see a variable in the syntax, you must replace it with one of its allowable names or values, as defined in the text.

```
>> __variable_____><
```

- References to syntax notes appear as numbers enclosed in parentheses above the line. Do not code the parentheses or the number.

```
>> (1)
__OPERAND_____><
```

**Note:**  
(1) An example of a syntax note.

- Some diagrams contain *syntax fragments*, which serve to break up diagrams that are too long, too complex, or too repetitious. Syntax fragment names are in mixed case and are shown in the diagram and in the heading of the fragment. The fragment is placed below the main diagram.

>>\_\_| Reference to Syntax Fragment |\_\_\_\_\_><

**Syntax Fragment:**

|\_\_1ST\_OPERAND, 2ND\_OPERAND, 3RD\_OPERAND\_\_\_\_\_|

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## 2.1.1.2 Entering Operator Commands

**MVS,VSE** Operator commands are entered and VTAM messages are received at the system console or the remote network console.

**VM** Operator commands can be entered and VTAM messages can be received at the VTAM virtual machine's operator console. VTAM can also be controlled from the system operator's console using the secondary console image facility.

VTAM operator commands and their formats are described later in this chapter.

The length of a VTAM operator command that can be entered at a console is limited by operator command input devices, certain operator application programs, the VTAM program operator interface, and VTAM itself. In most cases, VTAM requires operator commands to be entered on a single input line. Two exceptions are:

- If you need to enter more start options than will fit on one input line, end the line with a comma. Then VTAM prompts you for additional start options.
- If a command that exceeds VTAM's command length limit is entered on the input line, the command is rejected even though it might fit on the input line. A message indicating the additional length limitation imposed by VTAM is issued.

VTAM's command length limit can be reduced if PPOLOG=YES is specified in the START or MODIFY PPOLOG commands.

Subtopics:

- [2.1.1.2.1 Valid and Not-Valid Commands](#)
- [2.1.1.2.2 Command Verification Exit Routine](#)



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### 2.1.1.2.1 Valid and Not-Valid Commands

VTAM issues messages that tell you whether the commands you entered were accepted or rejected. The acceptance of a command does not imply command completion. When a command is entered correctly, with valid operands, VTAM issues a message of acknowledgment. If a syntax error is made in entering a command, VTAM issues one or more error messages and rejects the command.

See [VTAM Messages and Codes](#) for an explanation of error messages you might encounter.

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### 2.1.1.2.2 Command Verification Exit Routine

VTAM allows you to use a command verification exit routine (ISTCMMND) to screen and manipulate commands issued by a VTAM operator. (The term operator includes a program operator.) The primary purpose of this installation-wide exit routine is to screen command requests that impact critical nodes in the network.

See the ["MODIFY EXIT Command"](#) for information about modifying an installation-wide exit routine. See ["Command Verification Exit Routine"](#) in *VTAM Customization* for information about the command verification exit routine.



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### 2.1.1.3 Online Message Facility (MVS, VM)

The Online Message Facility is an OS/2(\*) program that provides online access to information from [VTAM Messages and Codes](#) and other BookManager(\*) softcopy books. The facility helps network operators and system programmers operate and diagnose problems without interrupting those tasks.

You can retrieve the descriptions of host messages by clicking on a message number in a Communications Manager emulator window. The Online Message Facility extracts the information you selected, builds a series of search arguments, then passes those search arguments to BookManager READ/2. BookManager searches for the information you selected and opens the appropriate softcopy book to the description of that information.

If the message you selected contains certain types of system codes, such as sense or abend codes, you can branch directly from the message description to the descriptions of the codes within that message.

The Online Message Facility also has a search function that allows you to search for messages and codes defined in BookManager softcopy books. In addition, you can take advantage of all the functions of BookManager READ/2 once it is invoked by the facility.



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## 2.1.1.4 Command Tree/2 (MVS, VM)

The IBM Command Tree/2 program guides you through the process of building a command. After you select the command options that you want, the Command Tree/2 program generates a command string that you can send to a specified destination. You need not remember details such as option names, the order of options, or punctuation to build a command. VTAM V4R2 for MVS/ESA and VM/ESA supply command set libraries for the Command Tree/2 program.

The Command Tree/2 program draws a tree structure that branches to show a product's commands and command options. In addition to issuing VTAM commands, you can use the Command Tree/2 program to:

- Add commands to a command tree
- Create and save your own commands (including CLISTs)
- Display a list of commands already sent
- Set up a command set library.

For more information on the Command Tree/2 program, see *Using Command Tree/2*, available on the *IBM Networking Softcopy Collection Kit* CD-ROM. Installation instructions for the VTAM command set library are in the [VTAM Network Implementation Guide](#). Use of the VTAM command set library requires the Command Tree/2 program to be installed on the operator's workstation.



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## 2.1.1.5 Controlling Operator Messages

The message-flooding prevention facility, shipped under object-code-only (OCO) protection since VTAM V3R1, identifies and suppresses duplicate messages which could overrun the operator console and conceal critical information. VTAM bases its suppression on the similarity of variable text in an original and subsequent message and a specified time interval between the two messages.

VTAM provides an external message-flooding prevention table that can be modified with the FLDTAB, FLDENT, and FLDEND macroinstructions. Using the FLDTAB start option or the MODIFY TABLE command, you can tell VTAM to use the default table supplied by IBM, use a user-defined table, or deny message-flooding prevention.

**Note:** You can only specify one message-flooding prevention table per VTAM.

The message-flooding prevention table identifies a list of messages that are candidates for flooding suppression. For each candidate message, the table identifies the criteria that must be met before VTAM suppresses duplicate messages. The suppression criteria include:

- The amount of time between the original and subsequent message
- An indication of which variable text fields are to be compared
- Whether a message is suppressed from the system hardcopy log.

If the message is reissued within the specified time interval and the specified variable text fields contain the same information, VTAM suppresses the message.

You do not have to code anything to get message-flooding prevention; VTAM uses an internal default table when VTAM is initialized. To specify a user-defined table, code the name of that table under the FLDTAB start option. This table is built dynamically when VTAM is initialized. If errors are found while building the table, VTAM issues a message indicating that the table has errors and uses the internal default table. If you code FLDTAB=NONE as a start option, VTAM does not provide any message-flooding prevention.

You can also use the MODIFY TABLE command to replace the table, or to change or delete resource associations to the table without affecting other VTAM operations. While VTAM is building the new message-flooding prevention table, it uses the current table. When VTAM verifies that the new table has been successfully built, VTAM replaces the existing table and begins using the new table. If you issue the MODIFY TABLE command to build a message-flooding prevention table, and there are fatal errors in the table, VTAM continues using the previous message-flooding prevention table (if one was in use) until the new table successfully builds.

While you are using a message-flooding prevention table, be aware of the effect on problem determination. If a command is issued twice within the time span specified in the message-flooding prevention table, any message sent to the operator by that command that is also a member of the table is suppressed for the second command. Because the table prevents messages from being issued by VTAM, this could affect CLISTS or automated operations facilities.

For messages that are part of a message group, VTAM searches the message-flooding prevention table for the header message of the group. If the header message is found and meets the suppression criteria, VTAM suppresses the whole message group. If the header message is not found in the table, VTAM will not suppress any message in the message group, including those that are listed in the table.

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## 2.1.1.6 Using Wildcard Names

A wildcard is a character used to represent an unspecified resource name or an unspecified part of a resource name. It is used by the VTAM operator to broaden the scope of a display or to find the name of a resource. Depending on the value of the DSPLYWLD start option, the use of wildcards might be allowed in the value specified for the ID operand of the following DISPLAY commands:

```

DISPLAY APPLS
DISPLAY CDRMS
DISPLAY CDRSCS
DISPLAY CLSTRS
DISPLAY GROUPS
DISPLAY LINES
DISPLAY RSCLIST
DISPLAY TERMS
DISPLAY TGPS
DISPLAY TOPO
DISPLAY TRACES

```

### Notes:

1. For most of the referenced DISPLAY commands, the ID operand identifies the name of a major node. The use of wildcards in the value of the ID operand does not extend the display to include subordinate nodes. To display the subordinate nodes, use the DISPLAY RSCLIST command with the IDTYPE operand.
2. Multiple wildcards are not allowed on the DISPLAY TOPO command.

The use of wildcards is also allowed in the value specified for the EXCLUDE operand of the DISPLAY RSCLIST command.

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every resource of a particular type in the network, depending on the command and operands issued.*

VTAM recognizes two wildcard characters for these commands:

**asterisk (\*)**  
represents a string of unspecified characters

**question mark (?)**  
represents a single unspecified character.

Following are several examples of how wildcard names are used:

**ID=\***  
displays all resource names

**ID=APP\***  
displays resource names that start with *APP*

**ID=\*01**  
displays resource names that end with *01*

**ID=APPL\*01**  
displays resource names that begin with *APPL* and end with *01*

**ID=APPL0??**  
displays resource names that begin with *APPL0* followed by exactly two characters

**ID=A\*P?1**  
displays resource names that start with *A* and end with *Px1* where *x* is any single character

**ID=?APP\***  
displays resource names that begin with any single character followed by *APP* and followed by any other characters

**ID=??\***  
displays resource names of two or more characters

**ID=(AA00,APP\*,\*01)**  
displays the first resource, then all resource names that start with *APP*, then all resources names that end with *01*.

Following are several examples of how wildcard names can be used with network-qualified names (*DISPLAY RSCLIST*, *DISPLAY TOPO*, and *DISPLAY TRACES,TYPE=NODES* commands):

**ID=NETA.APP\***  
displays resource names in *NETA* that begin with *APP*

**ID=NET\*.A\***  
displays resource names that start with *A* and have a network-qualified name that begins with *NET*

**ID=N\*A.A01**  
displays all resources with the name *A01* with a network-qualified name that begins with *N* and ends with *A*

**ID=NETA.\***  
displays all resources in *NETA*

**ID=\*.??**  
displays resources in any network with exactly two characters

**ID=(A\*,NETB.AP\*,APPL2,\*.T??)**  
displays:

- Resource names that begin with *A*
- Resource names in *NETB* that begin with *AP*
- *APPL2*
- Resources in any network whose name begins with *T* followed by exactly two characters





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## 2.1.1.7 Unformatted System Services (USS) Command Syntax

The unformatted system services (USS) table defines the format or syntax of commands that the operator enters. USS commands that can be found in this table include all:

- DISPLAY commands
- MODIFY commands
- VARY commands.

When one of the preceding commands is entered by a VTAM operator (including a program operator), USS does the following:

- Supplies default values for omitted operands.
- Detects duplicate or conflicting operands. In either case the command is rejected and an error message is issued.
- Converts abbreviations or user-defined keywords into keywords acceptable to VTAM command processors. For example, if OPT=CIO is entered on the MODIFY TRACE command, USS converts it to OPTION=CIO because OPT is defined as an abbreviation for the OPTION operand.

The command conversions that are to be done by USS are defined in the IBM-supplied USS table, ISTINCNO. The system programmer can supply a modified syntax for these commands by using USS facilities. If the syntax of a command has been changed, it is the responsibility of the system programmer to supply the operator with an explanation of the new command syntax. For more information on USS tables, see ["Defining VTAM Operator Commands"](#) in the *VTAM Resource Definition Reference*.

Enter the procedure name or *procname* as the first operand in a USS command. You can enter additional operands in any order. Exceptions to this include operands that normally contain a keyword, but can be abbreviated with a single value (for example, SCOPE=ALL can be abbreviated as ALL on the VARY ACT command and TYPE=IMMED can be abbreviated as IMMED or I on the VARY INACT command). In cases when an operand is coded using an abbreviation and the abbreviation does not include the keyword, the operand must not immediately follow the procedure name.



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## 2.1.2 DISPLAY ADJCLUST Command

```
>> vm_prefix DISPLAY NET,ADJCLUST_____>
      |_,NETID=netid_|_____>
> |_,SCOPE=ONLY_____><
  |_,SCOPE=| ONLY |_____><
  | ALL |_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY ADJCLUST (adjacent cluster table) command displays the adjacent cluster (routing) tables and their entries in the order to be used for APPN searches. The entries in the tables include all user-defined entries, along with any dynamic entries that have been added, based on the current value of the BNDYN start option.

**Note:** The order of the entries for a search can be affected by APPN directory entries and the directory services management exit.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

NETID=netid

specifies the destination network for the adjacent cluster table to be displayed.

#### SCOPE

determines the range of adjacent cluster tables to be displayed.

#### SCOPE=ALL

specifies that all adjacent cluster tables are to be displayed. This option is ignored if the NETID operand is specified.

#### SCOPE=ONLY

- If the NETID operand is specified, VTAM displays adjacent cluster definitions that match the destination network.
- If the NETID operand is not specified, VTAM displays adjacent cluster definitions for the default destination network.

### Resulting Display

The resulting display shows whether the table is a user-defined, default, or dynamically-built table, the level of dynamics used for the table, and the status of each entry. Defined entries are displayed regardless of their current status. If a defined entry is displayed as inactive, it will not be included in a search. Dynamic entries are displayed only if they are active.

- A user-defined table indicates that adjacent cluster definition statements exist for the specified NETID.
- A default routing table is used when no defined entries exist for the specified NETID, but a default table has been coded. A default table indicates how to route requests when the specified NETID is not defined.
- A dynamically-built routing table is created when no defined or default routing table exists. This table is created completely from active dynamic routing information.

### Examples

Displaying the user-defined adjacent cluster table for a specific network:

```
d net,adjclust,netid=neta
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CLUSTER TABLE
IST1325I DEFINED TABLE FOR NETA          DYNAMICS = LIMITED
IST1326I CP NAME           TYPE      STATE      STATUS      SNVC
IST1327I NETA.BN3         DEFINED ACTIVE   FOUND        003
IST1327I NETA.BN2         DEFINED NOT ACTIVE NOT SEARCHED 003
IST1327I NETA.BN1         DYNAMIC ACTIVE   NOT SEARCHED N/A
IST314I END
```

Displaying a default adjacent cluster table for a specific network:

```
d net,adjclust,netid=netb
```

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CLUSTER TABLE
IST1325I DEFAULT TABLE FOR NETB          DYNAMICS = LIMITED
IST1326I CP NAME          TYPE      STATE      STATUS      SNVC
IST1327I NETB.BN4        DEFINED  ACTIVE    NOT SEARCHED 004
IST1327I NETB.BN5        DYNAMIC  ACTIVE    NOT SEARCHED 003
IST314I END
```

Displaying a dynamically-built adjacent cluster table:

```
d net,adjclust,netid=netc
```

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CLUSTER TABLE
IST1325I DYNAMIC TABLE FOR NETC          DYNAMICS = LIMITED
IST1326I CP NAME          TYPE      STATE      STATUS      SNVC
IST1327I NETC.BN6        DYNAMIC  ACTIVE    FOUND        003
IST314I END
```



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## 2.1.3 DISPLAY ADJCP Command

```
>> vm_prefix DISPLAY NET,ADJCP___, ID=adjacent_cp_name_____>
>_ | SCOPE=ONLY_____ |_____><
>_ | SCOPE=_ ALL_____ |_____><
>_ | ONLY_____ |_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY ADJCP (adjacent control point) command displays the attributes of a specific adjacent node and the connections in which it is currently involved. This command is valid only when it is issued at an APPN node (network node, end node, interchange node, or migration data host).

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**ID=adjacent\_cp\_name**  
specifies the network-qualified name of the adjacent control point. If the network identifier is not provided, it is assumed to be the issuing network's network identifier. You can specify \* (or \*NETWORK) as the network ID portion of a network-qualified adjacent CP name in order to display adjacent CPs that do not currently have a network identifier assigned to them. For example, the following command is

valid if A01N currently does not have a network ID associated with it:

```
D NET,ADJCP,ID=*.a01n
```

#### SCOPE

specifies the desired scope of the display.

#### SCOPE=ONLY

displays the status and the major node name for the adjacent control point.

#### SCOPE=ALL

displays the status, the major node name, the node type, and detailed connection information for the adjacent control point.

### Resulting Display

The resulting VTAM display shows:

- For SCOPE=ONLY, the status and the major node name for the adjacent control point.
- For SCOPE=ALL, the status, the major node name, the node type, the number of connections, the number of CP-CP capable connections, an indication of whether the node being displayed is in the same subnetwork as the node where you are issuing the display, the resource name and status, the TG number, an indication of CP-CP session capability, and the TG characteristics. For a byte-by-byte explanation of the TG characteristics, see the ["DISPLAY TGPS Command."](#)

### Examples

Displaying an adjacent CP:

```
d net,adjcp,id=a01n,scope=only
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = ISTADJCP
IST314I END
```

Displaying detailed information for an adjacent CP:

```
d net,adjcp,id=sscp2a,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = ISTADJCP
IST1101I ADJCP DISPLAY SUMMARY FOR NETA.SSCP2A
```

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```
IST1102I NODENAME                NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I NETA.SSCP2A              NN          1          1          NO
IST1104I CONNECTION SUMMARY FOR NETA.SSCP2A
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I P3A4956M AC/R           21 YES    982D000000000000000017100808080
IST314I END
```

---



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## 2.1.4 DISPLAY ADJSSCPS Command

Display user-defined and dynamic adjacent SSCP tables:

```
>> vm_prefix DISPLAY NET,ADJSSCPS_____ >
      |_,CDRM=sscp_name_|_____ >
>_____ |_,SCOPE=ONLY_____ ><
      |_,NETID=netid_| |_,SCOPE=_____ ><
                        |ALL_____ ><
                        |ONLY_____ ><
```

Display the adjacent SSCP table for a specific cross-domain resource:

```
>> vm_prefix DISPLAY NET,ADJSSCPS_____,CDRSC=cdrsc_name_____ ><
```

Display a specific list of adjacent CDRMs used for session requests:

```
>> vm_prefix DISPLAY NET,ADJSSCPS_____,ADJLIST=list_name_____ ><
```

Display all lists of adjacent CDRMs:

```
>> vm_prefix DISPLAY NET,ADJSSCPS_____,ADJLIST=*_____ ><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY ADJSSCPS (adjacent system services control points) command displays user-defined and dynamically built adjacent SSCP tables and user-defined adjacent CDRM lists. If a user-defined adjacent SSCP table or CDRM list exists, VTAM displays information from that table or list. If no user-defined table exists, or if there is a table, but it does not contain any applicable entries, VTAM displays information from the dynamic adjacent SSCP table.

If you specify a CDRSC on this command, VTAM displays the dynamic adjacent SSCP table for the cross-domain resource, along with status information for the resource.

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ADJLIST

specifies that one or more lists of adjacent CDRMs are to be displayed. If you specify ADJLIST, do not specify any other operands on the command.

ADJLIST=list\_name

displays the list of adjacent CDRMs identified by *list\_name*.

ADJLIST=\*

displays all lists of adjacent CDRMs.

CDRM=sscp\_name

specifies that information is to be displayed about the adjacent SSCP table or tables for the specified CDRM. The *sscp\_name* may not be a network-qualified name; however, you can use the NETID operand to specify the network. If you specify CDRM, do not specify CDRSC on the same command.

CDRSC=cdrsc\_name

specifies that information is to be displayed about the adjacent SSCP table that is used to establish a session with the specified CDRSC. You can specify CDRSC as a network-qualified name. If you specify CDRSC, do not specify CDRM, NETID, or SCOPE on the same command.

The setting of the NONMODE start option might have an effect on how VTAM processes this operand. See "[NONMODE](#)" in the *VTAM Resource Definition Reference* for an explanation of this start option.

NETID=netid

specifies the destination network for the adjacent SSCP table or tables to be displayed. If you specify NETID, do not specify CDRSC on the same command.

SCOPE

determines the domain of the search for an adjacent SSCP table or tables. If you specify SCOPE, do not specify CDRSC on the same command.

SCOPE=ALL

- If neither NETID nor CDRM is specified:

1. VTAM displays all user-defined ADJSSCP tables.
  2. If no user-defined tables exist, VTAM displays the dynamic table if it exists.
- If you specify NETID (and not CDRM):
    1. VTAM displays all ADJSSCP tables for all CDRMs for the specified network.
    2. If there are no tables for individual CDRMs in the specified network, VTAM displays the default table for the specified network.
    3. If there is no default table for the specified network, VTAM displays the dynamic table if it exists.
  - If you specify CDRM (and not NETID):
    1. VTAM displays all ADJSSCP tables for the specified CDRM in all networks.
    2. If there are no tables for the specified CDRM, VTAM displays the default table for all networks.
    3. If there is no default table for all networks, VTAM displays the dynamic table if it exists.
  - If you specify both NETID and CDRM:
    1. VTAM displays the ADJSSCP for the specified CDRM in the specified network.
    2. If there is no table for the specified CDRM in the specified network, VTAM displays the default table for the specified network.
    3. If there is no default table for the specified network, VTAM displays the ADJSSCP table for the specified CDRM in the default network.
    4. If there is no table for the specified CDRM, VTAM displays the default table for all networks.
    5. If there is no default table for all networks, VTAM displays the dynamic table if it exists.

SCOPE=ONLY

- If you specify neither NETID nor CDRM:
  1. VTAM displays the default table for all networks.
  2. If there is no default table for all networks, VTAM displays the dynamic table if it exists.
  
- If you specify NETID (and not CDRM):
  1. VTAM displays the default table for the specified network.
  2. If there is no default table for the specified network, VTAM displays the default table for all networks.
  3. If there is no default table for all networks, VTAM displays the dynamic table if it exists.
  
- If you specify CDRM (and not NETID):
  1. VTAM displays the ADJSSCP table for the specified CDRM in the default network.
  2. If there is no table for the specified CDRM in the default network, VTAM displays the default table for all networks.
  3. If there is no default table for all networks, VTAM displays the dynamic table if it exists.
  
- If you specify both NETID and CDRM:
  1. VTAM displays the ADJSSCP for the specified CDRM in the specified network.
  2. If there is no table for the specified CDRM in the specified network, VTAM displays the default table for the specified network.
  3. If there is no default table for the specified network, VTAM displays the ADJSSCP table for the specified CDRM in the default network.
  4. If there is no table for the specified CDRM, VTAM displays the default table for all networks.
  5. If there is no default table for all networks, VTAM displays the dynamic table if it exists.

## Resulting Display

The resulting display differs depending on the operands specified.

If you specify the ADJLIST operand, the resulting display shows the appropriate adjacent CDRM list.

If you specify the CDRM or CDRSC operands, the resulting display shows the appropriate adjacent SSCP table. VTAM first searches for a user-defined table that satisfies the command. If a user-defined table is not found and the [DYNASSCP start option](#) has been set to YES, the dynamic adjacent SSCP table is displayed.

When DISPLAY ADJSSCPS is issued with the CDRSC operand, VTAM builds an adjacent SSCP table as if the resource were the target of a session initiation request. The table displayed is a combination of learned adjacent SSCPs which have been saved for the CDRSC and the appropriate user-defined or dynamic adjacent SSCP table. VTAM displays this table without invoking the session management exit routine for adjacent SSCP selection.

See ["Defining Adjacent SSCP Tables"](#) in the *VTAM Network Implementation Guide* for more information on dynamically defined adjacent SSCP tables.

## Examples

Examples of the DISPLAY ADJSSCPS command are presented in a scenario because the output of the command depends on the situation.

- Suppose that no adjacent SSCP tables are defined and no LU-LU sessions exist, but a dynamic table was created when an SSCP-SSCP session was established with SSCP2A. To display the dynamically created table, issue:

```
d net,adjsscps (with any other operands except CDRSC)
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST623I DYNAMIC ADJACENT SSCP TABLE
IST624I SSCP2A
IST314I END
```

- Later you establish an LU-LU session with APPL2 in SSCP2A. To display the dynamically created, session-specific adjacent SSCP table, issue:

```
d net,adjsscps,cdrsc=appl2
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST611I ADJACENT SSCP TABLE FOR APPL2 IN NETA
IST1220I SSCPNAME NETID CURRENT STATE ROUTING STATUS
IST624I SSCP2A NETA ACTIV SUCCESS
IST314I END
```

- Next you activate the following user-defined ADJSSCP table:

```
ADJTAB VBUILD TYPE=ADJSSCP
/* Default table for all networks */
SSCP1D ADJCDRM
/* CDRM SSCP in default table for all networks */
SSCPD CDRM
SSCP2D ADJCDRM
/* Default table for NETA */
NETA NETWORK NETID=NETA
```

```

SSCP1A    ADJCDRM
/* CDRM SSCPA in default table for NETA          */
SSCPA     CDRM
SSCP2A    ADJCDRM
/* Default table for NETB                        */
NETB      NETWORK NETID=NETB
/* CDRM SSCPA in default table for NETB        */
SSCPA     CDRM
SSCP2A    ADJCDRM
/* Define adjacent list                          */
LIST1     ADJLIST
SSCPD1    ADJCDRM
SSCP2A    ADJCDRM
LIST2     ADJLIST
SSCP1A    ADJCDRM

```

To display the user-defined, default ADJSSCP table for all networks, issue:

```

d net,adjsscps
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST623I DEFAULT ADJACENT SSCP TABLE
IST624I   SSCP1D
IST314I END

```

- To display all user-defined ADJSSCP tables, issue:

```

d net,adjsscps,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST611I ADJACENT SSCP TABLE FOR SSCPA IN NETB
IST624I   SSCP2A
IST611I ADJACENT SSCP TABLE FOR SSCPA IN NETA
IST624I   SSCP2A
IST623I DEFAULT ADJACENT SSCP TABLE FOR NETA
IST624I   SSCP1A
IST611I ADJACENT SSCP TABLE FOR SSCPD
IST624I   SSCP2D
IST623I DEFAULT ADJACENT SSCP TABLE
IST624I   SSCP1D
IST314I END

```

- To display the user-defined table for a specific CDRM in the default ADJSSCP table for all networks, issue:

```

d net,adjsscps,cdrm=sscpd
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST611I ADJACENT SSCP TABLE FOR SSCPD
IST624I   SSCP2D
IST314I END

```

- To display the user-defined table for a specific CDRM in a specific network, issue:

```

d net,adjsscps,cdrm=sscpa,netid=neta
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST611I ADJACENT SSCP TABLE FOR SSCPA IN NETA
IST624I   SSCP2A
IST314I END

```

- To display all user-defined ADJSSCP tables for a specific CDRM in all networks, issue:

```

d net,adjsscps,cdrm=sscpa,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE

```

```
IST611I ADJACENT SSCP TABLE FOR SSCPA IN NETB
IST624I   SSCP2A
IST611I ADJACENT SSCP TABLE FOR SSCPA IN NETA
IST624I   SSCP2A
IST314I END
```

- Displaying the user-defined adjacent CDRM list for a specific CDRSC:

```
d net,adjsscps,adjlist=list1
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST1333I ADJLIST = LIST1
IST624I   SSCP1
IST624I   SSCP2A
IST314I END
```

- Displaying all user-defined adjacent CDRM lists:

```
d net,adjsscps,adjlist=*
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST1333I ADJLIST = LIST2
IST624I   SSCP1A
IST1333I ADJLIST = LIST1
IST624I   SSCP1
IST624I   SSCP2A
IST314I END
```



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## 2.1.5 DISPLAY APPLS Command

```
>> vm_prefix DISPLAY NET,APPLS _____>
                                     |_, ID=  name _____|
                                     |<_, _____|
                                     |_( name |_)_|
```

```
> _____><
  |_, SCOPE=ALL _____|
  |_, SCOPE= _____|
  | ACT _____|
  | ACTONLY _____|
  | ALL _____|
  | CONCT _____|
  | INACT _____|
  | INACTONLY _____|
  | PENDING _____|
  | RESET _____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY APPLS (applications) command displays the status of active application program major nodes in the domain along with their subordinate application program minor nodes.

**Note:** To display application program minor nodes independently of the



major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=APPLS.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active application program major nodes whose subordinate resources are to be displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every application major node in the network.*

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable application program minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all application program minor nodes in an active state within the specified major nodes (or within all major nodes if the ID operand is omitted). The display does **not** include application programs in pending or connectable states. If no applications are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to active, connectable, and pending applications.

#### SCOPE=ALL

specifies that information is to be displayed about all application program minor nodes (regardless of their status) within the specified major nodes (or within all major nodes if the ID operand is omitted).

#### SCOPE=CONCT

specifies that information is to be displayed about all application program minor nodes in a CONCT (connectable) state within the specified major nodes (or within all major nodes if the ID operand is omitted). If no applications are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to active, connectable, and pending applications.

#### SCOPE=INACT

specifies that information is to be displayed about all inactive application program minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=INACTONLY or

SCOPE=RESET to further limit the display.

SCOPE=INACTONLY

specifies that information is to be displayed about all inactive application program minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

SCOPE=PENDING

specifies that information is to be displayed about all pending application program minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). A pending state is:

- A transient state to or from the fully active state
- **MVS,VSE** A state of "recovery pending" or "recovery in progress" for application programs that have been retained due to the failure or takeover of an application program enabled for persistence.

SCOPE=RESET

specifies that information is to be displayed about all application program minor nodes in a RESET state within the specified major nodes (or within all major nodes if the ID operand is omitted).

### Resulting Display

The resulting VTAM display shows:

- The name and status of the specified active application program major nodes (or all active application program major nodes if the ID operand is omitted). Inactive application program major nodes are not known to VTAM and are therefore not displayed.
- For each active application program major node, the name and status of each subordinate application program minor node (limited to active, connectable, inactive, or pending minor nodes if specified on the SCOPE operand).

**MVS** If a channel-attached host is used as an intermediate routing node for either a primary or backup extended recovery facility (XRF) session, the session through the channel-attached host might fail without notifying the XRF host. In that case, a DISPLAY APPLS command issued from either the primary or alternate host shows the failed session across the channel attachment as active.

### Examples

Displaying all application program major nodes and their minor nodes:

**d net,appls**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = APPL MAJ NODES/NAMES
IST089I VTAMSEG TYPE = APPL SEGMENT      , ACTIV
IST360I APPLICATIONS:
IST080I ISTATA00 CONCT      ISTNOP  ACTIV      ISTPDCLU  ACT/S
IST080I A01N      ACT/S
IST089I A01APPLS TYPE = APPL SEGMENT      , ACTIV
IST360I APPLICATIONS:
IST080I A01NV      ACTIV      A01NVPPT  ACTIV      A01NV000  CONCT
IST080I A01NV001  ACTIV      A01NV002  ACTIV      A01NV003  ACTIV
IST080I A01NV004  ACTIV      A01NV005  ACTIV      A01NV006  ACTIV
IST080I A01NV007  CONCT      A01NV008  CONCT      A01NV009  CONCT
IST080I A01TFOPT  CONCT      A01TFO0   CONCT      A01TFO1   CONCT
IST080I A01TFO2   CONCT      A01TFO3   CONCT      A01TFO4   CONCT
IST080I A01TF00   CONCT      A01TF01   CONCT      A01TF02   CONCT
IST080I A01TF03   CONCT      A01TF04   CONCT      A01TF05   CONCT
IST080I A01TF06   CONCT      A01TF07   CONCT      A01TF08   CONCT
IST080I A01TF09   CONCT      AAUTSKLP  CONCT      AAUTCNMI  ACTIV
IST080I DSICRTR  ACTIV      DSIAMLUT  ACT/S     A01NVLUC  ACT/S
IST080I A01NVSP  ACTIV      BNJHWMON  ACTIV      ALIASAPL  CONCT
IST080I DSIGDS   ACTIV      APPLR02   CONCT      APPLA01   CONCT
IST080I APPL01   CONCT      APPL0102  CONCT      A01MVSNO  CONCT
IST080I A01MVSOP CONCT      A01MVSRE  CONCT      WORM       CONCT
IST080I DIAL01   CONCT      CAPPL010  CONCT      CAPPL01C  CONCT
IST080I CAPPL01N CONCT      ECHO01    CONCT      ECHOX01   CONCT
IST080I ECHOA01  CONCT      APPCA01   CONCT      A01AP08   CONCT
IST080I A01SPAP8 CONCT      A01SPAP9  CONCT      NPMA01M   CONCT
IST080I NPMA01MA CONCT      TPNS02    CONCT      TPNSA01   CONCT
IST080I IMS02    CONCT      MHCICS02  CONCT      CICS02A   CONCT
IST080I TCAM02   CONCT      TSO02     ACTIV      TSO0201  ACT/S
IST080I TSO0202  CONCT      TSO0203   CONCT      TSO0204   CONCT
IST080I TSO0205  CONCT      TSO0206   CONCT      TSO0207   CONCT
IST080I TSO0208  CONCT      TSO0209   CONCT      TSO0210   CONCT
IST080I VMA01    CONCT      VMA011    CONCT      VMA012    CONCT
IST080I VMA013   CONCT      VMA014    CONCT      VMA015    CONCT
IST080I VMA016   CONCT      VMA017    CONCT      VMA018    CONCT
IST080I VMA019   CONCT
IST089I A01ECHOC TYPE = APPL SEGMENT      , ACTIV
IST360I APPLICATIONS:
IST080I ECHO01A  ACT/S     ECHO01B  ACTIV      ECHO01C  ACT/S
IST080I ECHO01D  CONCT     ECHO01E  CONCT
IST314I END

```

Displaying a specific application program major node and its minor nodes:

**d net,appls,id=a01appls**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = APPL MAJ NODES/NAMES
IST089I A01APPLS TYPE = APPL SEGMENT      , ACTIV
IST360I APPLICATIONS:
IST080I A01NV      ACTIV      A01NVPPT  ACTIV      A01NV000  CONCT
IST080I A01NV001  ACTIV      A01NV002  ACTIV      A01NV003  ACTIV
IST080I A01NV004  ACTIV      A01NV005  ACTIV      A01NV006  ACTIV
IST080I A01NV007  CONCT      A01NV008  CONCT      A01NV009  CONCT
IST080I A01TFOPT  CONCT      A01TFO0   CONCT      A01TFO1   CONCT
IST080I A01TFO2   CONCT      A01TFO3   CONCT      A01TFO4   CONCT
IST080I A01TF00   CONCT      A01TF01   CONCT      A01TF02   CONCT
IST080I A01TF03   CONCT      A01TF04   CONCT      A01TF05   CONCT
IST080I A01TF06   CONCT      A01TF07   CONCT      A01TF08   CONCT
IST080I A01TF09   CONCT      AAUTSKLP  CONCT      AAUTCNMI  ACTIV
IST080I DSICRTR  ACTIV      DSIAMLUT  ACT/S     A01NVLUC  ACT/S
IST080I A01NVSP  ACTIV      BNJHWMON  ACTIV      ALIASAPL  CONCT
IST080I DSIGDS   ACTIV      APPLR02   CONCT      APPLA01   CONCT
IST080I APPL01   CONCT      APPL0102  CONCT      A01MVSNO  CONCT
IST080I A01MVSOP CONCT      A01MVSRE  CONCT      WORM       CONCT
IST080I DIAL01   CONCT      CAPPL010  CONCT      CAPPL01C  CONCT
IST080I CAPPL01N CONCT      ECHO01    CONCT      ECHOX01   CONCT
IST080I ECHOA01  CONCT      APPCA01   CONCT      A01AP08   CONCT
IST080I A01SPAP8 CONCT      A01SPAP9  CONCT      NPMA01M   CONCT
IST080I NPMA01MA CONCT      TPNS02    CONCT      TPNSA01   CONCT
IST080I IMS02    CONCT      MHCICS02  CONCT      CICS02A   CONCT
IST080I TCAM02   CONCT      TSO02     ACTIV      TSO0201  ACT/S
IST080I TSO0202  CONCT      TSO0203   CONCT      TSO0204   CONCT
IST080I TSO0205  CONCT      TSO0206   CONCT      TSO0207   CONCT
IST080I TSO0208  CONCT      TSO0209   CONCT      TSO0210   CONCT
IST080I VMA01    CONCT      VMA011    CONCT      VMA012    CONCT

```

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```
IST080I VMA013 CONCT VMA014 CONCT VMA015 CONCT
IST080I VMA016 CONCT VMA017 CONCT VMA018 CONCT
IST080I VMA019 CONCT
IST314I END
```

---



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## 2.1.6 DISPLAY BFRUSE Command

```
>> vm_prefix DISPLAY NET,BFRUSE _____ >

> | _,BUFFER=* _____ | _____ ><
  | _,BUFFER= * |
  | SHORT |
  | SUMMARY |
  | buffid |
  | <_, _____ |
  | ( buffid | _____ ) |
  | _,SUMMARY | _____ |
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
BUFFER=*	BUF=*
BUFFER=buffid	BUF=buffid
BUFFER=SHORT	BUF=SH
BUFFER=SUMMARY	BUF=SUMM

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for BUFFER=SHORT, code only BUF=SH. Do not code BUFFER=SH.

### Purpose

The DISPLAY BFRUSE (buffer use) command displays information about VTAM buffer use.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**BUFFER**

specifies the buffers to display.

[Table 2](#) shows, for each buffer pool, the buffer pool ID, its name, and its abbreviation.

**BUFFER=\***

displays all buffer pools and information along with:

- **MVS,VM** Common service area (CSA) usage
- Intermediate routing node buffer usage limit (IRNLIMIT)
- **VSE** System GETVIS area (SGA) usage
- VTAM private storage usage.

**BUFFER=SHORT**

displays a shortened format of buffer-related information. Five digits are shown instead of 10. If the number is too large for display in 5 digits, then 5 asterisks (\*\*\*\*\*) are displayed. To view the data for that buffer, you can use the **BUFFER=buffid** operand.

The **SHORT** operand displays buffer pool information, along with:

- **MVS,VM** CSA usage
- IRNLIMIT buffer usage
- **VSE** SGA usage
- VTAM private storage usage.

**BUFFER=SUMMARY**

displays information about:

- **MVS,VM** CSA usage
- IRNLIMIT buffer usage
- **VSE** SGA usage
- VTAM private storage usage.

The information supplied by **SUMMARY** is independent of the information supplied by *buffid*. **SUMMARY** can be specified with or without *buffid*.

**BUFFER=buffid**

displays buffer pool count information for one or more standard VTAM buffer pools. Buffer pool count information will be displayed for the specified pools. A buffer name can be the full name, the buffer ID, or an abbreviation.

**Resulting Display**

For each buffer pool requested, the resulting VTAM display shows:

- The buffer pool identification (name of the buffer pool).

- Queued buffer requests (indicated by a **Q** after the buffer pool identification). The message display indicates the expansion limit for the **Q** buffer and the number of buffers needed to satisfy the queued requests.
- Whether an expansion attempt has failed (indicated by an **F** after the buffer pool identification). The message display indicates the expansion limit for the **F** buffer and the number of buffers needed to satisfy the queued requests.
- The size (in bytes) of each buffer. (Note that for certain buffer pools, such as IOBUF, the size displayed might not match the size specified in the buffer pool start options. This occurs because VTAM increases the size of some buffers to allow for buffer headers that must be added to those buffers.)
- The number of buffers currently assigned to the pool.
- The number of buffers currently available for use.
- The maximum number of buffers ever assigned to the pool (since the last SMS trace record was written, if an SMS trace is active).
- The maximum number of buffers ever used within the pool (since the last SMS trace record was written, if an SMS trace is active).
- The number of times that the buffer pool has been expanded (since the last SMS trace record was written, if an SMS trace is active).
- The number of available buffers at or below which expansion will occur.
- The number of available buffers at or above which contraction will be attempted.
- The number of buffers to be added during each expansion. This field contains "NA" (not applicable) if the dynamic buffer expansion function is not being used.

VTAM displays the following additional information when the BUFFER operand is not coded, when BUFFER=\*, or when BUFFER=SUMMARY is specified:

- **MVS,VM** For VTAM's common service area (CSA):
  - The usage limit
  - The current usage
  - The maximum CSA usage since the last DISPLAY BFRUSE command
  - The maximum CSA usage since VTAM was started.
- **MVS,VM** For 24-bit addressable CSA storage:
  - The usage limit
  - The current usage
  - The maximum CSA usage since the last DISPLAY BFRUSE command
  - The maximum CSA usage since VTAM was started.

**Note:** If VTAM requests 31-bit addressable storage and the operating system cannot honor the CSA storage request, the operating system provides VTAM with 24-bit addressable storage. The resulting display, however, shows the explicit storage request. The system parameters can be changed to provide for 31-bit addressable storage.

- **VSE** For VTAM's system GETVIS area (SGA):
  - The usage limit
  - The current usage
  - The maximum SGA usage since the last DISPLAY BFRUSE command
  - The maximum SGA usage since VTAM was started.

- **VSE** For 24-bit addressable SGA storage:
  - The usage limit
  - The current usage
  - The maximum SGA usage since the last DISPLAY BFRUSE command
  - The maximum SGA usage since VTAM was started.

**Note:** If VTAM requests 31-bit addressable storage and the operating system cannot honor the SGA storage request, the operating system provides VTAM with 24-bit addressable storage. The resulting display, however, shows the explicit storage request. The system parameters can be changed to provide for 31-bit addressable storage.

- VTAM's intermediate routing node buffer usage limit (IRNLIMIT), current buffer usage, and maximum buffer usage
- Current VTAM private storage usage and the maximum amount of VTAM private storage ever in use since VTAM was started.

**Note:** The amount shown for private storage includes storage allocated by VTAM's storage management services, plus the storage for VTAM's object code, tables, and installation-wide exit routines. Releases prior to V4R1 displayed only the amount of storage allocated by VTAM's storage management services.

For more information about using VTAM buffer use data, see ["SMS \(Buffer Use\) Trace"](#) in *VTAM Diagnosis*.

[Table 2](#) gives the IDs, names and abbreviated names of the buffer pools. For descriptions of VTAM buffer pools, see ["Buffer Pools"](#) in the *VTAM Network Implementation Guide*.

ID	Name	Abbrev
IO00	IOBUF	IO
BS00	BSBUF	BS
LP00	LPBUF	LP
XD00	XDBUF	XD
LF00	LFBUF	LF
CRPL	CRPLBUF	CR
SF00	SFBUF	SF
SP00	SPBUF	SP
AP00 <b>MVS</b>	APBUF	AP



**Examples**

**MVS,VM** Displaying VTAM buffer usage for a specific buffer:

**d net,bfruse,buffer=io00**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I IO00      BUFF SIZE  334      EXP INCREMENT   55
IST921I          TIMES EXP   0        EXP/CONT THRESH 36      / *NA*
IST922I          CURR TOTAL  110      CURR AVAILABLE  110
IST923I          MAX TOTAL   110      MAX USED        1
IST989I          EXP LIMIT   2147483647  BUFFS REQUESTED 0
IST314I END
```

**VSE** Displaying VTAM buffer usage for a specific buffer:

**d net,bfruse,buffer=io00**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I IO      BUFF SIZE  327      EXP INCREMENT   55
IST921I          TIMES EXP   0        EXP/CONT THRESH 36      / *NA*
IST922I          CURR TOTAL  110      CURR AVAILABLE  110
IST923I          MAX TOTAL   110      MAX USED        9
IST989I          EXP LIMIT   2147483647  BUFFS REQUESTED 0
IST314I END
```

**MVS,VM** Displaying VTAM buffer usage summary:

**d net,bfruse,buffer=summary**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST449I CSALIMIT = NOLIMIT, CURRENT = 1388K, MAXIMUM = 1388K
IST790I MAXIMUM CSA USED = 1388K
IST449I CSA24 LIMIT = NOLIMIT, CURRENT = 76K, MAXIMUM = 76K
IST790I MAXIMUM CSA24 USED = 76K
IST595I IRNLIMIT = NOLIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4550K, MAXIMUM USED = 4603K
IST314I END
```

**VSE** Displaying VTAM buffer usage summary:

**d net,bfruse,buffer=summary**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST449I SGALIMIT = NO LIMIT, CURRENT = 1254K, MAXIMUM = 1254K
IST790I MAXIMUM SGA USED = 1254K
IST449I SGA24 LIMIT = NO LIMIT, CURRENT = 78K, MAXIMUM = 78K
IST790I MAXIMUM SGA24 USED = 78K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4603K, MAXIMUM USED = 4644K
IST314I END
```

**MVS,VM** Displaying VTAM buffer usage for a buffer pool, along with summary information:

**d net,bfruse,buffer=(io00,summary)**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I IO00      BUFF SIZE  334      EXP INCREMENT   55
IST921I          TIMES EXP   0        EXP/CONT THRESH 36      / *NA*
IST922I          CURR TOTAL  110      CURR AVAILABLE  110
IST923I          MAX TOTAL   110      MAX USED        1
IST989I          EXP LIMIT   2147483647  BUFFS REQUESTED 0
IST924I -----
IST449I CSALIMIT = NOLIMIT, CURRENT = 1388K, MAXIMUM = 1388K
IST790I MAXIMUM CSA USED = 1388K
```

```

IST449I CSA24 LIMIT = NOLIMIT, CURRENT = 76K, MAXIMUM = 76K
IST790I MAXIMUM CSA24 USED = 76K
IST595I IRNLIMIT = NOLIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4550K, MAXIMUM USED = 4603K
IST314I END

```

**VSE** Displaying VTAM buffer usage for several buffers, along with summary information:

**d net,bfruse,buffer=(spbuf,bsbuf,summary)**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I SP          BUFF SIZE 144          EXP INCREMENT 25
IST921I          TIMES EXP 0             EXP/CONT THRESH 1 / *NA*
IST922I          CURR TOTAL 32           CURR AVAILABLE 32
IST923I          MAX TOTAL 32           MAX USED 0
IST924I -----
IST920I BS          BUFF SIZE 216          EXP INCREMENT 17
IST921I          TIMES EXP 0             EXP/CONT THRESH 17 / *NA*
IST922I          CURR TOTAL 34           CURR AVAILABLE 34
IST923I          MAX TOTAL 34           MAX USED 0
IST924I -----
IST449I SGALIMIT = NO LIMIT, CURRENT = 1254K, MAXIMUM = 1254K
IST790I MAXIMUM SGA USED = 1254K
IST449I SGA24 LIMIT = NO LIMIT, CURRENT = 78K, MAXIMUM = 78K
IST790I MAXIMUM SGA24 USED = 78K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4603K, MAXIMUM USED = 4644K
IST314I END

```

**MVS** Displaying VTAM buffer summary in table format:

**d net,bfruse,buffer=short**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST632I BUFF  BUFF  CURR  CURR  MAX  MAX  TIMES  EXP/CONT  EXP
IST633I ID    SIZE  TOTAL  AVAIL  TOTAL  USED  EXP  THRESHOLD  INCR
IST356I IO00  455  400  365  480  468  10  6/-----  8
IST356I BS00  147  600  600  600  0    0  60/-----  48
IST356I LP00  2032  80  74  88  65  6  22/ 30  4
IST356I XD00  681  10  10  10  0    0  5/-----  5
IST356I LF00  112  128  114  128  14  0  33/-----  32
IST356I CRPL  144  275  55  2550  2516  617  29/ 79  25
IST356I SF00  104  68  58  68  10  0  1/-----  34
IST356I SP00  144  50  50  50  1    0  1/-----  25
IST356I AP00  56  56  56  56  0    0  3/-----  56
IST449I CSALIMIT = NOLIMIT , CURRENT = 3887K, MAXIMUM = 3887K
IST790I MAXIMUM CSA USED = 6479K
IST449I CSA24 LIMIT = NOLIMIT , CURRENT = 30K , MAXIMUM = 30K
IST790I MAXIMUM CSA24 USED = 42K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 16457K, MAXIMUM USED = 19420K
IST314I END

```

**VM** Displaying VTAM buffer summary in table format:

**d net,bfruse,buffer=short**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST632I BUFF  BUFF  CURR  CURR  MAX  MAX  TIMES  EXP/CONT  EXP
IST633I ID    SIZE  TOTAL  AVAIL  TOTAL  USED  EXP  THRESHOLD  INCR
IST356I IO00  455  400  365  480  468  10  6/-----  8
IST356I BS00  147  600  600  600  0    0  60/-----  48
IST356I LP00  2032  80  74  88  65  6  22/ 30  4
IST356I XD00  681  10  10  10  0    0  5/-----  5
IST356I LF00  112  128  114  128  14  0  33/-----  32
IST356I CRPL  144  275  55  2550  2516  617  29/ 79  25
IST356I SF00  104  68  58  68  10  0  1/-----  34
IST356I SP00  144  50  50  50  1    0  1/-----  25
IST449I CSALIMIT = NOLIMIT , CURRENT = 3887K, MAXIMUM = 3887K
IST790I MAXIMUM CSA USED = 6479K
IST449I CSA24 LIMIT = NOLIMIT , CURRENT = 30K , MAXIMUM = 30K
IST790I MAXIMUM CSA24 USED = 42K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K

```

IST981I VTAM PRIVATE: CURRENT = 16457K, MAXIMUM USED = 19420K  
 IST314I END

**VSE** Displaying VTAM buffer summary in table format:

**d net,bfruse,buffer=short**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST632I BUFF  BUFF  CURR  CURR  MAX  MAX  TIMES  EXP/CONT
IST633I ID  SIZE  TOTAL  AVAIL  TOTAL  USED  EXP  THRESHOLD
IST356I SF  112  64  61  64  3  0  10/-----
IST356I IO  327  110  110  110  7  0  36/-----
IST356I SP  144  32  32  32  0  0  1/-----
IST356I LP  2032  64  58  64  8  0  22/-----
IST356I LF  120  120  118  120  2  0  33/-----
IST356I BS  216  34  34  34  0  0  17/-----
IST356I XD  681  10  10  10  0  0  5/-----
IST356I CR  164  200  196  200  5  0  10/-----
IST449I SGALIMIT = NO LIMIT, CURRENT = 1223K, MAXIMUM = 1223K
IST790I MAXIMUM SGA USED = 1223K
IST449I SGA24 LIMIT = NO LIMIT, CURRENT = 70K, MAXIMUM = 70K
IST790I MAXIMUM SGA24 USED = 70K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4850K, MAXIMUM USED = 4874K
IST314I END
  
```

**MVS** Displaying VTAM buffer usage for all buffers:

**d net,bfruse**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I IO00  BUFF SIZE 334  EXP INCREMENT 55
IST921I  TIMES EXP 0  EXP/CONT THRESH 36  / *NA*
IST922I  CURR TOTAL 110  CURR AVAILABLE 110
IST923I  MAX TOTAL 110  MAX USED 1
IST989I  EXP LIMIT 2147483647  BUFFS REQUESTED 0
IST924I -----
IST920I BS00  BUFF SIZE 216  EXP INCREMENT 17
IST921I  TIMES EXP 0  EXP/CONT THRESH 17  / *NA*
IST922I  CURR TOTAL 34  CURR AVAILABLE 34
IST923I  MAX TOTAL 34  MAX USED 0
IST924I -----
IST920I LP00  BUFF SIZE 2032  EXP INCREMENT 4
IST921I  TIMES EXP 0  EXP/CONT THRESH 22  / *NA*
IST922I  CURR TOTAL 64  CURR AVAILABLE 60
IST923I  MAX TOTAL 64  MAX USED 4
IST924I -----
IST920I XD00  BUFF SIZE 681  EXP INCREMENT 5
IST921I  TIMES EXP 0  EXP/CONT THRESH 5  / *NA*
IST922I  CURR TOTAL 10  CURR AVAILABLE 10
IST923I  MAX TOTAL 10  MAX USED 0
IST924I -----
IST920I LF00  BUFF SIZE 120  EXP INCREMENT 30
IST921I  TIMES EXP 0  EXP/CONT THRESH 33  / *NA*
IST922I  CURR TOTAL 120  CURR AVAILABLE 118
IST923I  MAX TOTAL 120  MAX USED 2
IST924I -----
IST920I CRPL  BUFF SIZE 160  EXP INCREMENT 23
IST921I  TIMES EXP 0  EXP/CONT THRESH 10  / *NA*
IST922I  CURR TOTAL 207  CURR AVAILABLE 207
IST923I  MAX TOTAL 207  MAX USED 1
IST924I -----
IST920I SF00  BUFF SIZE 112  EXP INCREMENT 32
IST921I  TIMES EXP 0  EXP/CONT THRESH 10  / *NA*
IST922I  CURR TOTAL 64  CURR AVAILABLE 62
IST923I  MAX TOTAL 64  MAX USED 2
IST924I -----
IST920I SP00  BUFF SIZE 144  EXP INCREMENT 25
IST921I  TIMES EXP 0  EXP/CONT THRESH 1  / *NA*
IST922I  CURR TOTAL 50  CURR AVAILABLE 50
IST923I  MAX TOTAL 50  MAX USED 0
IST924I -----
IST920I AP00  BUFF SIZE 56  EXP INCREMENT 56
IST921I  TIMES EXP 0  EXP/CONT THRESH 3  / *NA*
  
```

```

IST922I          CURR TOTAL 56          CURR AVAILABLE 56
IST923I          MAX TOTAL 56          MAX USED      0
IST924I -----
IST449I CSALIMIT = NOLIMIT, CURRENT = 1388K, MAXIMUM = 1388K
IST790I MAXIMUM CSA USED = 1388K
IST449I CSA24 LIMIT = NOLIMIT, CURRENT = 76K, MAXIMUM = 76K
IST790I MAXIMUM CSA24 USED = 76K
IST595I IRNLIMIT = NOLIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4554K, MAXIMUM USED = 4603K
IST314I END

```

**VM** Displaying VTAM buffer usage for all buffers:

**d net,bfruse**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I IO00      BUFF SIZE 334          EXP INCREMENT 55
IST921I          TIMES EXP 0            EXP/CONT THRESH 36 / *NA*
IST922I          CURR TOTAL 110         CURR AVAILABLE 110
IST923I          MAX TOTAL 110         MAX USED      1
IST989I          EXP LIMIT 2147483647  BUFFS REQUESTED 0
IST924I -----
IST920I BS00      BUFF SIZE 216          EXP INCREMENT 17
IST921I          TIMES EXP 0            EXP/CONT THRESH 17 / *NA*
IST922I          CURR TOTAL 34          CURR AVAILABLE 34
IST923I          MAX TOTAL 34          MAX USED      0
IST924I -----
IST920I LP00      BUFF SIZE 2032         EXP INCREMENT 4
IST921I          TIMES EXP 0            EXP/CONT THRESH 22 / *NA*
IST922I          CURR TOTAL 64          CURR AVAILABLE 60
IST923I          MAX TOTAL 64          MAX USED      4
IST924I -----
IST920I XD00      BUFF SIZE 681          EXP INCREMENT 5
IST921I          TIMES EXP 0            EXP/CONT THRESH 5 / *NA*
IST922I          CURR TOTAL 10          CURR AVAILABLE 10
IST923I          MAX TOTAL 10          MAX USED      0
IST924I -----
IST920I LF00      BUFF SIZE 120          EXP INCREMENT 30
IST921I          TIMES EXP 0            EXP/CONT THRESH 33 / *NA*
IST922I          CURR TOTAL 120         CURR AVAILABLE 118
IST923I          MAX TOTAL 120         MAX USED      2
IST924I -----
IST920I CRPL      BUFF SIZE 160          EXP INCREMENT 23
IST921I          TIMES EXP 0            EXP/CONT THRESH 10 / *NA*
IST922I          CURR TOTAL 207         CURR AVAILABLE 207
IST923I          MAX TOTAL 207         MAX USED      1
IST924I -----
IST920I SF00      BUFF SIZE 112          EXP INCREMENT 32
IST921I          TIMES EXP 0            EXP/CONT THRESH 10 / *NA*
IST922I          CURR TOTAL 64          CURR AVAILABLE 62
IST923I          MAX TOTAL 64          MAX USED      2
IST924I -----
IST920I SP00      BUFF SIZE 144          EXP INCREMENT 25
IST921I          TIMES EXP 0            EXP/CONT THRESH 1 / *NA*
IST922I          CURR TOTAL 50          CURR AVAILABLE 50
IST923I          MAX TOTAL 50          MAX USED      0
IST924I -----
IST449I CSALIMIT = NOLIMIT, CURRENT = 1388K, MAXIMUM = 1388K
IST790I MAXIMUM CSA USED = 1388K
IST449I CSA24 LIMIT = NOLIMIT, CURRENT = 76K, MAXIMUM = 76K
IST790I MAXIMUM CSA24 USED = 76K
IST595I IRNLIMIT = NOLIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4554K, MAXIMUM USED = 4603K
IST314I END

```

**VSE** Displaying VTAM buffer usage for all buffers:

**d net,bfruse**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST920I SF        BUFF SIZE 112          EXP INCREMENT 32
IST921I          TIMES EXP 0            EXP/CONT THRESH 10 / *NA*

```

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```

IST922I          CURR TOTAL 64          CURR AVAILABLE 63
IST923I          MAX TOTAL 64          MAX USED      1
IST924I -----
IST920I IO      BUFF SIZE 327          EXP INCREMENT 55
IST921I          TIMES EXP 0           EXP/CONT THRESH 36 / *NA*
IST922I          CURR TOTAL 110        CURR AVAILABLE 110
IST923I          MAX TOTAL 110        MAX USED      9
IST989I          EXP LIMIT 2147483647  BUFFS REQUESTED 0
IST924I -----
IST920I SP      BUFF SIZE 144          EXP INCREMENT 25
IST921I          TIMES EXP 0           EXP/CONT THRESH 1 / *NA*
IST922I          CURR TOTAL 32         CURR AVAILABLE 32
IST923I          MAX TOTAL 32         MAX USED      0
IST924I -----
IST920I LP      BUFF SIZE 2032         EXP INCREMENT 4
IST921I          TIMES EXP 0           EXP/CONT THRESH 22 / *NA*
IST922I          CURR TOTAL 64         CURR AVAILABLE 59
IST923I          MAX TOTAL 64         MAX USED      8
IST924I -----
IST920I LF      BUFF SIZE 120          EXP INCREMENT 30
IST921I          TIMES EXP 0           EXP/CONT THRESH 33 / *NA*
IST922I          CURR TOTAL 120        CURR AVAILABLE 118
IST923I          MAX TOTAL 120        MAX USED      2
IST924I -----
IST920I BS      BUFF SIZE 216          EXP INCREMENT 17
IST921I          TIMES EXP 0           EXP/CONT THRESH 17 / *NA*
IST922I          CURR TOTAL 34         CURR AVAILABLE 34
IST923I          MAX TOTAL 34         MAX USED      0
IST924I -----
IST920I XD      BUFF SIZE 681          EXP INCREMENT 5
IST921I          TIMES EXP 0           EXP/CONT THRESH 5 / *NA*
IST922I          CURR TOTAL 10         CURR AVAILABLE 10
IST923I          MAX TOTAL 10         MAX USED      0
IST924I -----
IST920I CR      BUFF SIZE 164          EXP INCREMENT 22
IST921I          TIMES EXP 0           EXP/CONT THRESH 10 / *NA*
IST922I          CURR TOTAL 200        CURR AVAILABLE 200
IST923I          MAX TOTAL 200        MAX USED      1
IST924I -----
IST449I SGALIMIT = NO LIMIT, CURRENT = 1254K, MAXIMUM = 1254K
IST790I MAXIMUM SGA USED = 1254K
IST449I SGA24 LIMIT = NO LIMIT, CURRENT = 78K, MAXIMUM = 78K
IST790I MAXIMUM SGA24 USED = 78K
IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
IST981I VTAM PRIVATE: CURRENT = 4607K, MAXIMUM USED = 4644K
IST314I END

```



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## 2.1.7 DISPLAY BNCOSMAP Command

```
>> vm_prefix DISPLAY NET,BNCOSMAP_____>
      |_,NETID=netid_|_____>
> |_,SCOPE=ONLY_____|_____><
  |_,SCOPE=| ONLY _____|_____><
  | ALL _____|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY BNCOSMAP (border node class-of-service mapping) command displays native and nonnative COS mappings defined for a border node.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

NETID=netid  
specifies the destination network for which native and nonnative border node COS mappings are to be displayed.

SCOPE  
indicates the range of border node COS mappings to be displayed. It is meaningful only if NETID is not specified.

SCOPE=ALL  
 displays the COS mappings for all networks served by this border node.

SCOPE=ONLY  
 displays border node COS mappings for the default NETID.

### Resulting Display

The resulting display shows:

- If NETID is specified, all border node COS mappings for the specified network
- If NETID is not specified:
  - For SCOPE=ALL, all COS mappings defined for this border node
  - For SCOPE=ONLY, all border node COS mappings for the default network.

### Examples

Displaying border node COS mappings for the default network:

```
d net,bncosmap
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BNCOSMAP
IST1321I TABLE FOR BNCOSMAP DEFAULT_NETID
IST1322I NON-NATIVE      NATIVE
IST1323I COS1            COS2
IST1323I COS3            COS2
IST1323I COS4            COS5
IST314I END
```

Displaying all border node COS mappings:

```
d net,bncosmap,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = BNCOSMAP
IST1321I TABLE FOR BNCOSMAP NETB
IST1322I NON-NATIVE      NATIVE
IST1323I COSB3            COSC
IST1323I COSB2            COSB
IST1323I COSB1            COSA
IST924I -----
IST1321I TABLE FOR BNCOSMAP NETC
IST1322I NON-NATIVE      NATIVE
IST1323I COSC3            COSD
IST1323I COSC2            COSC
IST1323I COSC1            COSB
```

IST314I END

---



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---

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## 2.1.8 DISPLAY CDRMS Command

```
>> vm_prefix DISPLAY NET,CDRMS _____>
                                     |_,ID= name _____|
                                     |<_,_ _____|
                                     |_(name|_)_|
```

```
> _____><
  |_,SCOPE=ALL _____|
  |_,SCOPE= _____|
  | ACT _____|
  | ACTONLY _____|
  | ALL _____|
  | CONCT _____|
  | INACT _____|
  | INACTONLY _____|
  | PENDING _____|
  | RESET _____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY CDRMS (cross-domain resource managers) command displays the status of active cross-domain resource manager (CDRM) major nodes and their subordinate minor nodes.

**Note:** To display cross-domain resource managers independently of the

major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=CDRMS.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active CDRM major nodes whose subordinate resources are to be displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every CDRM major node in the network.*

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable CDRM minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all CDRM minor nodes in an active state within the specified major nodes (or within all major nodes if the ID operand is omitted). The display does **not** include CDRMs in pending or connectable states. If no CDRMs are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

#### SCOPE=ALL

specifies that information is to be displayed about all CDRM minor nodes (regardless of their status) within the specified major nodes (or within all major nodes if the ID operand is omitted).

#### SCOPE=CONCT

specifies that information is to be displayed about all CDRM minor nodes in a CONCT (connectable) state within the specified major nodes (or within all major nodes if the ID operand is omitted). If no CDRMs are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

#### SCOPE=INACT

specifies that information is to be displayed about all inactive CDRM minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

**SCOPE=INACTONLY**

specifies that information is to be displayed about all inactive CDRM minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

**SCOPE=PENDING**

specifies that information is to be displayed about all pending CDRM minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

**SCOPE=RESET**

specifies that information is to be displayed about all CDRM minor nodes in a RESET state within the specified major nodes (or within all major nodes if the ID operand is omitted).

**Resulting Display**

The resulting display shows:

- The name and status of the specified active CDRM major nodes (or all active CDRM major nodes if the ID operand is omitted).
- For each active CDRM major node:
  - The name, status, subarea number, element address, and network identification is displayed for each minor node. This is limited to active, inactive, or pending minor nodes if specified on the SCOPE operand.
  - **MVS,VM** The network address within the gateway NCP used for the cross-network SSCP-SSCP session is displayed if you are displaying a CDRM in another network.

**Examples**

Displaying all CDRM major nodes and their minor nodes:

**d net,cdrms**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CDRMS
IST089I A01CDRMC TYPE = CDRM SEGMENT      , ACTIV
IST482I A01N      ACTIV, SA                1, EL      1, NETID = NETA
IST482I A02N      NEVAC, SA                2, EL      1, NETID = NETA
IST482I A81N      NEVAC, SA                81, EL     1, NETID = NETA
IST482I A82N      NEVAC, SA                82, EL     1, NETID = NETA
IST482I A83N      NEVAC, SA                83, EL     1, NETID = NETA
IST482I A84N      NEVAC, SA                84, EL     1, NETID = NETA
IST482I A500N     NEVAC, SA                500, EL    1, NETID = NETA
IST482I A14N      NEVAC, SA                14, EL     1, NETID = NETA
IST482I A15N      NEVAC, SA                15, EL     1, NETID = NETA

```

```

IST482I A17N      NEVAC, SA          17, EL      1, NETID = NETA
IST482I A360N    NEVAC, SA          360, EL     1, NETID = NETA
IST482I C01N     NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST482I C11N     NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST482I C255N    NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST314I END

```

Displaying a specific CDRM major node and its minor nodes:

**d net,cdrms,id=a01cdrmc**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CDRMS
IST089I A01CDRMC TYPE = CDRM SEGMENT , ACTIV
IST482I A01N     ACTIV, SA           1, EL      1, NETID = NETA
IST482I A02N     NEVAC, SA           2, EL      1, NETID = NETA
IST482I A81N     NEVAC, SA           81, EL     1, NETID = NETA
IST482I A82N     NEVAC, SA           82, EL     1, NETID = NETA
IST482I A83N     NEVAC, SA           83, EL     1, NETID = NETA
IST482I A84N     NEVAC, SA           84, EL     1, NETID = NETA
IST482I A500N    NEVAC, SA          500, EL     1, NETID = NETA
IST482I A14N     NEVAC, SA           14, EL     1, NETID = NETA
IST482I A15N     NEVAC, SA           15, EL     1, NETID = NETA
IST482I A17N     NEVAC, SA           17, EL     1, NETID = NETA
IST482I A360N    NEVAC, SA          360, EL     1, NETID = NETA
IST482I C01N     NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST482I C11N     NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST482I C255N    NEVAC, SA          N/A, EL     N/A, NETID = NETC
IST314I END

```



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## 2.1.9 DISPLAY CDRSCS Command

```
>> vm_prefix DISPLAY NET,CDRSCS _____ >
                                     |_, ID= name _____|
                                     |<_, _____|
                                     |_( name |_)_|
```

```
> _____ ><
   |_, NETID= _____| |_, SCOPE= ALL _____|
   |_____| |_, SCOPE= ACT _____|
                                     |_____|
                                     | ACTONLY _____|
                                     | ALL _____|
                                     | CONCT _____|
                                     | INACT _____|
                                     | INACTONLY _____|
                                     | PENDING _____|
                                     | RESET _____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY CDRSCS (cross-domain resources) command displays information about cross-domain resources, including independent LUs.

**Note:** To display cross-domain resources independently of the major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=CDRSCS.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active CDRSC major nodes whose subordinate resources are to be displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every CDRSC major node in the network.*

### NETID=netid

specifies that VTAM display CDRSCs within the indicated network and CDRSCs defined without a network identifier (not associated with any particular network).

If you do not specify the NETID operand, CDRSCs are displayed regardless of their network.

If you specify the NETID operand, but do not identify a specific network (that is, a value for *netid* is not entered), CDRSCs within the host network are displayed.

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable CDRSC minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all CDRSC minor nodes in an active state within the specified major nodes (or within all major nodes if the ID operand is omitted). The display does **not** include CDRSCs in pending or connectable states. If no CDRSCs are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

#### SCOPE=ALL

specifies that information is to be displayed about all CDRSC minor nodes (regardless of their status) within the specified major nodes (or within all major nodes if the ID operand is omitted).

#### SCOPE=CONCT

specifies that information is to be displayed about all CDRSC

minor nodes in a CONCT (connectable) state within the specified major nodes (or within all major nodes if the ID operand is omitted). If no CDRSCs are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

SCOPE=INACT  
specifies that information is to be displayed about all inactive CDRSC minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

SCOPE=INACTONLY  
specifies that information is to be displayed about all inactive CDRSC minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

SCOPE=PENDING  
specifies that information is to be displayed about all pending CDRSC minor nodes within the specified major nodes (or within all major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

SCOPE=RESET  
specifies that information is to be displayed about all CDRSC minor nodes in a RESET state within the specified major nodes (or within all major nodes if the ID operand is omitted).

## Resulting Display

The resulting display shows:

- If ID is specified, the name and status of the specified CDRSC major node or nodes. Inactive CDRSC major nodes are not known to VTAM and are therefore not displayed.
- If ID is not specified, the name and status of each active CDRSC major node in the domain. Inactive CDRSC major nodes are not known to VTAM and are therefore not displayed.
- For each CDRSC major node, the name, status, owning CDRM, and NETID (where applicable) of each subordinate CDRSC minor node (limited to active, inactive, or pending minor nodes if specified on the SCOPE operand).

## Examples

Displaying cross-domain resources for a specific network:

```
d net,cdrrcs,netid=neta
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CDRSCS
IST089I ISTDILU TYPE = CDRSC SEGMENT , ACTIV
```

```

IST483I A04I0421 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0422 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0423 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I C23I92C5 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST089I ISTCDRDY TYPE = CDRSC SEGMENT      , ACTIV
IST483I C25NVLUC ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST1185I NAME = NETA.A04P885A - DIRECTORY ENTRY = REGISTERED EN
IST1185I NAME = NETA.A04P886A - DIRECTORY ENTRY = REGISTERED EN
IST1185I NAME = NETA.A04P888A - DIRECTORY ENTRY = REGISTERED EN
IST1185I NAME = NETY.A04P882A - DIRECTORY ENTRY = REGISTERED EN
IST314I  END

```

Displaying a specific cross-domain resource major node and its subordinate resources:

#### d net,cdrrcs,id=istpdilu

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CDRSCS
IST089I ISTPDILU TYPE = CDRSC SEGMENT      , ACTIV
IST483I A31I3621 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3622 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3623 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3624 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3625 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3631 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3632 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3633 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3634 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I3635 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A31I4821 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88B3 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88B4 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88B5 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88C1 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88C2 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88C3 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88C4 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A03I88C5 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST314I  END

```

Displaying all cross-domain resources:

#### d net,cdrrcs

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CDRSCS
IST089I ISTPDILU TYPE = CDRSC SEGMENT      , ACTIV
IST483I A04I0421 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0422 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0423 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0424 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I A04I0425 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I C23I92C2 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I C23I92C3 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I C23I92C4 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST483I C23I92C5 ACTIV      , CDRM = ***NA***, NETID = ***NA***
IST089I ISTCDRDY TYPE = CDRSC SEGMENT      , ACTIV
IST483I C25NVLUC ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I B01NVLUC ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I A81NVLUC ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I A03D207F ACT/S----Y, CDRM = A01N      , NETID = NETA
IST483I C23D92CE ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D48CC ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D921D ACT/S----Y, CDRM = A01N      , NETID = NETX
IST483I C23D527B ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D48CD ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D486B ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D486D ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D92AD ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I A03D203B ACT/S----Y, CDRM = A01N      , NETID = NETZ
IST483I A03D167C ACT/S----Y, CDRM = A01N      , NETID = NETA
IST483I A03D883D ACT/S----Y, CDRM = A01N      , NETID = NETZ
IST483I C23D486E ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D48AC ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I C23D52CD ACT/S----Y, CDRM = A01N      , NETID = NETC
IST483I A31D926C ACT/S----Y, CDRM = A01N      , NETID = NETA
IST483I A31D48CC ACT/S----Y, CDRM = A01N      , NETID = NETA

```



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```
IST483I A04D209B ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST483I C23D527F ACT/S-----Y, CDRM = A01N      , NETID = NETC
IST483I C23D483F ACT/S-----Y, CDRM = A01N      , NETID = NETZ
IST483I C23D524F ACT/S-----Y, CDRM = A01N      , NETID = NETC
IST483I C01NVLUC ACT/S-----Y, CDRM = A01N      , NETID = NETC
IST483I A02NVLUC ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST483I ECHO02A  ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST483I A50NVLUC ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST483I A500N    ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST483I A02N     ACT/S-----Y, CDRM = A01N      , NETID = NETA
IST314I  END
```



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## 2.1.10 DISPLAY CLSTRS Command

```
>> vm_prefix DISPLAY NET,CLSTRS _____ >
                                     |_,ID= name _____|
                                     |<_,_____|
                                     |_(name|_)_|
```

```
> _____ |_,SCOPE=ALL _____| _____ ><
|_,OWNER= host_name _____| |_,SCOPE= ACT _____|
|*NONE _____| |_____|
|_____|
|_____|
|_____|
|_____|
|_____|
|_____|
|_____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY CLSTRS (clusters) command displays the status of physical units (PUs) subordinate to an NCP node, a local SNA node, or a switched subarea node.

**Note:** To display physical units independently of the major nodes that

contain them, use the DISPLAY RSCLIST command with IDTYPE=CLSTRS.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active NCP, local SNA, or switched major nodes whose subordinate PUs are to be displayed.

If OWNER is also specified on this command, the value of ID must match the name of an NCP major node.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every NCP, local SNA, and switched major node in the network.*

### OWNER

specifies whether PUs defined with the OWNER operand are to be displayed. This operand is only valid when the name or the wildcard value specified on the ID operand matches the name of an NCP major node.

#### OWNER=host\_name

specifies that only PUs whose owning SSCP (as determined by the OWNER operand on the GROUP, LINE, or PU definition statements) matches the *host\_name* specified are to be displayed.

#### OWNER=\*NONE

specifies that only PUs **without** an OWNER operand on the GROUP, LINE, or PU definition statements are to be displayed.

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable PUs within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). The information is displayed for the major node as well. If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all PUs in an

active state within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). The display does **not** include PUs in pending or connectable states. If no PUs are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

## SCOPE=ALL

specifies that information is to be displayed about all PUs (regardless of status) within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). The information is displayed for the major node as well.

## SCOPE=CONCT

specifies that information is to be displayed about all PUs in a CONCT (connectable) state within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). If no PUs are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

## SCOPE=INACT

specifies that information is to be displayed about all inactive PUs within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). The information is displayed for the major node as well. If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

## SCOPE=INACTONLY

specifies that information is to be displayed about all inactive PUs within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

## SCOPE=PENDING

specifies that information is to be displayed about all pending PUs within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

## SCOPE=RESET

specifies that information is to be displayed about all PUs in a RESET state within the specified major nodes (or within all NCP, local SNA, and switched major nodes if the ID operand is omitted).

## Resulting Display

The resulting display shows:

- For each active major node defining physical units, the major node name, status, and type, the names of the active, inactive, pending, or all physical units (as determined by the SCOPE operand) associated with the major node, and the status and node type for each subordinate resource listed.
- For local SNA major nodes, the channel device name for every physical unit in the local SNA major node.
- **VSE** For each physical unit supported by the X.21 short-hold

mode/multiple port sharing (SHM/MPS) feature, the names of the active physical units that are waiting to be retried.

### Examples

Displaying all physical units (clusters) subordinate to a specific major node:

```
d net,clstrs,id=c23smnc
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CLUSTERS/PHYS UNITS
IST089I C23SMNC TYPE = SW SNA MAJ NODE , ACTIV
IST089I C23P922 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P923 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P925 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P926 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P928 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P929 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P92B TYPE = PHYSICAL UNIT , CONCT
IST089I C23P92C TYPE = PHYSICAL UNIT , CONCT
IST314I END
```

Displaying all physical units (clusters) owned by a specific SSCP:

```
d net,clstrs,owner=sscp1a
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CLUSTERS/PHYS UNITS
IST089I ISTDSPUS TYPE = PU T4/5 MAJ NODE , ACTIV
IST172I NO CLUS/PHYSUNITS EXIST
IST089I ISTDSPMN TYPE = SW SNA MAJ NODE , ACTIV
IST172I NO CLUS/PHYSUNITS EXIST
IST089I NCP3AA1 TYPE = PU T4/5 MAJ NODE , PCTD1
IST089I P3A3767A TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3274A TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956A TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3767D TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956G TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3767C TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956E TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956F TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956C TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3274B TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3767B TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A4956D TYPE = PHYSICAL UNIT , NEVAC
IST089I P3A3274C TYPE = PHYSICAL UNIT , NEVAC
IST314I END
```

Displaying all physical units (clusters):

```
d net,clstrs
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CLUSTERS/PHYS UNITS
IST089I ISTDSPUS TYPE = PU T4/5 MAJ NODE , ACTIV
IST172I NO CLUS/PHYSUNITS EXIST
IST089I ISTDSPMN TYPE = SW SNA MAJ NODE , ACTIV
IST089I A04P88A TYPE = PHYSICAL UNIT , ACTIV---X-
IST089I A04P887 TYPE = PHYSICAL UNIT , ACTIV---X-
IST089I A04P884 TYPE = PHYSICAL UNIT , ACTIV---X-
IST089I A04P881 TYPE = PHYSICAL UNIT , ACTIV---X-
IST089I C23SMNC TYPE = SW SNA MAJ NODE , ACTIV
IST089I C23P922 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P923 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P925 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P926 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P928 TYPE = PHYSICAL UNIT , CONCT
IST089I C23P929 TYPE = PHYSICAL UNIT , CONCT
```

```
IST089I C23P92B TYPE = PHYSICAL UNIT , CONCT
IST089I C23P92C TYPE = PHYSICAL UNIT , CONCT
IST089I A04SMNC TYPE = SW SNA MAJ NODE , ACTIV
IST089I A04P882 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P883 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P885 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P886 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P888 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P889 TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P88B TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A04P88C TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I SMNA01C TYPE = SW SNA MAJ NODE , ACTIV
IST089I A50NETNA TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A02NETNA TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A02NETNB TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I A0462ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I A04C001 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04C002 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04C011 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04C012 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04C031 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04C032 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04NXXX TYPE = PHYSICAL UNIT , NEVAC----T
IST089I A04P041 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04P042 TYPE = PHYSICAL UNIT , NEVAC
IST089I A04P043 TYPE = PHYSICAL UNIT , NEVAC
IST089I C2362ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST172I NO CLUS/PHYSUNITS EXIST
IST314I END
```



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## 2.1.11 DISPLAY CNOS Command

```
>> vm_prefix DISPLAY NET,CNOS___, ID=appl_name___, LUNAME=lu_name_____>
> _____><
|_, LOGMODE=logon_mode_name_|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
LOGMODE	LOG
LUNAME	LU

### Purpose

The DISPLAY CNOS (change number of sessions) command displays LU 6.2 information associated with an application program and a partner LU and logon mode.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=appl\_name  
specifies the name of the LU 6.2 application program about which the information is requested. The value specified for *appl\_name* cannot be a network-qualified name.

LOGMODE=logon\_mode\_name  
specifies the logon mode name for which the requested LU 6.2 information applies. If you do not specify a logon mode name, SESSCAP, CONVSECL, CONVSECP, and SYNCLVL are the only fields shown for the partner LU.

LUNAME=lu\_name  
specifies the name of the partner LU about which the LU 6.2

information is requested. The name can be a network-qualified name in the form of *netid.luname*.

If PARS=(NQAMES=NO) is coded on the ACB macroinstruction of the resource named on the ID operand, and a network-qualified name is specified, the network identifier is ignored.

If PARS=(NQAMES=YES) is coded on the ACB macroinstruction, *luname* can be either a non-network-qualified name or a network-qualified name. If *luname* is a non-network-qualified name, the command is processed against all LUs with that non-network-qualified name across all networks. If *luname* is a network-qualified name, the command is processed against the LU in the specified network.

## Resulting Display

The resulting VTAM display shows:

- The LU 6.2 application program name, LU name, and logon mode name of the requested session
- The negotiation values and security level values.

## Examples

Displaying CNOS for all logon modes:

```
d net,cnos,id=appcap05,luname=appcap06
IST097I DISPLAY ACCEPTED
IST1001I ID= APPCAP05 LUNAME= NETA.APPCAP06
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I SYNCLVL =SYNCPT  CONVCAP =FDX
IST314I END
```

Displaying CNOS for a specific logon mode:

```
d net,cnos,id=appcap05,luname=appcap06,logmode=batch
IST097I DISPLAY ACCEPTED
IST1001I ID= APPCAP05 LUNAME= NETA.APPCAP06 LOGMODE= BATCH
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I DRAINL  =NO      DRAINR  =NO      DDRAINL  =NALLOW
IST1005I SESSCNT =        0 FREECNT =        0 QALLOC  =        0
IST1005I WINLCNT =        0 WINRCNT =        0 AUTOSSES =        0
IST1005I DRESPL  =NALLOW  RESP    =***NA*** DELETE  =NALLOW
IST1005I SYNCLVL =SYNCPT  CONVCAP =FDX
IST1003I SESSLIM CNOS=        2 DEFINE=        2
IST1003I MINWINL CNOS=        1 DEFINE=        1
IST1003I MINWINR CNOS=        1 DEFINE=        1
IST314I END
```

Displaying CNOS for all logon modes and partner LU name is found in more than one network:

```
d net,cnos,id=appcap05,luname=appcap06
```



```

IST097I DISPLAY ACCEPTED
IST1001I ID= APPCAP05 LUNAME= NETB.APPCAP06
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I SYNCLVL =SYNCPT  CONVCAP =HDX
IST1001I ID= APPCAP05 LUNAME= NETA.APPCAP06
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I SYNCLVL =SYNCPT  CONVCAP =HDX
IST314I END

```

Displaying CNOS for a specific logon mode and the partner LU is found in more than one network:

**d net,cnos,id=appcap05,luname=appcap06,logmode=batch**

```

IST097I DISPLAY ACCEPTED
IST1001I ID= APPCAP05 LUNAME= NETB.APPCAP06 LOGMODE= BATCH
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I DRAINL  =NO          DRAINR  =NO          DDRAINL  =NALLOW
IST1005I SESSCNT =           1 FREECNT =           0 QALLOC  =           0
IST1005I WINLCNT =           1 WINRCNT =           0 AUTOSES  =           0
IST1005I DRESPL  =NALLOW    RESP    =***NA***   DELETE  =NALLOW
IST1005I SYNCLVL =SYNCPT    CONVCAP  =HDX
IST1003I SESSLIM CNOS=         2 DEFINE=         2
IST1003I MINWINL CNOS=         1 DEFINE=         1
IST1003I MINWINR CNOS=         1 DEFINE=         1
IST1001I ID= APPCAP05 LUNAME= NETA.APPCAP06 LOGMODE= BATCH
IST1002I RCPRI=0000 RCSEC=0000
IST1005I SESSCAP =PARALLEL CONVSECL=AVPV      CONVSECP=AVPV
IST1005I DRAINL  =NO          DRAINR  =NO          DDRAINL  =NALLOW
IST1005I SESSCNT =           1 FREECNT =           0 QALLOC  =           0
IST1005I WINLCNT =           1 WINRCNT =           0 AUTOSES  =           0
IST1005I DRESPL  =NALLOW    RESP    =***NA***   DELETE  =NALLOW
IST1005I SYNCLVL =SYNCPT    CONVCAP  =HDX
IST1003I SESSLIM CNOS=         2 DEFINE=         2
IST1003I MINWINL CNOS=         1 DEFINE=         1
IST1003I MINWINR CNOS=         1 DEFINE=         1
IST314I END

```



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## 2.1.12 DISPLAY CONVID Command

```
>> vm_prefix DISPLAY NET,CONVID_,ID=appl_name_____>
> _,ETIME=0_____
> _,ETIME=number_of_minutes_|_ ,LOGMODE=logon_mode_name_|_____>
> _,LUNAME=lu_name_|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
LOGMODE	LOG
LUNAME	LU

### Purpose

The DISPLAY CONVID (conversation ID) command provides information about active conversations with the specified application program. You can limit display of information to conversations that have had no activity for a specified period of time.

**Note:** This command causes VTAM to check every conversation and could have an adverse effect on VTAM performance.

You can use this command during problem determination to view a record of conversation information between logical unit (LU) partners.

Conversations that are in the process of allocating and deallocating are temporarily suspended while this command is being processed. Conversations that are sending or receiving continue to operate while this command is running.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**ETIME=number\_of\_minutes**

specifies the minimum amount of time that can elapse with no API activity before VTAM displays its record of conversations between the LU partners.

For example, if you specify **ETIME=5**, VTAM displays only information about conversations that have had no activity for at least 5 minutes.

You can specify 0-999 minutes as a value for **ETIME**. If you use 0 (the default), VTAM displays a record of all conversations.

**ID=appl\_name**

identifies the name of the LU 6.2 application to which the requested conversation information applies. This value cannot be a network-qualified name.

**LOGMODE=logon\_mode\_name**

specifies the logon mode name to which the requested conversation information applies. Active conversations that use the specified logon mode name are displayed.

**LUNAME=lu\_name**

specifies the name of the partner LU to which the requested conversation information applies. Active conversations with the specified partner LU are displayed. The name can be a network-qualified name in the form of *netid.luname*.

If **PARMS=(NQNAMES=NO)** is coded on the ACB macroinstruction of the resource named on the ID operand, and a network-qualified name is specified, the network identifier is ignored.

If **PARMS=(NQNAMES=YES)** is coded on the ACB macroinstruction, *luname* can be either a non-network-qualified name or a network-qualified name. If *luname* is a non-network-qualified name, the command is processed against all LUs with that non-network-qualified name across all networks. If *luname* is a network-qualified name, the command is processed against the LU in the specified network.

## Resulting Display

The resulting VTAM display shows:

- The names of the partner LUs in the conversations
- Each partner LU's logon mode name
- Each conversation's identifier
- Each conversation's session identifier
- Each conversation's status
- Each conversation's elapse time.

## Examples

Displaying active conversations with a specific partner LU:

```

d net,convid,id=appcap05,luname=appcap06
IST097I DISPLAY ACCEPTED
IST1040I CONVERSATION(S) FOUND FOR APPCAP05
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = BATCH
IST1008I CONVID = 01000003, STATUS = F_SR, ETIME = 2
IST1009I SID = D5376DF41F2EDFF2
IST924I -----
IST314I END

```

Displaying all active conversations for a specific LU:

```

d net,convid,id=appcap05
IST097I DISPLAY ACCEPTED
IST1040I CONVERSATION(S) FOUND FOR APPCAP05
IST1007I PARTNER = NETB.APPCAP07, LOGMODE = BATCH
IST1008I CONVID = 01000009, STATUS = SEND, ETIME = 2
IST1009I SID = EAABEEC32CD34A3A
IST924I -----
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = BATCH
IST1008I CONVID = 01000008, STATUS = SEND, ETIME = 2
IST1009I SID = EAABEEC32CD34A39
IST924I -----
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = BATCH
IST1008I CONVID = 01000006, STATUS = SEND, ETIME = 4
IST1009I SID = EAABEEC32CD34A38
IST924I -----
IST314I END

```

Displaying active conversations for a specific logmode:

```

d net,convid,id=appcap05,logmode=interact
IST097I DISPLAY ACCEPTED
IST1040I CONVERSATION(S) FOUND FOR APPCAP05
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = INTERACT
IST1008I CONVID = 01000011, STATUS = SEND, ETIME = 10
IST1009I SID = EAABEEC32CD34A3E
IST924I -----
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = INTERACT
IST1008I CONVID = 0100000C, STATUS = SEND, ETIME = 14
IST1009I SID = EAABEEC32CD34A3B
IST924I -----
IST314I END

```

Displaying active conversations for a specific logmode and partner LU:

```

d net,convid,id=appcap05,luname=appcap06,logmode=batch
IST097I DISPLAY ACCEPTED
IST1040I CONVERSATION(S) FOUND FOR APPCAP05
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = BATCH
IST1008I CONVID = 01000008, STATUS = SEND, ETIME = 18
IST1009I SID = EAABEEC32CD34A39
IST924I -----
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = BATCH
IST1008I CONVID = 01000006, STATUS = SEND, ETIME = 20
IST1009I SID = EAABEEC32CD34A38
IST924I -----
IST314I END

```

Displaying active conversations with no API activity for more than 2 minutes and the partner LU is found in more than one network:

```

d net,convid,id=appcap05,luname=appcap06,etime=2
IST097I DISPLAY ACCEPTED
IST1040I CONVERSATION(S) FOUND FOR APPCAP05
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = INTERACT
IST1008I CONVID = 01000011, STATUS = SEND, ETIME = 11
IST1009I SID = EAABEEC32CD34A3E
IST924I -----
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = HOLLY
IST1008I CONVID = 0100000F, STATUS = SEND, ETIME = 13
IST1009I SID = EAABEEC32CD34A3D

```

```
IST924I -----  
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = INTERACT  
IST1008I CONVID = 0100000C, STATUS = SEND, ETIME = 15  
IST1009I SID = EAABEEC32CD34A3B  
IST924I -----  
IST1007I PARTNER = NETB.APPCAP06, LOGMODE = BATCH  
IST1008I CONVID = 01000008, STATUS = SEND, ETIME = 18  
IST1009I SID = EAABEEC32CD34A39  
IST924I -----  
IST1007I PARTNER = NETA.APPCAP06, LOGMODE = BATCH  
IST1008I CONVID = 01000006, STATUS = SEND, ETIME = 20  
IST1009I SID = EAABEEC32CD34A38  
IST924I -----  
IST314I END
```

---



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## 2.1.13 DISPLAY COS Command

```
>> vm_prefix DISPLAY NET, COS _, ID=pu_name_ | _, NETID= * _ | netid | _ ><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY COS (class-of-service) command displays the class-of-service (COS) table name for a particular network or all networks associated with a specified PU type 4 or 5.

If a COS table is not defined for a network, VTAM displays the default table name (ISTSDCOS). If the default table is not loaded, VTAM indicates that the default algorithm will be used to determine the class of service.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=pu\_name  
identifies the physical unit type 4 or type 5 for which the COS table is displayed. If pu\_name is not specified, ID defaults to the host physical unit name specified on the HOSTPU start option. If HOSTPU was not specified in the start option list, then ISTOPUS is used as the default.

The resource identified by pu\_name must be active for the display to occur.

If an ID is specified, the results displayed are with respect to the issuing VTAM host.

#### NETID

specifies whether the COS table for a particular network or all networks is displayed. If omitted, NETID defaults to the network from which the command was entered.

**Note:** If a model network is defined by using COPIES= as part of the network definition, then \*NETWORK is used as the network ID of the model network for the DISPLAY COS command.

NETID=netid  
displays the COS table for the named network.

NETID=\*  
displays the COS table for all networks.

#### Resulting Display

The resulting display shows the requested networks paired with the applicable COS tables.

#### Examples

Displaying a class-of-service table for a specific PU:

```
d net,cos,id=istpus
IST097I DISPLAY ACCEPTED
IST354I PU T4/5 MAJOR NODE = ISTEPUS
IST862I NETID = NETA          COSTABLE = ISTSDCOS
IST314I END
```



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## 2.1.14 DISPLAY CPS Command (VSE)

```
>>__DISPLAY NET,CPS_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY CPS (call progress signal) command displays the contents of the CPS table. This includes the CPS number, the retry delay, and the retry time.

### Resulting Display

The resulting display provides the call progress signal table name, the signal, delay and retry limit.

### Examples

Displaying a call progress signal table:

```
d net,cps
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = CPS TABLE
IST1025I CPS DEFINITION TABLE NAME=ISTCPS10
IST1026I SIGNAL=41 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=42 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=43 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=44 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=45 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=46 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=47 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=48 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=49 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=51 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=71 DELAY=5 RETRY LIMIT= 5
IST1026I SIGNAL=72 DELAY=5 RETRY LIMIT= 5
IST314I END
```





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## 2.1.15 DISPLAY DIRECTORY Command

Display a resource:

```
>> vm_prefix DISPLAY NET,DIRECTRY_,ID=name_,SCOPE=ONLY_><
|SCOPE=_ONLY_|
|ALL_|
```

Display a resource name in any network:

```
>> vm_prefix DISPLAY NET,DIRECTRY_,ID=*.name_>
>|MAX=1_|SCOPE=ONLY_|><
|MAX=number_of_resources_|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY DIRECTORY (directory) command displays information from the directory database about a resource and the resources that it serves and owns. For example, you can display a network node along with the end nodes that it serves and the LUs that it owns. This command is valid only when it is issued at a network node or an interchange node.

### Operands

*vm\_prefix* **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=resource\_name

specifies the name of a network node, end node, or LU in the directory database. The resource name can be network-qualified. If you do not specify the network identifier, VTAM uses the identifier of the host from which you are issuing the command.

You can specify \* (or \*NETWORK) as the network ID portion of a network-qualified name. The \* is useful for displaying a resource for which you do not know the network ID. The \* is also useful for displaying several resources with the same name that are found in multiple networks, provided that you also specify the MAX operand on the command.

MAX=number\_of\_resources

specifies the maximum number of resources to display when the resource name on the ID operand is specified as being in "any network." That is, the network ID portion of the network-qualified resource name is specified as \* (or \*NETWORK). For example, ID=\*.a0ln can be specified. MAX is valid only when an "any network" resource name is specified on the ID operand. The value for MAX can be any integer from 1 to 200. The default is 1.

The resource name might exist in more networks than the number you specify on the MAX operand. However, VTAM searches only for the number of instances that you have specified. When that number is found, VTAM does not search any further. This saves processing time for the command and gives you control over the amount of display output generated by the command. If fewer resources are found than you have specified on MAX, VTAM displays only the resources that are found.

SCOPE

specifies the desired scope of the display.

SCOPE=ALL

displays information for the resource specified on the ID operand and the resources it serves or owns, if any. If the specified resource is a network node, VTAM displays information about the network node, the end nodes it serves, and the LUs it owns. If the specified resource is an end node, VTAM displays information about the end node and the LUs it serves. If the specified resource is an LU, the display output is the same for SCOPE=ALL and SCOPE=ONLY.

SCOPE=ALL is not valid if you specify ID=\*.name.

*Warning: In a large network, displaying a network node or end node with SCOPE=ALL might generate an undesirably large display.*

SCOPE=ONLY

displays information only for the resource specified on the ID operand.

## Resulting Display

The resulting VTAM display shows:

- For SCOPE=ONLY, the entry type (registered, dynamic, or defined), the resource type (network node, end node, or LU), the name of the owning CP, and the name of the network node server.
- For SCOPE=ALL, the same information as SCOPE=ONLY, and additionally, the name, entry type, and resource type of the served end nodes and owned LUs.

If the resource type that is displayed is EN, the node might actually be a network node, end node, or SSCP. This is because in a mixed APPN and subarea network, CPs and SSCPs that are found in or through a subarea network are represented in this host (the host from which you are issuing this command) as end nodes that are served by the interchange node through which the resource was found.

The DISPLAY DIRECTORY command might show a resource name appearing in several networks even though the resource actually exists in only one network. This can happen if intermediate SSCPs are pre-V4R1 and they pass only the 8-character resource name. The real network ID is therefore lost and other network IDs might be subsequently assumed.

### Examples

Displaying an end node with SCOPE=ALL:

```
d net,directry,id=neta.sscpla,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = DIRECTORY
IST1186I DIRECTORY ENTRY = REGISTERED EN
IST1184I CPNAME = NETA.SSCP1A NETSRVR = NETD.SSCP2A
IST1185I NAME = NETB.ECHOB91 - DIRECTORY ENTRY = REGISTERED LU
IST1185I NAME = NETB.ECHOB92 - DIRECTORY ENTRY = REGISTERED LU
IST1185I NAME = NETA.NMVTAPPL - DIRECTORY ENTRY = REGISTERED LU
IST1185I NAME = NETA.APPL2V - DIRECTORY ENTRY = REGISTERED LU
IST1185I NAME = NETA.APPL1V - DIRECTORY ENTRY = REGISTERED LU
IST1185I NAME = NETA.TS01 - DIRECTORY ENTRY = REGISTERED LU
IST314I END
```

Displaying an end node with SCOPE=ONLY:

```
d net,directry,id=neta.sscpla,scope=only
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = DIRECTORY
IST1186I DIRECTORY ENTRY = REGISTERED EN
IST1184I CPNAME = NETA.SSCP1A NETSRVR = NETD.SSCP2A
IST314I END
```

Displaying an LU:

```
d net,directry,id=neta.lu1
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = DIRECTORY
IST1186I DIRECTORY ENTRY = REGISTERED LU
IST1184I CPNAME = NETA.SSCP1A NETSRVR = NETD.SSCP2A
IST314I END
```



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## 2.1.16 DISPLAY DISK Command

```
>> vm_prefix DISPLAY NET,DISK___, ID=ncp_name_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY DISK command provides information about an IBM 3720 or 3745 Communication Controller's disk contents.

The DISPLAY DISK command displays the following information about the contents of IBM 3720 and 3745 Communication Controller external disk storage:

- Information about each load module, including:
  - Load module name
  - Date and time the load module was stored on disk
  - Stability of the load module (stored, storing, or suspended)
  - Indication of whether a load module on disk is the same as the load module currently active in the communication controller
  - Module name, requested IPL time, and estimated IPL time (if IPL was specified).
- Information regarding dumps, including:
  - Dump name
  - Date and time the dump was stored on disk.

**Note:** Dump information is not displayed until the complete dump has been stored on the hard disk. If you do not receive dump information, retry the command at a later time.

- An indication of whether the load module is coded to receive automatic IPL.

This is determined by the value of Auto Dump/Load, which controls automatic dumping and reloading of an NCP to or from the hard disk in the event of an NCP abend. See the [DUMPLoad](#) operand on the VARY ACT command in topic [2.1.92](#) for more information.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=ncp\_name

identifies the name of the NCP currently active in the IBM 3720 or 3745 Communication Controller. The contents of that communication controller's external disk storage are displayed.

**Note:** Although the IBM 3745-410 Communication Controller disk can contain up to four load modules and two dumps, the maximum per CCU is two load modules and one dump. DISPLAY DISK displays only the 3745 storage relative to the NCP specified in the ID operand.

## Resulting Display

The resulting display provides load module and dump information. Load module and dump source are not provided. To view dump source, use the DISPLAY NCPSTOR command, shown in the ["DISPLAY NCPSTOR Command."](#)

## Examples

Displaying a disk containing a load module:

```
d net,disk,id=a0362zc
IST097I DISPLAY ACCEPTED
IST951I DISPLAY DISK INFORMATION FOR A0362ZC
IST954I LOAD MODULE   DATE       TIME   STORE STATUS
IST955I   A04AT       02/06/92  15:11:54   STORED
IST965I AUTO DUMP/LOAD: NO
IST314I END
```

Displaying a disk containing a dump and two load modules:

```
d net,disk,id=a0362zc
IST097I DISPLAY ACCEPTED
IST951I DISPLAY DISK INFORMATION FOR A0362ZC
IST952I DUMP NAME     DATE       TIME
IST953I   A0362ZC     09/25/92  10:30:52
IST924I -----
IST954I LOAD MODULE   DATE       TIME   STORE STATUS   ACTIVE
```

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IST955I	A04AT	02/06/92	15:11:54	STORED	NO
IST955I	A0362ZC	09/25/92	10:23:43	STORED	YES
IST965I	AUTO DUMP/LOAD: YES				
IST314I	END				

---



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## 2.1.17 DISPLAY DLURS Command

```
>> vm_prefix DISPLAY NET,DLURS_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
DLURS	DLUR

### Purpose

The DISPLAY DLURS (dependent LU requesters) command displays all DLURs for which this host acts as dependent LU server (DLUS). Only DLURs that have a CPSVRMGR session with the host are displayed. The host (the DLUS) always sends data on a contention-winner session and receives data on a contention-loser session. Likewise, the DLUR sends data on a contention-winner session and receives data on a contention-loser session.

This command is valid only when it is issued at a network node or an interchange node.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### Resulting Display

The resulting display shows:

- The name of each DLUR

- The status of each end of the CPSVRMGR session. Pending active and pending inactive states should be temporary. If the session remains in pending active or pending inactive state, it might be hung.

## Examples

Displaying dependent LU requesters:

### **d net,dlurs**

```
IST097I DISPLAY ACCEPTED
```

```
IST350I DISPLAY TYPE = DLURS
```

```
IST1352I DLUR NAME          DLUS CONWINNER STATE  DLUS CONLOSER STATE
```

```
IST1353I NETA.NNCPA1       ACTIVE          ACTIVE
```

```
IST314I END
```

---



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## 2.1.18 DISPLAY EXIT Command

```
>> vm_prefix DISPLAY NET,EXIT | -, ID=* _____ ><
      | -, ID= * | _____
      | exit_name | _____
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY EXIT command displays the name, exit level, module name, and status of installation-wide exit routines.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID  
specifies which installation-wide exit routines to display.

ID=exit\_name  
specifies one of the following installation-wide exit routines:

ELMCLUSP **MVS** Logon manager exit routine

ISTCMMND Command verification exit routine

ISTEXCAA Session management exit routine

ISTEXCCS Configuration services XID exit routine

```

ISTEXCDM  Directory management exit routine

ISTEXCGR   MVS  Generic resource resolution exit routine

ISTEXCSD  Selection of definitions for dependent logical units
           (SDDL) exit routine

ISTEXCUV  USERVAR exit routine

ISTEXCVR  Virtual route selection exit routine

```

ID=\*  
specifies all installation-wide exit routines.

## Resulting Display

The resulting display shows the *exitname*, the exit level the module name for the exit routine, and the status of the exit routine at the time the command was issued. See [Chapter 1, "Writing VTAM Installation-Wide Exit Routines"](#) in *VTAM Customization* for information about the exit level for *exitname*.

## Examples

Displaying all installation-wide exit routines:

```

d net,exit
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = EXIT
IST1250I NAME      LEVEL      MODULE      STATUS
IST1251I ISTCMMND  ***NA***          INACTIVE
IST1251I ISTEUCUV  ***NA***  ISTEUCUV    ACTIVE
IST1251I ELMCLUSP ***NA***          INACTIVE
IST1251I ISTECCS   ***NA***  ISTECCS    ACTIVE
IST1251I ISTEUCSD ***NA***  ISTEUCSD   ACTIVE
IST1251I ISTECAA   ***NA***          INACTIVE
IST1251I ISTEUCVR ***NA***          INACTIVE
IST1251I ISTEUCDM ***NA***          INACTIVE
IST1251I ISTEUCGR ***NA***  ISTEUCGR   ACTIVE
IST314I END

```

Displaying a specific installation-wide exit routine:

```

d net,exit,id=istexcuv
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = EXIT
IST1250I NAME      LEVEL      MODULE      STATUS
IST1251I ISTEUCUV  ***NA***  ISTEUCUV    ACTIVE
IST314I END

```



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## 2.1.19 DISPLAY GROUPS Command

```
>> vm_prefix DISPLAY NET, GROUPS _____ >
                                     |_, ID=  name _____|
                                     |<_, _____|
                                     |_( name |_)_|
```

```
> _____ ><
  |_, SCOPE=ALL _____|
  |_, SCOPE= _____|
  | ACT _____|
  | ACTONLY _____|
  | ALL _____|
  | CONCT _____|
  | INACT _____|
  | INACTONLY _____|
  | PENDING _____|
  | RESET _____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY GROUPS command provides information about line groups.

**Note:** To display line groups independently of the major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=GROUPS.

## Operands

### vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active NCP, channel-attachment, or XCA major nodes whose subordinate line groups are to be displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every NCP, channel-attachment, and XCA major node in the network.*

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable line groups within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all line groups in an active state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). The display does **not** include line groups in pending or connectable states. If no line groups are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

#### SCOPE=ALL

specifies that information is to be displayed about all line groups (regardless of status) within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted).

#### SCOPE=CONCT

specifies that information is to be displayed about all line groups in a CONCT (connectable) state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If no line groups are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

#### SCOPE=INACT

specifies that information is to be displayed about all inactive line groups within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If this display is undesirably large, you can use

SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

#### SCOPE=INACTONLY

specifies that information is to be displayed about all inactive line groups within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

#### SCOPE=PENDING

specifies that information is to be displayed about all pending line groups within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

#### SCOPE=RESET

specifies that information is to be displayed about all line groups in a RESET state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted).

### Resulting Display

The resulting display lists the group's major node with its type and status, and the name, type, and status of each line group subordinate to the major node.

### Examples

Displaying all line groups:

#### d net,groups

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = GROUPS
IST089I ISTDUS TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I ISTGROUP TYPE = LINE GROUP , ACTIV
IST089I A0462ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I A04LBNNB TYPE = LINE GROUP , ACTIV
IST089I A04XNPAX TYPE = LINE GROUP , ACTIV
IST089I A04DBNNS TYPE = LINE GROUP , ACTIV
IST089I A04LBNNS TYPE = LINE GROUP , ACTIV
IST089I A04GPRI TYPE = LINE GROUP , ACTIV
IST089I A04GSEC TYPE = LINE GROUP , ACTIV
IST089I A04LINNS TYPE = LINE GROUP , ACTIV
IST089I A04BPGRP TYPE = LINE GROUP , ACTIV
IST089I A04BLG1 TYPE = LINE GROUP , ACTIV
IST089I A04BLG2 TYPE = LINE GROUP , ACTIV
IST089I A04XCA0 TYPE = LINE GROUP , ACTIV
IST089I C2362ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST172I NO GROUPS EXIST
IST314I END
```

Displaying line groups within a specific major node:

#### d net,groups,id=a0362zc

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = GROUPS
IST089I A0362ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I A03LBNNB TYPE = LINE GROUP , ACTIV
IST089I A03XNPAX TYPE = LINE GROUP , ACTIV
IST089I A03L56KP TYPE = LINE GROUP , ACTIV
```



```
IST089I A03LBNNS TYPE = LINE GROUP      , ACTIV
IST089I A03FID2  TYPE = LINE GROUP      , ACTIV
IST089I A03BPGRP TYPE = LINE GROUP      , ACTIV
IST089I A03BLG1  TYPE = LINE GROUP      , ACTIV
IST089I A03BLG2  TYPE = LINE GROUP      , ACTIV
IST089I A03XCA0  TYPE = LINE GROUP      , ACTIV
IST314I  END
```

---



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## 2.1.20 DISPLAY ID Command

Display a resource:

```
>> vm_prefix DISPLAY NET, ID=name |_, IDTYPE=RESOURCE |_____>
|_, IDTYPE= CP |
| DIRECTRY |
| GENERIC |
| LUALIAS |
| RESOURCE |
| SSCP |
| USERVAR |
|_____>

> |_, NETID=netid_ | |_, SCOPE=ONLY |_____><
|_, SCOPE= ACT |
| ALL |
| INACT |
| ONLY |
|_____><
```

Display a resource name in any network:

```
>> vm_prefix DISPLAY NET, ID=* .name |_, IDTYPE=RESOURCE |_____>
|_, IDTYPE= DIRECTRY |
| RESOURCE |
|_____>

> |_, MAX=1 | |_, SCOPE=ONLY |_____><
|_, MAX=number_of_resources_ | |_, SCOPE= ACT |
| ALL |
| INACT |
| ONLY |
|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ALL	EVERY or E
SCOPE=INACT	INACT or I
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

## Purpose

The DISPLAY ID command provides information about a particular major node, minor node, or directory entry. Additional information can be displayed about the node's subordinate resources.

**Note:** This command applies only to active major nodes and minor nodes within active major nodes.

Inactive subarea nodes (for example, NCP major nodes) that have been contacted by VTAM as a result of the activation of a cross-subarea link station can be displayed, if the name of the given subarea node is known to VTAM. Both the NCP being displayed and the NCP containing the link station must be an NCP V1R3 or later release level. In all other cases, inactive major nodes and their minor nodes are not known to VTAM and are therefore not displayed.

When the operator specifies:

- A switched line, the display indicates whether the line is dial-in, dial-out, or both dial-in and dial-out. For a dial-in line, the answer mode is indicated.
- An application program minor node or LU name, the associated USS, interpret, and logon-mode table names and the default logon-mode entry are displayed.
- An NCP or host physical unit name, the following are displayed:
  - The name and status of the associated dynamic path update members
  - The load module name of the NCP that was loaded (if different from the NCP PU name)
  - An indication of whether a nondisruptive load (MODIFY LOAD) is currently in progress
  - An indication of whether an NCP, MOSS, or CSP dump transfer (MODIFY DUMP) is currently in progress.
- The name of a FRSESET definition statement, a FRSESET display is issued. The display includes a message that shows how the FRSESET was defined, statically or dynamically. (Statically means that it was included in the NCP generation.)
- An application program minor node, the compression-level values are displayed.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=name

specifies the name of a major node, minor node, USERVAR, **MVS** generic resource name, LUALIAS, or resource in the directory database. The name can be a network-qualified name.

**Notes:**

1. If the name is an NCP major node, the name used must be the name specified on the ID operand when the NCP was activated. If PUNAME was specified on the BUILD definition statement, then *name* is the PUNAME.
2. If the name is an application program in this domain, the ID operand can specify either the application program minor node name or the name under which the application program opened its ACB.
3. For a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.
4. If the name is a non-network-qualified CDRSC, VTAM will use the network ID of the host from which the command is issued. If two or more CDRSCs exist with the same resource name, but different network identifiers, and DISPLAY ID=*non-network-qualified\_name* is issued, then one of the following occurs:
  - Only one CDRSC is displayed. The displayed CDRSC is either:
    - The one that has been defined with VTAM's network identifier, or
    - The one that has been defined as cross-network, but specified with NQNMODE=NAME, either on its CDRSC definition or by the NQNMODE start option.
  - None of the CDRSCs will be displayed if they are all specified with NQNMODE=NQNAME, either on their CDRSC definitions or by the NQNMODE start option.
5. If you specify a non-network-qualified USERVAR name, VTAM uses the network ID of the host from which you issue the command.
6. You can specify \* (or \*NETWORK) as the network ID portion of a network-qualified name. The \* is useful for displaying a resource for which you do not know the network ID. The \* is also useful for displaying several resources with the same name that are found in multiple networks, provided that you also specify the MAX operand on the command.
7. **MVS** If the name is a generic resource name, the output will list all the members known by that generic resource name.

IDTYPE

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE can be used to identify

which resource the command should act on. IDTYPE differs from MAX in that IDTYPE displays several representations of the same resource, whereas MAX displays several different resources with the same name.

IDTYPE=CP

displays information only about the host CP (represented as an application) or an adjacent CP (represented as a CDRSC).

IDTYPE=GENERIC **MVS**

displays the names of application program network names that are also generic resources.

IDTYPE=SSCP

displays information only about the SSCP (represented as a CDRM).

IDTYPE=USERVAR

displays information only about the resource whose name is associated with the USERVAR.

IDTYPE=LUALIAS

displays information only about the CDRSC whose name is associated with the LUALIAS. If a network-qualified name is specified, VTAM does not search for an LUALIAS with that resource name. For more information on CDRSCs that are defined with an LUALIAS, see ["Cross-Domain Resource \(CDRSC\) Major Node"](#) in the *VTAM Resource Definition Reference*.

IDTYPE=DIRECTRY

displays information from the directory database for the specified resource. The DISPLAY ID command with IDTYPE=DIRECTRY is valid only when it is issued at a network node or an interchange node.

IDTYPE=RESOURCE

displays information about the resource named on the ID operand. VTAM searches for the resource in the following order:

1. VTAM searches for an SSCP (CDRM), a host CP (application), or an adjacent CP (CDRSC) by the name specified on the ID operand and displays information for any or all of these resources it finds. If the resource is found and it is not the host CP, and you are issuing this command at a network node or interchange node, the display includes information from the directory database.
2. If VTAM does not find an SSCP, a host CP, or an adjacent CP, it searches for a resource with the name specified on the ID operand and displays information for the resource, if it finds it. If the resource is a CDRSC, and you are issuing this command at a network node or interchange node, the display includes information from the directory database.
3. If VTAM does not find a resource by that name, it searches for a USERVAR with the name specified on the ID operand and displays information for the resource, if it finds it.
4. If VTAM does not find a USERVAR by that name, or a USERVAR is found but the resource defined as the value of the USERVAR is not found, it searches for an LUALIAS with the name specified on the ID operand and displays information for the CDRSC, if it finds it.
5. If no resource is found with the name specified on the ID operand, and you are issuing this command at a network node or interchange node, VTAM displays information about the resource from the directory database, if it finds it.

6. If no resource is found and no entry exists in the directory database with the specified name, the command fails.

**MAX=number\_of\_resources**

specifies the maximum number of resources to display when the resource name on the ID operand is specified as being in "any network." That is, the network ID portion of the network-qualified resource name is specified as \* (or \*NETWORK). For example, ID=\*.a01n can be specified. MAX is valid only when the following conditions are both true:

1. An "any network" resource name is specified on the ID operand
2. IDTYPE=RESOURCE or IDTYPE=DIRECTRY is used.

The value for MAX can be any integer from 1 to 200. The default is 1.

The resource name might exist in more networks than the number you specify on the MAX operand. However, VTAM searches only for the number of instances that you have specified. When that number is found, VTAM does not search any further. This saves processing time for the command and gives you control over the amount of display output generated by the command. If fewer resources are found than you have specified on MAX, VTAM displays only the resources that are found.

The display might show the same resource more than once if both subarea information and APPN directory information are available for a particular resource. The value specified for MAX does not take into consideration this duplication of information for a particular resource, so you could specify a value such as MAX=3 and receive a display of up to six resources.

**NETID=netid**

is valid only for CDRSC major nodes and limits the scope of the display to CDRSCs within the indicated network and CDRSCs defined without a network identifier (not associated with any particular network). If you specify the NETID operand, but do not identify a specific network (that is, a value for *netid* is not entered), all CDRSCs in the major node are displayed. CDRSCs are displayed in the order in which they were defined or added within the major node.

To display minor nodes and independent LUs, specify a network-qualified name on the ID operand, and do not use the NETID operand.

**SCOPE**

specifies the desired scope of the display. The SCOPE operand is ignored for frame relay PUs or FRSESETs. Nor does SCOPE have any effect when you display resources in the directory database.

These values specify whether information is to be provided about the specified node's subordinate resources in addition to the information about the node itself. They are meaningful only for resources that have subordinate resources.

VTAM treats resources in a pending state as active for the purpose of display; otherwise, the resources are considered inactive. A pending state is a transient state to or from the fully active state.

**SCOPE=ACT**

specifies that, in addition to the name and status of the resource specified on the ID operand, the name and status of all its active subordinate resources, if any, are to be displayed.

**SCOPE=ALL**

specifies that, in addition to the name and status of the resource specified on the ID operand, the name and status of all its subordinate resources, if any, are to be displayed (regardless of their status).

**SCOPE=INACT**

specifies that, in addition to the name and status of the resource specified on the ID operand, the name and status of all its inactive subordinate resources, if any, are to be displayed.

**SCOPE=ONLY**

tells VTAM not to display the name and status of any subordinate resources.

**Resulting Display**

The resources that are displayed depend on their relationship within the hierarchy that is specified on the ID operand. The following lists show what resources are displayed for each major node or minor node.

**Note:** Independent LUs that are defined under a PU do not always appear in this output. Only independent LUs that are currently using the PU as a boundary function for multiple concurrent sessions are displayed.

A DISPLAY ID command issued at an APPN node might show a resource name appearing in several networks even though the resource actually exists in only one network. This can happen if intermediate SSCPs are pre-V4R1 and they pass only the 8-character resource name. The real network ID is therefore lost and other network IDs might be subsequently assumed.

For a DISPLAY ID command with IDTYPE=RESOURCE or IDTYPE=DIRECTRY, if the resource type that is displayed is EN, the node might actually be a network node, end node, or SSCP. This is because in a mixed APPN and subarea network, CPs and SSCPs that are found in or through a subarea network are represented in this host (the host where you are issuing this command) as end nodes which are served by the interchange node through which the resource was found.

## ° Major nodes:

- For ID=*ADJCP* major node, its subordinate nodes
- For ID=*application program* major node, its subordinate applications
- For ID=*CDRM* major node, its subordinate CDRMs
- For ID=*CDRSC* major node, its subordinate CDRSCs

- For ID=*channel-attachment major node*, its subordinate links
- For ID=*external communications adapter (XCA) major node*, its subordinate links
- For ID=*hostpu*, its subordinate cross-subarea links
- **VM,VSE** For ID=*LAN major node*, its subordinate links
- For ID=*local non-SNA 3270 major node*, its subordinate logical units
- For ID=*local\_sna\_major\_node*:
  - Each PU providing local SNA connectivity and its subordinate logical units
  - Each PU providing APPN host-to-host connectivity
- For ID=*lugroup major node*, its model LU groups, and their model LUs
- For ID=*model major node*, its subordinate logical units and the physical units to which the logical units are subordinate
- For ID=*NCP major node*, its subordinate links
- **VM,VSE** For ID=*packet major node*, its subordinate links
- For ID=*switched major node*, its subordinate logical units and the physical units to which the logical units are subordinate
- **VSE** For X.21 major nodes, VTAM displays PUs and LUs. If the PUs and LUs are waiting to be retried under X.21 call progress signal retry, VTAM adds a modifier to the message. To see more information about these signals, use the ["DISPLAY CPS Command \(VSE\)."](#)

◦ Minor nodes:

- For ID=*application program minor node* or *ACB name*:
  - For SCOPE=ACT, the established sessions with the application program
  - For SCOPE=INACT, the names of logical units waiting for sessions with the application program
  - For SCOPE=ALL, the information provided for both ACT and INACT, as described above
- **MVS,VM** An indication if the application is a VCNS user



- For ID=*CDRSC minor node*:
  - For SCOPE=ACT, the established sessions with the cross-domain resource
  - For SCOPE=INACT, the names of logical units waiting for sessions with the cross-domain resource
  - For SCOPE=ALL, the information provided for both ACT and INACT, as described in the preceding
  
- For ID=*host CDRM name*, the host's network ID (where applicable), subarea and element addresses, and only the external CDRM session partner and session status for established sessions with the host CDRM
  
- For ID=*same-network external CDRM name*:
  - For SCOPE=ACT, active cross-domain resources owned by the external CDRM
  - For SCOPE=INACT, inactive cross-domain resources owned by the external CDRM
  - For SCOPE=ALL, all active or inactive cross-domain resources owned by the external CDRM
  
- For ID=*cross-network external CDRM name*:
  - For SCOPE=ACT, active cross-network resources owned by the external CDRM
  - For SCOPE=INACT, inactive cross-network resources owned by the external CDRM
  - For SCOPE=ALL, all active or inactive cross-network resources owned by the external CDRM
  
- For ID=*line group*:
  - For SCOPE=ALL, lines and PUs
  - For SCOPE=ACT, all active lines and all active PUs
  - For SCOPE=INACT, all inactive lines, all inactive PUs, and all active lines that have inactive PUs
  - For SCOPE=ONLY, only line group
  
- For ID=*link*:

- Its subordinate link stations, or
  - Its subordinate physical units and dependent logical units
- For `ID=physical_unit`:
    - Its subordinate logical units
    - For a PU providing APPN host-to-host connectivity, the name, current status, and line control as specified by the TRLE operand on the PU definition statement
    - For a PU supported by a DLUR, the name of the DLUR and the switched major node that defines the PU
  - **VSE** For `ID=x.21 shm pu` or `ID=shm group`, VTAM displays PUs. If the PUs are waiting to be retried under X.21 short-hold mode/multiple port sharing (SHM/MPS), VTAM adds a modifier to the message. To see more information about these signals, use the ["DISPLAY CPS Command \(VSE\)."](#)
- Resources in the directory database:
    - The name of the resource
    - The entry type, such as dynamic
    - The resource type, such as network node
    - The owning CP
    - The network node server.
  - **MVS** Generic resource names:
    - Member name
    - Owning CP name
    - Whether the resource is currently available to be selected during resolution. *NO* indicates that the generic resource is on an end node that does not have a CP-CP session with its network node server, and is therefore not selected.
    - APPC value.

## Examples

Displaying an adjacent CP major node:

```
d net,id=istadjcp,scope=all
```

```

IST097I DISPLAY ACCEPTED
IST075I NAME = ISTADJCP, TYPE = ADJCP MAJOR NODE
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST1100I ADJACENT CONTROL POINTS FROM MAJOR NODE ISTADJCP
IST1102I NODENAME          NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I NETB.VN1         VN          0          0          N/A
IST1103I NETA.VN1        VN          1          0          N/A
IST314I END

```

Displaying an application program major node:

**d net,id=a01appls,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A01APPLS, TYPE = APPL SEGMENT
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST360I APPLICATIONS:
IST080I A01NV      ACTIV      A01NVPPT ACTIV      A01NV000 CONCT
IST080I A01NV001  ACTIV      A01NV002 ACTIV      A01NV003 ACTIV
IST080I A01NV004  ACTIV      A01NV005 ACTIV      A01NV006 ACTIV
IST080I A01TFOPT  CONCT      A01TFO0  CONCT      A01TFO1  CONCT
IST080I A01TFO2   CONCT      A01TFO3   CONCT      A01TFO4   CONCT
IST080I A01TF09   CONCT      AAUTSKLP  CONCT      AAUTCNMI  ACTIV
IST080I DSICRTR   ACTIV      DSIAMLUT  ACT/S      A01NVLUC  ACT/S
IST080I A01NVSPPT ACTIV      BNJHWMON  ACTIV      ALIASAPL  CONCT
IST080I DSIGDS    ACTIV      APPLR02   CONCT      APPLA01   CONCT
IST080I APPL01    CONCT      APPL0102  CONCT      A01MVSNO  CONCT
IST080I A01MVSOP  CONCT      A01MVSRE  CONCT      WORM      CONCT
IST080I DIAL01    CONCT      CAPPL010  CONCT      CAPPL01C  CONCT
IST080I NPMA01MA  CONCT      TPNS02    CONCT      TPNSA01   CONCT
IST080I IMS02     CONCT      MHCICS02  CONCT      CICS02A   CONCT
IST080I TCAM02    CONCT      TSO02     ACTIV      TSO0201  ACT/S
IST080I TSO0202   CONCT      TSO0203   CONCT      TSO0204   CONCT
IST080I VMA01     CONCT      VMA011    CONCT      VMA012    CONCT
IST080I VMA013    CONCT      VMA014    CONCT      VMA015    CONCT
IST314I END

```

Displaying a CDRM major node:

**d net,id=a01cdrmc,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A01CDRMC, TYPE = CDRM SEGMENT
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST477I CDRMS:
IST482I A01N      ACTIV, SA      1, EL      1, NETID = NETA
IST482I A02N      NEVAC, SA      2, EL      1, NETID = NETA
IST482I A81N      NEVAC, SA      81, EL     1, NETID = NETA
IST482I A82N      NEVAC, SA      82, EL     1, NETID = NETA
IST482I A500N     NEVAC, SA      500, EL    1, NETID = NETA
IST482I A14N      NEVAC, SA      14, EL     1, NETID = NETA
IST482I A360N     NEVAC, SA      360, EL    1, NETID = NETA
IST482I C01N      NEVAC, SA      N/A, EL    N/A, NETID = NETC
IST482I C11N      NEVAC, SA      N/A, EL    N/A, NETID = NETC
IST482I C255N     NEVAC, SA      N/A, EL    N/A, NETID = NETC
IST314I END

```

Displaying a CDRSC major node:

**d net,id=istcdrdy,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = ISTCDRDY, TYPE = CDRSC SEGMENT
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST478I CDRSCS:
IST483I C25NVLUC  ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I B01NVLUC  ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I A81NVLUC  ACTIV----Y, CDRM = ***NA***, NETID = NETA
IST483I A03D207F  ACT/S----Y, CDRM = A01N , NETID = NETA
IST483I A02NVLUC  ACT/S----Y, CDRM = A01N , NETID = NETA
IST483I ECHO02A   ACT/S----Y, CDRM = A01N , NETID = NETA
IST483I A50NVLUC  ACT/S----Y, CDRM = A01N , NETID = NETA
IST483I A500N     ACT/S----Y, CDRM = A01N , NETID = NETA
IST483I A02N      ACT/S----Y, CDRM = A01N , NETID = NETA
IST314I END

```

Displaying a CDRSC major node for a specific network:

**d net,id=a99cdrsc,netid=netc,scope=all**

```
IST097I DISPLAY ACCEPTED
IST075I NAME = A99CDRSC, TYPE = CDRSC SEGMENT
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST478I CDRSCS:
IST483I CECHO01  ACTIV      , CDRM = C01M      , NETID = NETC
IST483I TPNSC01  ACTIV      , CDRM = C01M      , NETID = NETC
IST483I C01NVLUC ACTIV      , CDRM = C01M      , NETID = NETC
IST483I TSO11    ACTIV      , CDRM = ***NA***  , NETID = NETC
IST483I ECHO11   ACTIV      , CDRM = C11M      , NETID = NETC
IST483I C11NVLUC ACTIV      , CDRM = C11M      , NETID = NETC
IST483I TSO255   ACTIV      , CDRM = ***NA***  , NETID = NETC
IST483I ECHO255  ACTIV      , CDRM = C255M     , NETID = NETC
IST483I C255NLUC ACTIV      , CDRM = C255M     , NETID = NETC
IST314I END
```

**VM,VSE** Displaying a LAN major node:

**d net,id=a01lanx,scope=all**

```
IST097I DISPLAY ACCEPTED
IST075I NAME = A01LANX, TYPE = CA MAJOR NODE
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST956I PORT SAP= 4 MAC=400000192211 MAXDATA= 2012 MAXSTN= 9
IST958I INBND= 6382 OUTBND= 6383 PENDING= 0 ATTN= 6254 CUA=0B00
IST1324I VNNAME = NETA.VN1          VNGROUP = GP1AVN
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I A01LANX AC/R      21 NO      902D0000000000000000000017100808
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST170I LINES:
IST232I LANLINE2, ACTIV
IST232I LANLINE3, ACTIV
IST232I LN1AVN  , ACTIV
IST314I END
```

Displaying a dependent LU requester:

**d net,id=nncpa1,scope=all**

```
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.NNCPA1, TYPE = ADJACENT CP
IST486I STATUS= ACT/S----Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=CPSVCMG USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NON
IST231I CDRSC MAJOR NODE = ISTDGRDY
IST1044I ALSLIST = ISTAPNPU
IST1131I DEVICE = ILU/CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000004, SESSION REQUESTS = 0000000
IST206I SESSIONS:
IST1081I ADJACENT LINK STATION = P3A4956K
IST634I NAME      STATUS      SID          SEND RECV VR TP NET
IST635I SSCP1A    ACTIV/DL-S E2C5E2E2D6D5000B 001C 0000 0 0 NET
IST635I SSCP1A    ACTIV/CP-S E2C5E2E2D6D50005 0004 0001 0 0 NET
IST635I SSCP1A    ACTIV/DL-P EAABEEC3361D945A 0000 0012 0 0 NET
IST635I SSCP1A    ACTIV/CP-P EAABEEC3361D9458 0001 0005 0 0 NET
IST1355I PHYSICAL UNITS SUPPORTED BY DLUR NETA.NNCPA1
IST089I AA1PUB   TYPE = PHYSICAL UNIT      , ACTIV
IST089I AA1PUB   TYPE = PHYSICAL UNIT      , ACTIV
IST924I -----
IST075I NAME = NETA.NNCPA1, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC NN
IST1184I CPNAME = NETA.NNCPA1 - NETSRVR = ***NA***
IST314I END
```

Displaying a local SNA major node:

**d net,id=a50lsna,scope=all**

```
IST097I DISPLAY ACCEPTED
IST075I NAME = A50LSNA, TYPE = LCL SNA MAJ NODE
```

```

IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST084I NETWORK NODES:
IST089I PUA      TYPE = PHYSICAL UNIT      , ACTIV      , CUA=0770
IST089I LSNALU1  TYPE = LOGICAL UNIT      , ACTIV
IST089I LSNALU2  TYPE = LOGICAL UNIT      , ACTIV
IST089I LSNALU3  TYPE = LOGICAL UNIT      , ACTIV
IST089I LSNALU4  TYPE = LOGICAL UNIT      , ACTIV
IST314I END

```

Displaying a local SNA major node for each PU providing APPN host-to-host connectivity:

```

d net,id=lsna1a,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = LSNA1A, TYPE = LCL SNA MAJ NODE
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST084I NETWORK NODES:
IST1316I PU NAME = AHHCPU1  STATUS = NEVAC      TRLE = ML1A2A2
IST1316I PU NAME = AHHCPU2  STATUS = NEVAC      TRLE = ML1A2A3
IST1316I PU NAME = AHHCPU3  STATUS = NEVAC      TRLE = ML1A2A4
IST314I END

```

Displaying a local non-SNA 3270 major node:

```

d net,id=a01local,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A01LOCAL, TYPE = LCL 3270 MAJ NODE
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST355I LOGICAL UNITS:
IST089I A01A741  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0741
IST089I A01A742  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0742
IST089I A01A743  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0743
IST089I A01A744  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0744
IST089I A01A745  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0745
IST089I A01A746  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0746
IST089I A01A747  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0747
IST089I A01A748  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0748
IST089I A01A721  TYPE = LOGICAL UNIT      , ACT/S      , CUA=0721
IST089I A01A722  TYPE = LOGICAL UNIT      , ACTIV      , CUA=0722
IST089I A01A723  TYPE = LOGICAL UNIT      , ACTIV      , CUA=0723
IST089I A01A724  TYPE = LOGICAL UNIT      , ACTIV      , CUA=0724
IST089I A01A725  TYPE = LOGICAL UNIT      , ACTIV      , CUA=0725
IST089I A01A726  TYPE = LOGICAL UNIT      , NEVAC      , CUA=0726
IST314I END

```

Displaying an NCP major node:

```

d net,id=a0462zc,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A0462ZC, TYPE = PU T4/5
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST247I LOAD/DUMP PROCEDURE STATUS = RESET
IST484I SUBAREA = 4
IST391I ADJ LINK STATION = 0017-S, LINE = 0017-L, NODE = ISTOPUS
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST077I SIO = 50078 CUA = 0017
IST675I VR = 0, TP = 2
IST170I LINES:
IST080I A04B00  NEVAC      A04B01  NEVAC      A04B03  NEVAC
IST080I A04B32  NEVAC      A04B33  NEVAC      A04B35  NEVAC
IST080I A04VXX  NEVAC-----T A04S02  NEVAC      A04S34  NEVAC
IST080I A04S04  NEVAC      A04S16  NEVAC      A04S20  NEVAC
IST080I A04S36  NEVAC      A04S48  NEVAC      A04S52  NEVAC
IST080I A04S128 NEVAC      A04S136 NEVAC      A04PT88 ACTIV
IST080I A04C00  NEVAC      A04C02  NEVAC
IST314I END

```

Displaying the host physical unit:

```

d net,id=istpus,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = ISTOPUS      , TYPE = PU T4/5

```

```

IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST596I IRN TRACE = OFF
IST484I SUBAREA =          500
IST925I DYNAMIC PATH DEFINITION A50PATHC STATUS = ACTIV
IST654I I/O TRACE = ON , BUFFER TRACE = ON - AMOUNT = PARTIAL
IST170I LINES:
IST080I 0016-L  ACTIV----I 0015-L  ACTIV----I
IST314I END

```

Displaying a switched major node:

**d net,id=a04smnc,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A04SMNC, TYPE = SW SNA MAJ NODE
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST084I NETWORK NODES:
IST089I A04P882  TYPE = PHYSICAL UNIT      , ACTIV--L--
IST089I A04P883  TYPE = PHYSICAL UNIT      , ACTIV--L--
IST089I A04D8831 TYPE = LOGICAL UNIT       , ACTIV
IST089I A04D8832 TYPE = LOGICAL UNIT       , ACTIV
IST089I A04D8833 TYPE = LOGICAL UNIT       , ACT/S
IST089I A04D8834 TYPE = LOGICAL UNIT       , ACTIV
IST089I A04D8835 TYPE = LOGICAL UNIT       , ACTIV
IST089I A04D8836 TYPE = LOGICAL UNIT       , ACT/S
IST089I A04D8837 TYPE = LOGICAL UNIT       , ACT/S
IST089I A04P885  TYPE = PHYSICAL UNIT      , ACTIV--L--
IST089I A04P886  TYPE = PHYSICAL UNIT      , ACTIV--L--
IST089I A04D8861 TYPE = LOGICAL UNIT       , ACT/S
IST089I A04D8862 TYPE = LOGICAL UNIT       , ACT/S
IST089I A04D8863 TYPE = LOGICAL UNIT       , ACTIV
IST089I A04D8864 TYPE = LOGICAL UNIT       , ACTIV
IST314I END

```

Displaying a channel-attachment major node:

**d net,id=ctcbc0t3,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = CTCBC0T3      , TYPE = CA MAJOR NODE
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST170I LINES:
IST232I CTCLBC03, ACTIV---E, CUA = BC0
IST314I END

```

Displaying an adjacent CP (CDRSC minor node):

**d net,id=net.a.sscp2a,idtype=cp,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.SSCP2A, TYPE = ADJACENT CP
IST1046I SSCP NETA.SSCP2A ALSO EXISTS
IST486I STATUS= ACT/S---Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTDARDY
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST1044I ALSLIST = AHCPU1  ISTDAPNU
IST082I DEVTYPE = INDEPENDENT LU / CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST1081I ADJACENT LINK STATION = AHCPU1
IST634I NAME      STATUS      SID          SEND RECV VR TP NETID
IST635I SSCP1A    ACTIV/CP-S F6ABEEC34904F92C 0002 0001 0 0 NETA
IST635I SSCP1A    ACTIV/CP-P EAABEEC34604F7DF 0001 0002 0 0 NETA
IST314I END

```

Displaying an SSCP (CDRM minor node) with virtual-route-based transmission

group support:

**d net,id=neta.sscp2a,idtype=sscp,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.SSCP2A, TYPE = CDRM
IST1046I CP NETA.SSCP2A ALSO EXISTS
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = CDRM1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = EXTERNAL
IST637I SUBAREA= 2 ELEMENT= 1
IST675I VR = 0, TP = 0
IST389I PREDEFINITION OF CDRSC = OPT
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I SSCP2A AC/R 255 YES 982D0000000000000000000017100808080
IST636I CDRSCS OWNED BY SSCP2A -
IST080I L4A3278A ACTIV L4A3279A ACTIV L4A3767D ACTIV
IST080I L4A3278B ACTIV L4A3279B ACTIV L4A3287B ACTIV
IST080I L4A3767E ACTIV L4A4956D ACTIV L4A4956E ACTIV
IST080I L4A4956F ACTIV NETAPPL1 ACTIV NETAPPL2 ACTIV
IST080I NETAPPL3 ACTIV NETAPPL4 ACTIV APLMDSEC ACTIV
IST080I TSO2 ACTIV
IST314I END

```

Displaying an SSCP (CDRM) and adjacent CP (CDRSC) with the same name from a network node:

**d net,id=sscp2a,idtype=resource,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.SSCP2A, TYPE = CDRM
IST1046I CP NETA.SSCP2A ALSO EXISTS
IST486I STATUS= NEVAC, DESIRED STATE= INACT
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = CDRM1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = EXTERNAL
IST637I SUBAREA= 2 ELEMENT= 1
IST389I PREDEFINITION OF CDRSC = OPT
IST636I CDRSCS OWNED BY SSCP2A -
IST080I L4A3278A ACTIV L4A3279A ACTIV L4A3767D ACTIV
IST080I L4A3278B ACTIV L4A3279B ACTIV L4A3287B ACTIV
IST080I L4A3767E ACTIV L4A4956D ACTIV L4A4956E ACTIV
IST080I L4A4956F ACTIV NETAPPL1 ACTIV NETAPPL2 ACTIV
IST080I NETAPPL3 ACTIV NETAPPL4 ACTIV APLMDSEC ACTIV
IST080I TSO2 ACTIV
IST924I -----
IST075I NAME = NETA.SSCP2A, TYPE = ADJACENT CP
IST1046I SSCP NETA.SSCP2A ALSO EXISTS
IST486I STATUS= ACT/S---Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTCDRDY
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST1044I ALSLIST = AHCPU1 ISTAPNPU
IST082I DEVTYPE = INDEPENDENT LU / CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST1081I ADJACENT LINK STATION = AHCPU1
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I SSCP1A ACTIV/CP-S F6ABEEC34904F92C 0002 0001 0 0 NETA
IST635I SSCP1A ACTIV/CP-P EAABEEC34604F7DF 0001 0002 0 0 NETA
IST924I -----
IST075I NAME = NETA.SSCP2A, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC NN
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST314I END

```

Displaying an SSCP (CDRM) and a host CP (application) with the same name:

```

d net,id=neta.sscpla,idtype=resource,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.SSCPLA, TYPE = CDRM
IST1046I CP NETA.SSCPLA ALSO EXISTS
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = HOST, GATEWAY CAPABLE
IST637I SUBAREA= 1  ELEMENT= 1
IST388I DYNAMIC CDRSC DEFINITION SUPPORT = YES
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST924I -----
IST075I NAME = NETA.SSCPLA, TYPE = HOST CP
IST1046I SSCP NETA.SSCPLA ALSO EXISTS
IST486I STATUS= ACT/S      , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = VTAM      , STEPNAME = VTAM      , DSPNAME = 0AAABIST
IST228I ENCRYPTION = NONE
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST634I NAME      STATUS      SID      SEND RECV VR TP NETID
IST635I SSCP2A    ACTIV/CP-S EAABEEC3F11FF31F 0002 0001      NETA
IST635I SSCP2A    ACTIV/CP-P F6ABEEC3F4203D93 0001 0002      NETA
IST314I END

```

Displaying the host (this command works for any host). This display shows an interchange node:

```

d net,id=vtam
IST097I DISPLAY ACCEPTED
IST075I NAME = VTAM, TYPE = CDRM
IST1046I CP NETA.A500N ALSO EXISTS
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST599I REAL NAME = NETA.A500N
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = HOST, GATEWAY CAPABLE
IST637I SUBAREA= 500 ELEMENT= 1
IST388I DYNAMIC CDRSC DEFINITION SUPPORT = YES
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST924I -----
IST075I NAME = NETA.A500N, TYPE = HOST CP
IST1046I SSCP NETA.A500N ALSO EXISTS
IST486I STATUS= ACT/S      , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = NET41S    , STEPNAME = NET      , DSPNAME = 00000IST
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000004, SESSION REQUESTS = 0000000000
IST314I END

```

Displaying a CDRSC (no SSCP, adjacent CP, or host CP was found with this name) from a network node:

```

d net,id=neta.netappl1,idtype=resource,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.NETAPPL1, TYPE = CDRSC
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE

```



```

IST231I CDRSC MAJOR NODE = CDRSC1A
IST479I CDRM NAME = SSCP2A, VERIFY OWNER = NO
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST1044I ALSLIST = ISTAPNPU
IST082I DEVTYPE = INDEPENDENT LU / CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST924I -----
IST075I NAME = NETA.NETAPPL1, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC LU
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST314I END

```

Displaying directory information for a resource (no SSCP, adjacent CP, host CP, or other resource was found with this name) and the command was issued at a network node or interchange node:

```

d net,id=net.lu71,idtype=resource,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.LU71, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC LU
IST1184I CPNAME = NETA.NN3 - NETSRVR = ***NA***
IST314I END

```

Displaying only directory information for a resource:

```

d net,id=sscp2a,idtype=directry,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.SSCP2A, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC NN
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = ***NA***
IST314I END

```

Displaying an application program:

```

d net,id=appla01,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.APPLA01, TYPE = APPL
IST486I STATUS= CONCT , DESIRED STATE= CONCT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=AMODETAB USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = A01APPLS
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = ***NA***, STEPNAME = ***NA***, DSPNAME = ***NA***
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END

```

Displaying a dynamic same-network CDRSC:

```

d net,id=applaa3,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.APPLAA3, TYPE = CDRSC
IST486I STATUS= ACTIV----Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTCDRDY
IST479I CDRM NAME = ***NA***, VERIFY OWNER = NO
IST1184I CPNAME = NETA.SSCPAA - NETSRVR = ***NA***
IST082I DEVTYPE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST314I END

```

Displaying a dynamic cross-network CDRSC:

**d net,id=netb.applb11,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETB.APPLB11, TYPE = CDRSC
IST486I STATUS= ACT/S----Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTDORDY
IST479I CDRM NAME = SSCP7B, VERIFY OWNER = NO
IST1184I CPNAME = NETB.SSCP7B - NETSRVR = ***NA***
IST082I DEVTYPE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST634I NAME          STATUS          SID          SEND RCV VR TP NETID
IST635I APPL1        ACTIV-S          C2BB19BC74339803 0016 0016 0 0 NETA
IST635I APPL1        ACTIV-P          EAABEEC34604F7E2 0009 000A 0 0 NETA
IST314I END
IST097I DISPLAY ACCEPTED

```

Displaying a predefined CDRSC for a specific network:

**d net,id=applb11,netid=netb,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = APPLB11, TYPE = CDRSC
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = CDRSC1A
IST479I CDRM NAME = SSCP7B, VERIFY OWNER = NO
IST082I DEVTYPE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST314I END

```

Displaying a predefined CDRSC without network (no sessions):

**d net,id=applb11,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = APPLB11, TYPE = CDRSC
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST599I REAL NAME = ***NA***
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = CDRSC1A
IST479I CDRM NAME = SSCP7B, VERIFY OWNER = NO
IST082I DEVTYPE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST314I END

```

Displaying an independent logical unit:

**d net,id=l3270a,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = L3270A, TYPE = CDRSC
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV

```

```

IST599I REAL NAME = ***NA***
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST1333I ADJLIST = ***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTDILU
IST1044I ALSLIST = AHHCPU1
IST082I DEVTYPE = INDEPENDENT LU / CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST924I -----
IST075I NAME = NETA.L3270A, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = REGISTERED LU
IST1184I CPNAME = NETA.SSCP2A - NETSRVR = NETA.SSCP1A
IST314I END

```

Displaying the host CDRM:

```

d net,id=a01n,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.A01N, TYPE = CDRM
IST1046I CP NETA.A01N ALSO EXISTS
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = HOST, GATEWAY CAPABLE
IST637I SUBAREA= 1 ELEMENT= 1
IST388I DYNAMIC CDRSC DEFINITION SUPPORT = YES
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST924I -----
IST075I NAME = NETA.A01N, TYPE = HOST CP
IST1046I SSCP NETA.A01N ALSO EXISTS
IST486I STATUS= ACT/S , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = VTAMSEG
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = NET41B , STEPNAME = NET , DSPNAME = 00000IST
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000014, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I A04P882A ACTIV/CP-S E7F3895623BE5C86 000D 0001 0 0 NETY
IST635I A04P888A ACTIV/CP-S E7F3895623BE5C85 053E 0001 0 0 NETA
IST635I A04P886A ACTIV/CP-S E7F3895623BE5C84 0721 0001 0 0 NETA
IST635I A04P885A ACTIV/CP-S E7F3895623BE5C83 03AE 0001 0 0 NETA
IST635I A04P889A ACTIV/CP-S E7F3895623BE5C82 0727 0001 0 0 NETA
IST635I A04P883A ACTIV/CP-S E7F3895623BE5C81 01C5 0001 0 0 NETZ
IST635I A02N ACTIV/CP-S E7F3895623BE56A5 1055 0001 0 0 NETA
IST635I A02N ACTIV/CP-P E7E3F9563F1747D7 0001 1047 0 0 NETA
IST635I A04P882A ACTIV/CP-P F3342BAB9019C2B2 0001 000E 0 0 NETY
IST635I A04P883A ACTIV/CP-P E36D478882B602AB 0001 01C6 0 0 NETZ
IST635I A04P885A ACTIV/CP-P EF0E04F6C768DD2E 0001 03AF 0 0 NETA
IST635I A04P886A ACTIV/CP-P EF0E07F6C768E02F 0001 0722 0 0 NETA
IST635I A04P888A ACTIV/CP-P EF0E09F6C768E230 0001 053F 0 0 NETA
IST635I A04P889A ACTIV/CP-P EF0E08F6C768E131 0001 0728 0 0 NETA
IST314I END

```

Displaying a same-network external CDRM:

```

d net,id=A02n,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.A02N, TYPE = CDRM
IST1046I CP NETA.A02N ALSO EXISTS
IST486I STATUS= NEVAC , DESIRED STATE= INACT
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = A01CDRMC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = EXTERNAL
IST637I SUBAREA= 2 ELEMENT= 1

```

```

IST389I PREDEFINITION OF CDRSC = OPT
IST636I CDRSCS OWNED BY A02N      -
IST172I NO CDRSCS EXIST
IST924I -----
IST075I NAME = NETA.A02N, TYPE = ADJACENT CP
IST1046I SSCP NETA.A02N ALSO EXISTS
IST486I STATUS= ACT/S----Y, DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = ISTCDRDY
IST479I CDRM NAME = A01N      , VERIFY OWNER = NO
IST1044I ALSLIST = ISTAPNPU
IST082I DEVTYPE = INDEPENDENT LU / CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I ACTIVE SESSIONS = 0000000002, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST1081I ADJACENT LINK STATION = A02NETNA
IST634I NAME      STATUS      SID      SEND RECV VR TP NETID
IST635I A01N      ACTIV/CP-S E7E3F9563F1747D7 1055 0001 0 0 NETA
IST635I A01N      ACTIV/CP-P E7F3895623BE56A5 0001 105F 0 0 NETA
IST924I -----
IST075I NAME = NETA.A02N, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC NN
IST1184I CPNAME = NETA.A02N      - NETSRVR = ***NA***
IST314I END

```

Displaying a cross-network external CDRM:

**d net,id=c01n,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETC.C01N, TYPE = CDRM
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST231I CDRM MAJOR NODE = A50CDRMC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST476I CDRM TYPE = EXTERNAL
IST637I SUBAREA= 3      ELEMENT= 1
IST675I VR = 0, TP = 2
IST638I ADJNETSA = 1, ADJNETEL = 1
IST675I VR = 0, TP = 2
IST639I GWN = A0362ZC , ADJNET = NETC
IST640I A500N      ADDR IN ADJNET - SA =          31, EL =      11
IST641I GATEWAY PATH SELECTION LIST -
IST642I  ADJNET      GWN      SUBAREA      ELEM      ADJNETSA      ADJNETEL
IST643I  NETC      A0362ZC      3          1          1          1
IST643I  NETC          255          3          1          1
IST898I GWSELECT = YES
IST389I PREDEFINITION OF CDRSC = OPT
IST636I CDRSCS OWNED BY C01N      -
IST080I C01NVLUC ACT/S----Y
IST924I -----
IST075I NAME = NETC.C01N, TYPE = DIRECTORY ENTRY
IST1186I DIRECTORY ENTRY = DYNAMIC EN
IST1184I CPNAME = NETC.C01N      - NETSRVR = NETA.A01N
IST314I END

```

Displaying a peripheral BSC line group:

**d net,id=a031bnnb,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A03LBNNB      , TYPE = LINE GROUP
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST354I PU T4/5 MAJOR NODE = A0362ZC
IST084I NETWORK NODES:
IST089I A03B00      TYPE = LINE      , NEVAC
IST089I A03C001      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03C002      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03B01      TYPE = LINE      , NEVAC
IST089I A03C011      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03C012      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03B32      TYPE = LINE      , NEVAC
IST089I A03C321      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03C322      TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03B33      TYPE = LINE      , NEVAC

```

```

IST089I A03C331 TYPE = PHYSICAL UNIT , NEVAC
IST089I A03C332 TYPE = PHYSICAL UNIT , NEVAC
IST314I END

```

Displaying a peripheral SDLC line group:

```

d net,id=a03lbns,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A03LBNS , TYPE = LINE GROUP
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST354I PU T4/5 MAJOR NODE = A0362ZC
IST084I NETWORK NODES:
IST089I A03S16 TYPE = LINE , ACTIV
IST089I A03P161 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P162 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P163 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P164 TYPE = PHYSICAL UNIT , PREQC
IST089I A03S20 TYPE = LINE , ACTIV
IST075I NAME = A03LBNS , TYPE = LINE GROUP
IST089I A03P201 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P202 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P203 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P204 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P205 TYPE = PHYSICAL UNIT , PREQC
IST089I A03P206 TYPE = PHYSICAL UNIT , PREQC
IST314I END

```

Displaying a peripheral SDLC switched line group:

```

d net,id=grp3a9,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = GRP3A9 , TYPE = LINE GROUP
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST354I PU T4/5 MAJOR NODE = NCP3AB5
IST084I NETWORK NODES:
IST089I LN3A9 TYPE = LINE , ACTIV
IST089I P3A4956K TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I L3A4956A TYPE = LOGICAL UNIT , ACT/S
IST089I LN3A10 TYPE = LINE , ACTIV
IST089I P3A4956L TYPE = PHYSICAL UNIT , ACTIV--L--
IST089I L3A4956A TYPE = LOGICAL UNIT , ACT/S
IST089I LN3A11 TYPE = LINE , ACTIV
IST089I P3A4956M TYPE = PHYSICAL UNIT , NEVAC
IST314I END

```

**Note:** Independent LU L3A4956A is shown under two PUs because it has active sessions through these PUs.

Displaying a peripheral BSC link:

```

d net,id=a03b00,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A03B00 , TYPE = LINE
IST486I STATUS= NEVAC , DESIRED STATE= INACT
IST087I TYPE = LEASED , CONTROL = BSC
IST134I GROUP = A03LBNSB, MAJOR NODE = A0362ZC
IST650I POLL = 000, NEGPOLL = 010, SESSION(S) = 032
IST084I NETWORK NODES:
IST089I A03C001 TYPE = PHYSICAL UNIT , NEVAC
IST089I A03T0011 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0012 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0013 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0014 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0015 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0016 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0017 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0018 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T0019 TYPE = LOGICAL UNIT , NEVAC
IST089I A03T001A TYPE = LOGICAL UNIT , NEVAC
IST089I A03T001B TYPE = LOGICAL UNIT , NEVAC
IST089I A03T001C TYPE = LOGICAL UNIT , NEVAC
IST089I A03T001D TYPE = LOGICAL UNIT , NEVAC
IST089I A03T001E TYPE = LOGICAL UNIT , NEVAC

```

```

IST089I A03T001F TYPE = LOGICAL UNIT      , NEVAC
IST089I A03C002 TYPE = PHYSICAL UNIT      , NEVAC
IST089I A03T0021 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0022 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0023 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0024 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0025 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0026 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0027 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0028 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T0029 TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002A TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002B TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002C TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002D TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002E TYPE = LOGICAL UNIT      , NEVAC
IST089I A03T002F TYPE = LOGICAL UNIT      , NEVAC
IST314I END

```

Displaying an SDLC link (multidrop INN):

**d net,id=a04in01,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A04IN01, TYPE = LINE
IST486I STATUS= ACTIV---E , DESIRED STATE = ACTIV
IST087I TYPE = LEASED      , CONTROL = SDLC
IST134I GROUP = A04MPRI, MAJOR NODE = A04N43A
IST084I NETWORK NODES:
IST089I A04P013 TYPE = PHYSICAL UNIT      , NEVAC
IST089I A04L013A TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013B TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013C TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013D TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013E TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013F TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013G TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013H TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013I TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013J TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013K TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013L TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013M TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013N TYPE = LOGICAL UNIT      , NEVAC
IST089I A04L013O TYPE = LOGICAL UNIT      , NEVAC
IST089I A04I013A TYPE = LOGICAL UNIT      , NEVAC
IST089I A04I013B TYPE = LOGICAL UNIT      , NEVAC
IST089I A04I013C TYPE = LOGICAL UNIT      , NEVAC
IST089I A04I013D TYPE = LOGICAL UNIT      , NEVAC
IST089I A04I013E TYPE = LOGICAL UNIT      , NEVAC
IST396I LNKSTA  STATUS      CTG  GTG      ADJNODE      ADJSA      NETID
IST397I A04P014  NEVAC        2   2              0
IST397I A04P015  NEVAC        2   2              0
IST397I A04P016  NEVAC        2   2              0
IST397I A04P017  ACTIV----E   2   2      A31N52B     31
IST397I A04P018  ACTIV----E   2   2      A71N43A     71
IST397I A04P019  NEVAC        2   2              0
IST397I A04P01A  NEVAC        2   2              0
IST397I A04P01B  NEVAC        2   2              0
IST397I A04P01C  NEVAC        2   2              0
IST314I END

```

Displaying a peripheral SDLC link:

**d net,id=ln3atr10,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = LN3ATR10, TYPE = LINE
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST087I TYPE = LEASED      , CONTROL = SDLC
IST134I GROUP = GP3ATRP1, MAJOR NODE = NCP3AB7
IST1324I VNNAME = NETA.VN1      VNGROUP = GP3ATR10
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I LN3ATR10 AC/R      21 NO      9075000000000000000017100808080
IST084I NETWORK NODES:
IST089I P3ATR10 TYPE = PHYSICAL UNIT      , ACTIV
IST314I END

```

Displaying a cross-subarea SDLC switched link:

```
d net,id=a04hdx00,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A04HDX00, TYPE = LINE
IST486I STATUS= ACTIV          , DESIRED STATE = ACTIV
IST087I TYPE = SWITCHED DIAL-INOUT, CONTROL = SDLC
IST936I ANSWER MODE = ENABLED
IST134I GROUP = A04SADG1, MAJOR NODE = A04S43A
IST084I NETWORK NODES:
IST089I A31A      TYPE = LINK STATION      , ACTIV
IST314I END
```

Displaying a peripheral SDLC switched link:

```
d net,id=j0004001,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME =J00004001, TYPE = LINE
IST486I STATUS= ACTIV          , DESIRED STATE = ACTIV
IST087I TYPE = SWITCHED DIAL-INOUT, CONTROL = SDLC
IST936I ANSWER MODE = ENABLED
IST134I GROUP = A04TRLG1, MAJOR NODE = A04S43A
IST172I NO NETWORK NODES EXIST
IST314I END
```

Displaying a cross-subarea SDLC link:

```
d net,id=a04c08,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A04C08, TYPE = LINE
IST486I STATUS= NEVAC          , DESIRED STATE= INACT
IST087I TYPE = LEASED          , CONTROL = SDLC
IST134I GROUP = A04XCA0, MAJOR NODE = A0462ZC
IST396I LNKSTA  STATUS      CTG GTG  ADJNODE  ADJSA  NETID
IST397I A04P08A  NEVAC          1    1    A03N43A    0
IST314I END
```

Displaying a cross-subarea channel link:

```
d net,id=012-1,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = 012-L, TYPE = LINE
IST486I STATUS= ACTIV----I    , DESIRED STATE = ACTIV
IST087I TYPE = LEASED          , CONTROL = NCP
IST134I GROUP = ISTGROUP, MAJOR NODE = A99MPU
IST396I LNKSTA  STATUS      CTG GTG  ADJNODE  ADJSA  NETID
IST397I 012-S    ACTIV----I    1    1    A03N43A    3
IST314I END
```

Displaying a cross-subarea channel link station:

```
d net,id=012-s,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = 012-S, TYPE = LINK STATION
IST486I STATUS= ACTIV----I    , DESIRED STATE = ACTIV
IST081I LINE NAME = 012-L, LINE GROUP = ISTGROUP, MAJNOD = A99MPU
IST396I LNKSTA  STATUS      CTG GTG  ADJNODE  ADJSA  NETID
IST397I 012-S    ACTIV----I    1    1    A03N43A    3
IST610I                                LINE 012-L    - STATUS ACTIV----I
IST314I END
```

Displaying a cross-subarea SDLC link station:

```
d net,id=a03p644,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A03P644, TYPE = LINK STATION
IST486I STATUS= NEVAC          , DESIRED STATE = INACT
IST081I LINE NAME = A03IN64, LINE GROUP = A03MPRI, MAJNOD = A03N43A
```

```

IST396I LNKSTA      STATUS      CTG GTG   ADJNODE      ADJSA      NETID
IST397I A03P644    NEVAC          2   2           0
IST610I                                     LINE A03IN64 - STATUS NEVAC
IST314I END

```

Displaying a physical unit:

**d net,id=a03p011,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A03P011, TYPE = PU_T2.1
IST486I STATUS= ACTIV      , DESIRED STATE = ACTIV
IST081I LINE NAME = A03IN01, LINE GROUP = A03MPRI, MAJNOD = A03N43A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I LOGICAL UNITS:
IST080I A03L011A NEVAC          A03L011B NEVAC          A03L011C NEVAC
IST080I A03L011D NEVAC          A03L011E NEVAC          A03L011F NEVAC
IST080I A03L011G NEVAC          A03L011H NEVAC          A03L011I NEVAC
IST080I A03L011J NEVAC          A03L011K NEVAC          A03L011L NEVAC
IST080I A03L011M NEVAC          A03L011N NEVAC          A03L011O NEVAC
IST314I END

```

Displaying a physical unit with APPN host-to-host connectivity:

**d net,id=ahhcpu1**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = AHHCPU1, TYPE = PU_T2.1
IST486I STATUS= ACTIV--L-- , DESIRED STATE= ACTIV
IST1043I CP NAME = SSCP2A , CP NETID = NETA, DYNAMIC LU = YES
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I AHHCPU1 AC/R      21 YES 802D000000000000000017100808
IST136I LOCAL SNA MAJOR NODE = LSNA1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1314I TRLE = ML1A2A2 STATUS = ACTIV CONTROL = MPC
IST314I END

```

Displaying a physical unit with DLUR support:

**d net,id=aalpua,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = AALPUA, TYPE = PU_T2
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST1043I CP NAME = ***NA***, CP NETID = NETA, DYNAMIC LU = YES
IST1354I DLUR NAME = NNCPA1 MAJNODE = SWDLR1A
IST136I SWITCHED SNA MAJOR NODE = SWDLR1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I LOGICAL UNITS:
IST080I AA1LUA1 ACT/S          AA1LUA2 ACTIV          AA1LUA3 ACTIV
IST080I AA1LUA4 ACTIV
IST314I END

```

Displaying a switched link station:

**d net,id=a31a,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A31A, TYPE = LINK STATION
IST486I STATUS= ACTIV      , DESIRED STATE = ACTIV
IST136I SWITCHED SNA MAJOR NODE = A02SAD
IST081I LINE NAME = A04HDX00, LINE GROUP = A04SADG1, MAJNOD = A04S43A
IST396I LNKSTA      STATUS      CTG GTG   ADJNODE      ADJSA      NETID
IST397I A31A        ACTIV          2   2           A31S43A      31
IST610I                                     LINE A04HDX00 - STATUS ACTIV
IST314I END

```

Displaying a switched PU type 2:

**d net,id=a04p501,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = A04P501, TYPE = PU_T2
IST486I STATUS= CONCT      , DESIRED STATE = CONCT

```



```
IST136I SWITCHED SNA MAJOR NODE = A04SG1
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I LOGICAL UNITS:
IST080I A04L501A CONCT          A04L501B CONCT          A04L501C CONCT
IST080I A04L501D CONCT          A04L501E CONCT          A04L501F CONCT
IST080I A04L501G CONCT          A04L501H CONCT          A04L501I CONCT
IST080I A04L501J CONCT          A04L501K CONCT          A04L501L CONCT
IST080I A04L501M CONCT          A04L501N CONCT          A04L501O CONCT
IST314I END
```

Displaying a switched PU type 2.1 (AS/400):

```
d net,id=a04p882,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A04P882, TYPE = PU_T2.1
IST486I STATUS= ACTIV--L-- , DESIRED STATE= ACTIV
IST1043I CP NAME = A04P882A, CP NETID = NETY, DYNAMIC LU = YES
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I A04P882 AC/R        21 YES  802D0000000000000000017100000000
IST136I SWITCHED SNA MAJOR NODE = A04SMNC
IST081I LINE NAME = J000401B, LINE GROUP = A04BLG1, MAJNOD = A0462ZC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I LOGICAL UNITS:
IST080I A04I8823 ACT/S          A04I8822 ACT/S          A04P882A ACT/S----Y
IST080I A04I8821 ACT/S
IST314I END
```

Displaying a local SNA physical unit:

```
d net,id=pua,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = PUA, TYPE = PU_T2
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST136I LOCAL SNA MAJOR NODE = A50LSNA
IST077I SIO = *NA* CUA = 0770
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST355I LOGICAL UNITS:
IST080I LSNALU1 ACTIV          LSNALU2  ACTIV          LSNALU3  ACTIV
IST080I LSNALU4  ACTIV
IST314I END
```

Displaying a logical unit under an NCP:

```
d net,id=a04dxxx1,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.A04DXXX1, TYPE = LOGICAL UNIT
IST486I STATUS= NEVAC----T , DESIRED STATE= INACT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT 00000001
IST081I LINE NAME = A04VXX, LINE GROUP = A04XNPAX, MAJNOD = A0462ZC
IST135I PHYSICAL UNIT = A04NXXX
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END
```

Displaying a switched logical unit:

```
d net,id=a31d0711,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = A31D0711, TYPE = LOGICAL UNIT
IST486I STATUS= NEVAC , DESIRED STATE= INACT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=CRYPTLOG USSTAB=AUSSTAB LOGTAB=INTERP
IST934I DLOGMOD=REQENCRP USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT 00000001
```

```

IST136I SWITCHED SNA MAJOR NODE = SMNDDNN
IST135I PHYSICAL UNIT = A31P021
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END

```

Displaying a local SNA logical unit:

**d net,id=lsnalul,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.LSNALU1, TYPE = LOGICAL UNIT
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=AMODETAB USSTAB=AUSSTAB LOGTAB=***NA***
IST934I DLOGMOD=D4A32782 USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT 00000001
IST136I LOCAL SNA MAJOR NODE = A50LSNA
IST135I PHYSICAL UNIT = PUA , CUA = 0770
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST172I NO SESSIONS EXIST
IST314I END

```

Displaying a local non-SNA logical unit:

**d net,id=a50a721,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.A50A721, TYPE = LOGICAL UNIT
IST486I STATUS= ACT/S , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=AMODETAB USSTAB=AUSSTAB LOGTAB=INTERP
IST934I DLOGMOD=M23270I USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU ENABLED ,SESSION LIMIT 00000001
IST351I LOCAL 3270 MAJOR NODE = A50LOCAL
IST077I SIO = 00010 CUA = 0721
IST1131I DEVICE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST171I ACTIVE SESSIONS = 0000000001, SESSION REQUESTS = 0000000001
IST206I SESSIONS:
IST634I NAME STATUS SID SEND RCV VR TP NETID
IST635I ECHOC1C ACTIV-P D73BC0750F6AE8F3 0000 0001 0 0 NETC
IST635I ECHO50B PREALC-P ECC39EEE2AA3BC6E NETA
IST314I END

```

Displaying an XCA major node with its subordinate resources:

**d net,id=xcala,scope=all**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = XCALA, TYPE = XCA MAJOR NODE
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST1021I MEDIUM=RING,ADAPNO= 1,CUA=0500,SNA SAP= 8
IST1324I VNNAME = NETA.CN1 VNGROUP = GP1A2A
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I XCALA AC/R 21 NO 902D0000000000000000000017100808080
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST170I LINES:
IST232I LN1A2A , ACTIV
IST232I LN1A7B , NEVAC
IST232I LN1A9C , NEVAC
IST232I LN1AAA , NEVAC
IST232I LN1ABA , NEVAC
IST232I LN1ACA , NEVAC
IST232I LN1ADA , NEVAC
IST232I LN1AEA , NEVAC
IST314I END

```

Displaying an XCA major node without its subordinate resources:

**d net,id=x50rbf4a**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = X50RBF4A, TYPE = XCA MAJOR NODE
IST486I STATUS= ACTIV          , DESIRED STATE= ACTIV
IST1021I MEDIUM=RING,ADAPNO= 0,CUA=0BF4,SNA SAP= 4
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST314I END

```

Displaying a resource name that is known in several networks:

**d net,id=\*.applb12,max=3**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.APPLB12, TYPE = APPL
IST486I STATUS= CONCT          , DESIRED STATE= CONCT
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU INHIBITED,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = APPL1A
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST271I JOBNAME = ***NA***, STEPNAME = ***NA***, DSPNAME = ***NA***
IST228I ENCRYPTION = OPTIONAL
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0, OUTPUT = 0
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST924I -----
IST075I NAME = NETB.APPLB12, TYPE = CDRSC
IST486I STATUS= ACTIV          , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = CDRSC1A
IST479I CDRM NAME = SSCP7B , VERIFY OWNER = NO
IST1131I DEVICE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST924I -----
IST075I NAME = NETC.APPLB12, TYPE = CDRSC
IST486I STATUS= ACTIV          , DESIRED STATE= ACTIV
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I CDRSC MAJOR NODE = CDRSC1A
IST479I CDRM NAME = SSCP9C , VERIFY OWNER = NO
IST1131I DEVICE = CDRSC
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST228I ENCRYPTION = NONE
IST171I ACTIVE SESSIONS = 0000000000, SESSION REQUESTS = 0000000000
IST314I END

```

**MVS** Displaying a generic resource name:

**d net,id=A0418863,idtype=generic**

```

IST097I DISPLAY ACCEPTED
IST075I NAME = GRAPPL, TYPE = GENERIC RESOURCE
IST1359I MEMBER NAME          OWNING CP      SELECTABLE  APPC
IST1360I NETA.NETAPPL1        SSCP2A          YES          NO
IST1360I NETA.APPL1           SSCP1A          NO           NO
IST1360I NETA.APPLAA1         SSCPAA          YES          NO
IST1393I GENERIC RESOURCE NAME RESOLUTION EXIT IS ISTEXCGR
IST314I END

```



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## 2.1.21 DISPLAY LINES Command

```
>> vm_prefix DISPLAY NET,LINES _____>
      |_, ID=  name _____|
      |<_, _____|
      |_( name |_)_|
```

```
> _____>
      |_, OWNER= host_name _____|
      |*_NONE _____|
      |_, SCOPE= ALL _____|
      |ACT _____|
      |ACTONLY _____|
      |ALL _____|
      |CONCT _____|
      |INACT _____|
      |INACTONLY _____|
      |PENDING _____|
      |RESET _____|
```

```
> _____><
      |_, USE= DEFINED _____|
      |SPARE _____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
USE=DEFINED	DEFINED
USE=SPARE	SPARE
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

**Purpose**

The DISPLAY LINES command displays the status of lines and channel links in the domain.

**Note:** To display lines and channel links independently of the major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=LINES.

**Operands**

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=name

specifies the name of one or more active NCP, channel-attachment, or XCA major nodes whose subordinate lines and channel links are to be displayed.

If OWNER is also specified on this command, the value of ID must match the name of an NCP major node.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every NCP, channel-attachment, and XCA major node in the network.*

OWNER

specifies whether lines and channel links defined with the OWNER operand are to be displayed. This operand is only valid when the name or the wildcard value specified on the ID operand matches the name of an NCP major node.

OWNER=host\_name

specifies that only lines and channel links whose owning SSCP (as determined by the OWNER operand on the GROUP or LINE definition statements) matches the host\_name specified are to be displayed.

OWNER=\*NONE

specifies that only lines and channel links **without** an OWNER operand on the GROUP or LINE definition statements are to be displayed.

SCOPE

specifies the desired scope of the display.

SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable lines and channel links within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

SCOPE=ACTONLY

specifies that information is to be displayed about all lines and channel links in an active state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). The display does **not** include lines and channel links in pending or connectable states. If no lines or channel links are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

SCOPE=ALL

specifies that information is to be displayed about all lines and channel links (regardless of their status) within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted).

SCOPE=CONCT

specifies that information is to be displayed about all lines and channel links in a CONCT (connectable) state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If no lines or channel links are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include those in active, connectable, and pending states.

SCOPE=INACT

specifies that information is to be displayed about all inactive lines and channel links within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

SCOPE=INACTONLY

specifies that information is to be displayed about all inactive lines and channel links within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

SCOPE=PENDING

specifies that information is to be displayed about all pending lines and channel links within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

SCOPE=RESET

specifies that information is to be displayed about all lines and channel links in a RESET state within the specified major nodes (or within all NCP, channel-attachment, and XCA major nodes if the ID operand is omitted).

USE

specifies whether information is to be displayed about lines that are currently designated as DEFINED or SPARE. If you do not specify USE, information about both spare and defined lines is displayed.

USE=DEFINED  
specifies that information is to be displayed only about lines that are currently usable.

USE=SPARE  
specifies that information is to be displayed only about spare lines.

## Resulting Display

VTAM displays the name and status of each line within the specified major node (or within all major nodes containing lines if ID is omitted). The display is limited to active, inactive, or pending minor nodes if specified on the SCOPE operand.

## Examples

Displaying all lines:

```
d net,lines
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LINES
IST354I PU T4/5 MAJOR NODE = ISTOPUS
IST170I LINES:
IST080I 0016-L    ACTIV----I 0017-L    ACTIV----I
IST354I PU T4/5 MAJOR NODE = A0462ZC
IST170I LINES:
IST080I A04B00    NEVAC          A04B01    NEVAC          A04B03    NEVAC
IST080I A04B32    NEVAC          A04B33    NEVAC          A04B35    NEVAC
IST080I A04VXX    NEVAC----T    A04S02    NEVAC          A04S34    NEVAC
IST080I A04S04    NEVAC          A04S16    NEVAC          A04S20    NEVAC
IST080I A04S36    NEVAC          A04S48    NEVAC          A04S52    NEVAC
IST080I A04S128  NEVAC          A04S136  NEVAC          A04PT88   ACTIV
IST080I A04PT89  NEVAC          A04PT92  NEVAC          J0004001  ACTIV
IST080I J0004003  ACTIV          J0004005  ACTIV          J0004007  ACTIV
IST080I J0004009  ACTIV          J000400B  ACTIV          J000400D  ACTIV
IST080I J000400F  ACTIV          J0004011  ACTIV          J0004013  ACTIV
IST080I A04C00    NEVAC          A04C02    NEVAC
IST354I PU T4/5 MAJOR NODE = C2362ZC
IST172I NO LINES EXIST
IST314I END
```

Displaying all lines within a specific major node:

```
d net,lines,id=a0362zc
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LINES
IST354I PU T4/5 MAJOR NODE = A0362ZC
IST170I LINES:
IST080I A03B00    NEVAC          A03B01    NEVAC          A03B32    NEVAC
IST080I A03B33    NEVAC          A03VXX    NEVAC----T    A03S02    NEVAC
IST080I A03S16    ACTIV          A03S20    ACTIV          A03S128  NEVAC
IST080I A03PT88   ACTIV          A03PT89   ACTIV          J0003001  ACTIV
IST080I J0003003  ACTIV          J0003005  ACTIV          J0003007  ACTIV
IST080I J0003009  ACTIV          J000300B  ACTIV          J000300D  ACTIV
IST080I J000300F  ACTIV          J0003011  ACTIV          J0003013  ACTIV
IST080I J0003015  ACTIV          J0003017  ACTIV          J0003019  ACTIV
IST080I J000301B  ACTIV          J000301D  ACTIV          J000301F  NEVAC
IST080I J0003021  NEVAC          J0003023  NEVAC          J0003025  NEVAC
IST080I J0003027  NEVAC          J0003029  NEVAC          J000302B  NEVAC
IST080I J000302D  NEVAC          J000302F  NEVAC          J0003031  ACTIV
IST080I J0003033  ACTIV          J0003035  ACTIV          J0003037  ACTIV
IST080I J0003039  ACTIV          J000303B  ACTIV          J000303D  ACTIV
```

```
IST080I J000303F ACTIV      J0003041 ACTIV      J0003043 ACTIV
IST080I J0003045 ACTIV      J0003047 ACTIV      J0003049 ACTIV
IST080I J000304B ACTIV      J000304D ACTIV      J000304F NEVAC
IST080I A03C08  NEVAC      A03C10  NEVAC      A03C00  NEVAC
IST080I A03C02  NEVAC
IST314I  END
```

Displaying all lines owned by a specific SSCP:

**d net,lines,owner=sscp1a**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LINES
IST354I PU T4/5 MAJOR NODE = ISTEPUS
IST172I NO LINES EXIST
IST231I CA MAJOR NODE = CTCA590
IST172I NO LINES EXIST
IST354I PU T4/5 MAJOR NODE = NCP3AA1
IST170I LINES:
IST080I LN3A1      NEVAC      LN3A7      NEVAC      LN3A4      NEVAC
IST080I LN3A4A1   NEVAC      LN3A4A2   NEVAC      LN3A4A3   NEVAC
IST080I LN3A4A4   NEVAC      LN3A4AM   NEVAC      LN3A5A1   NEVAC
IST080I LN3A5A2   NEVAC      LN3A8A1   NEVAC
IST314I  END
```



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## 2.1.22 DISPLAY LMTBL Command

Display partner LUs in LU-mode table:

```
>> vm_prefix DISPLAY NET,LMTBL___,ID=appl_name___,TYPE=LUNAME_____><
```

Display logon mode names in LU-mode table:

```
>> vm_prefix DISPLAY NET,LMTBL___,ID=appl_name___,LUNAME=lu_name_____>
```

```
>___,TYPE=LOGMODE_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
LUNAME	LU

### Purpose

The DISPLAY LMTBL (LU-mode table) command displays information contained in the LU-mode table. It shows either all logon mode names defined for an application program and its partner LU or the names of all partner LUs for the specified application program.

### Operands

*vm\_prefix* **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=*appl\_name*  
specifies the name of the LU 6.2 application program to which the requested information applies. *appl\_name* cannot be a network-qualified name.

LUNAME=*lu\_name*  
specifies the name of the partner LU to which the requested logon mode information applies. LUNAME is required for TYPE=LOGMODE. The name

can be a network-qualified name in the form of *netid.luname*.

If `PARMS=(NQNames=NO)` is coded on the ACB macroinstruction of the resource named on the ID operand, and a network-qualified name is specified, the network identifier is ignored.

If `PARMS=(NQNames=YES)` is coded on the ACB macroinstruction, *luname* can be either a non-network-qualified name or a network-qualified name. If *luname* is a non-network-qualified name, the command is processed against all LUs with that non-network-qualified name across all networks. If *luname* is a network-qualified name, the command is processed against the LU in the specified network.

**TYPE**  
specifies the type of information you want to display.

**TYPE=LUNAME**  
displays the names of all partner LUs that are defined in the LU-mode table for the LU 6.2 application program specified.

**TYPE=LOGMODE**  
displays the logon mode names defined in the LU-mode table for the application program and partner LU specified.

### Resulting Display

The resulting VTAM display shows:

- For `TYPE=LUNAME`:
  - The name of the specified application program
  - The name of each partner LU associated with the specified application program
- For `TYPE=LOGMODE`:
  - The name of the specified application program and partner LU
  - The name of logon modes associated with the partner LUs of the specified application program.

### Examples

Displaying logon mode names in LU-mode table:

```
d net,lmtbl,type=logmode,id=echo50b,luname=netc.echoc1a
IST097I DISPLAY ACCEPTED
IST1006I LOGMODE NAMES DEFINED IN LU NETC.ECHOC1A FOR ECHO50B
IST988I SNASVCMG BATCH
IST314I END
```

Displaying partner LUs in LU-mode table:

```
d net,lmtbl,type=luname,id=echo50b
IST097I DISPLAY ACCEPTED
IST1006I LU NAMES DEFINED FOR ECHO50B
IST1154I NETC.ECHOC1A
IST314I END
```

---



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## 2.1.23 DISPLAY LUGROUPS Command

Display all LUGROUP major nodes:

```
>> vm_prefix DISPLAY NET,LUGROUPS SCOPE=ONLY ><
      |_____|
      |_____| SCOPE=ONLY
      |_____| ALL |_____|
```

Display a specific LUGROUP major node:

```
>> vm_prefix DISPLAY NET,LUGROUPS ID=lugroup_major_node_name >
> SCOPE=ONLY ><
  |_____|
  |_____| SCOPE=ONLY
  |_____| ALL |_____|
```

Display a model LU group:

```
>> vm_prefix DISPLAY NET,LUGROUPS ID=model_lu_group >
> SCOPE=ONLY ><
  |_____|
  |_____| SCOPE=ONLY
  |_____| ALL |_____|
```

Display a model LU:

```
>> vm_prefix DISPLAY NET,LUGROUPS ID=model_lu_name >
> GROUP=model_lu_group SCOPE=ONLY ><
  |_____|
  |_____| SCOPE=ONLY
  |_____| ALL |_____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

**Purpose**

The DISPLAY LUGROUPS (logical unit groups) command provides information about LUGROUP major nodes, model LU groups, and specific model LUs within an LU group.

**Operands****vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**GROUP=model\_lu\_group**

specifies the name of a model LU group. This operand is valid only if the ID operand specifies a model LU. It is required if the ID operand specifies a model LU to indicate which model LU group to search. Because two different model LU groups can contain model LUs with the same name, this specification of which model LU group to search is necessary.

**ID=name**

specifies the name of one the following:

- LUGROUP major node
- Model LU group
- Model LU.

**SCOPE**

specifies what LUGROUP resources are displayed. The results depend on whether an ID is specified and whether SCOPE is specified as ONLY or ALL.

**SCOPE=ALL**

specifies that the requested node and all its subordinate nodes be displayed.

**SCOPE=ONLY**

specifies that only the requested nodes be displayed.

**Resulting Display**

The resulting VTAM display shows:

- If ID is not specified:
  - For SCOPE=ONLY, all LUGROUP major nodes

- For SCOPE=ALL, all LUGROUP major nodes, their model LU groups, and their model LUs
- If ID specifies an LUGROUP major node:
    - For SCOPE=ONLY, each of the LU groups within the specified LUGROUP major node
    - For SCOPE=ALL, the specified LUGROUP major node, its model LU groups, and their model LUs
- If ID specifies a model LU group:
    - For SCOPE=ONLY, the specified model LU group, verifying that it is active
    - For SCOPE=ALL, the specified model LU group and its model LUs
- If ID specifies a model LU and GROUP specifies a model LU group:
    - For SCOPE=ONLY, the specified model LU, verifying that it exists within the specified model LU group
    - For SCOPE=ALL, the characteristics of the specified model LU.

## Examples

Displaying all LU groups:

```
d net,lugroups,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LUGROUP MAJOR NODES
IST1060I LUGROUP MAJOR NODE = LUGRP50
IST075I NAME = LARRY, TYPE = MODEL LU GROUP
IST355I LOGICAL UNITS:
IST080I 3194@00          3194000          @@90001
IST080I 329000@         327@@01          9373@
IST080I 9375@           3270@           @
IST075I NAME = CURLY, TYPE = MODEL LU GROUP
IST355I LOGICAL UNITS:
IST080I 3194@           3290@           3270001
IST080I 3270@           @
IST075I NAME = MOE, TYPE = MODEL LU GROUP
IST355I LOGICAL UNITS:
IST080I 3194@           3290@           3270001
IST080I 3270@           @
IST314I END
```

Displaying a specific LUGROUP major node:

```
d net,lugroups,id=lugrp50
IST097I DISPLAY ACCEPTED
IST1060I LUGROUP MAJOR NODE = LUGRP50
IST075I NAME = LARRY, TYPE = MODEL LU GROUP
IST075I NAME = CURLY, TYPE = MODEL LU GROUP
IST075I NAME = MOE, TYPE = MODEL LU GROUP
IST314I END
```

Displaying a model LU group:

```
d net,lugroups,id=larry,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = LARRY, TYPE = MODEL LU GROUP
IST355I LOGICAL UNITS:
IST080I 3194@00          3194000          @@90001
IST080I 329000@         327@@01          9373@
IST080I 9375@           3270@           @
IST314I END
```

Displaying a model LU:

```
d net,lugroups,id=3194@00,group=larry,scope=all
IST097I DISPLAY ACCEPTED
IST075I NAME = NETA.3194@00, TYPE = MODEL LU
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST314I END
```



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## 2.1.24 DISPLAY MAJNODES Command

```
>> vm_prefix DISPLAY NET,MAJNODES_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY MAJNODES (major nodes) command displays the status of all active major nodes in the domain.

This command displays the status of all **active** major nodes, which include the following major node types:

- Adjacent CP
- Application program
- Cross-domain resource manager (CDRM); in a multiple-domain network
- Channel-attachment
- Cross-domain resource (CDRSC); in a multiple-domain network (including independent logical units)
- External communication adapter (XCA)
- **VM,VSE** Local area network (LAN)
- Local SNA
- Local non-SNA
- LUGROUP
- Model



- NCP
- **VM,VSE** Packet
- Switched.

**Note:** NCP major nodes, which are type 4 physical units, are listed in the display as PU\_T4/5 major nodes. The VTAM host physical unit, which is a type 5 physical unit, is listed in the display as a PU\_T4/5 major node. Channel-attachment major nodes are listed in the display as CA major nodes.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

## Resulting Display

The resulting display gives the name, type, and status of each known major node.

## Examples

Displaying major nodes:

```
d net,majnodes
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MAJOR NODES
IST089I VTAMSEG TYPE = APPL SEGMENT , ACTIV
IST089I ISTOPUS TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I ISTOPDILU TYPE = CDRSC SEGMENT , ACTIV
IST089I ISTOPDJCP TYPE = ADJCP MAJOR NODE , ACTIV
IST089I ISTOPCDRDY TYPE = CDRSC SEGMENT , ACTIV
IST089I ISTOPDSWMN TYPE = SW SNA MAJ NODE , ACTIV
IST089I A01APPLS TYPE = APPL SEGMENT , ACTIV
IST089I A01CDRMC TYPE = CDRM SEGMENT , ACTIV
IST089I A01LOCAL TYPE = LCL 3270 MAJ NODE , ACTIV
IST089I C23SMNC TYPE = SW SNA MAJ NODE , ACTIV
IST089I A04SMNC TYPE = SW SNA MAJ NODE , ACTIV
IST089I SMNA01C TYPE = SW SNA MAJ NODE , ACTIV
IST089I A01ECHOCHOC TYPE = APPL SEGMENT , ACTIV
IST089I A0462ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST089I C2362ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST314I END
```



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## 2.1.25 DISPLAY MODELS Command

```
>> vm_prefix DISPLAY NET, MODELS _____ >
      |_, ID=model_name_| _____ >
> _____ ><
  |_, SCOPE=ONLY _____ ><
  |_, SCOPE= _____ ><
  | ONLY _____ ><
  | ALL _____ ><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY MODELS command provides information about model resources.

VTAM can dynamically define switched PUs and LUs by defining a model major node with descriptions of model PUs and LUs. When a switched device that has not been defined to VTAM requests connection, VTAM copies these model descriptions to build dynamic switched PUs and LUs. The DISPLAY MODELS command allows you to view the models as defined by VTAM.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS, VSE** Do not use a command prefix.

ID=*model\_name*  
 specifies the model whose definition you want to view. This includes

the model major node and the individual model PU and LU devices.

#### SCOPE

specifies which model resources to display. The results depend on whether an ID is specified and whether SCOPE is specified as ONLY or ALL.

#### SCOPE=ALL

If ID is not specified, SCOPE=ALL displays all model major nodes, model PUs, and model LUs defined to VTAM.

If ID specifies a model major node name, SCOPE=ALL displays that major node and its model PUs and LUs.

If ID specifies a model PU or LU, SCOPE=ALL displays information about that model PU or LU.

#### SCOPE=ONLY

If ID is not specified, SCOPE=ONLY displays all model major nodes defined to VTAM. No model PUs or LUs are displayed.

If ID specifies a model major node name, SCOPE=ONLY displays information about that major node. Its model PUs and LUs are not displayed.

If ID specifies a model PU or LU, SCOPE=ONLY displays information about that model PU or LU.

### Resulting Display

The resulting VTAM display shows:

- If ID is specified:
  - For SCOPE=ONLY, the name and type of the model node specified
  - For SCOPE=ALL, the name and type of the model node specified and, for a model major node, the name, type, and status its subordinate nodes
  
- If ID is not specified:
  - For SCOPE=ONLY, all model major nodes
  - For SCOPE=ALL, all model major nodes and the name, type, and status of their subordinate nodes.

**Examples**

Displaying all model major nodes:

```
d net,models
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST1018I MODEL MAJOR NODE = A03MMNC
IST314I END
```

Displaying all model major nodes and their subordinate resources:

```
d net,models,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST1018I MODEL MAJOR NODE = A03MMNC
IST1017I MODELS:
IST089I A03MMNPU TYPE = PHYSICAL UNIT      , RESET
IST089I A03MMNLU TYPE = LOGICAL UNIT       , RESET
IST314I END
```

Displaying a specific model major node and its subordinate resources:

```
d net,models,id=a03mmnc,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST075I NAME = A03MMNC, TYPE = MODEL MAJOR NODE
IST1017I MODELS:
IST089I A03MMNPU TYPE = PHYSICAL UNIT      , RESET
IST089I A03MMNLU TYPE = LOGICAL UNIT       , RESET
IST314I END
```

Displaying a specific PU in a model major node:

```
d net,models,id=a03mmnpu
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST075I NAME = A03MMNPU, TYPE = PHYSICAL UNIT
IST1018I MODEL MAJOR NODE = A03MMNC
IST314I END
```

Displaying a specific LU in a model major node:

```
d net,models,id=a03mmnlu
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST075I NAME = .A03MMNLU, TYPE = LOGICAL UNIT
IST1018I MODEL MAJOR NODE = A03MMNC
IST977I MDLTAB=MDLTAB1 ASLTAB=ASLTAB1
IST861I MODETAB=AMODETAB USSTAB=AUSSTAB LOGTAB=INTERP
IST934I DLOGMOD=M23278I USS LANGTAB=***NA***
IST1131I DEVICE = LU
IST314I END
```



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## 2.1.26 DISPLAY NCPSTOR Command

```
>> vm_prefix DISPLAY NET,NCPSTOR_,ADDR=address_,ID=ncp_name_____>

>_ | _,LENGTH=32_____ | _,STORAGE=MAIN_____ | _____><
   | _,LENGTH=number_of_bytes_ | | _,STORAGE= DUMPMAIN | _____><
   | _____ | | DUMPVEC | _____><
   | _____ | | MAIN | _____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY NCPSTOR (NCP storage) command displays either the storage contents of a communication controller running an NCP, or an NCP dump stored in an IBM 3720 or 3745 Communication Controller. This command displays up to 256 (decimal) bytes from any address within the communication controller or the dump stored in the IBM 3720 or 3745 Communication Controller.

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ADDR=address

specifies the address (in hexadecimal) of the first byte of data to be displayed.

ID=ncp\_name

specifies the name of the NCP whose storage is to be displayed.

LENGTH=number\_of\_bytes

specifies the number of bytes of NCP storage to be displayed. Any decimal integer 1-256 can be specified. If LENGTH is omitted, VTAM displays 32 bytes (the default).

**STORAGE**

specifies the type of storage to be displayed.

**STORAGE=MAIN**

displays the storage contents of an IBM 3720 or 3745 Communication Controller running an NCP.

**STORAGE=DUMPVEC**

displays the state vector (also called the dump header) of the NCP stored in the IBM 3720 or 3745 Communication Controller. The state vector contains items such as the NCP registers, storage keys, program state, and instruction addresses. The state vector is storage that is linearly addressable in the range 0-511, depending on the communication controller unit model. If the sum of the *number\_of\_bytes* specified for LENGTH and the *address* specified for ADDR is greater than 511, then LENGTH is modified to display the state vector from the *address* specified for ADDR to 511.

**STORAGE=DUMPMAIN**

displays the main part of an NCP dump stored on the IBM 3270 or 3745 Communication Controller. This dump portion is mapped byte for byte to the main storage of the communication controller. The displayable address range starts at main storage address 0 and ends at the address one byte lower than the maximum storage installed on the communication controller external storage.

**Resulting Display**

The resulting display shows:

- The type of storage
- The name of the NCP
- The contents of storage, in hexadecimal, with addresses.

**Examples**

Displaying the NCP storage executing in the controller:

```
d net,ncpstor,id=a0362zc,addr=0,storage=main
IST097I DISPLAY ACCEPTED
IST244I NCP MAIN STORAGE          FOR ID = A0362ZC
IST245I 000000  714C01AA 719C09A8 B900000D B806B568
IST245I 000010  00000000 00000000 00000000 00000000
IST314I END
IST241I D NCPSTOR COMMAND COMPLETE FOR A0362ZC
```

Displaying the state vector of a dump stored on the controller:

```
d net,ncpstor,id=a0362zc,storage=dumpvec,addr=0
IST097I DISPLAY ACCEPTED
IST244I NCP DUMP VECTOR STORAGE FOR ID = A0362ZC
IST245I 000000  00800C02 011257AE 0001E088 00155994
IST245I 000010  00156648 001257A8 00155D40 0004D5E0
```

```
IST314I  END
IST241I  D NCPSTOR COMMAND COMPLETE FOR A0362ZC
```

Displaying the main portion of a dump stored on the controller:

```
d net,ncpstor,id=a0362zc,storage=dumpmain,addr=512,length=64
```

```
IST097I  DISPLAY ACCEPTED
IST244I  NCP DUMP MAIN STORAGE    FOR ID = A0362ZC
IST245I  000512      2742 68140910 17180728 27BE9001
IST245I  000520      28D02539 CD0435D0 A8022458 BF40047A
IST245I  000530      A80E2539 D440E3E1 35D025B9 BF40047A
IST245I  000540      00700070 6513E47F 21390458 5180F560
IST245I  000550      8846
IST314I  END
IST241I  D NCPSTOR COMMAND COMPLETE FOR A0362ZC
```

---



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## 2.1.27 DISPLAY NETSRVR Command

```
>> vm_prefix DISPLAY NET,NETSRVR | SCOPE=ALL | _____ ><
      | SCOPE= ALL |
      | ONLY |
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY NETSRVR (network node server) command displays information about network node servers. Enter this command at the end node whose server information you want to display. This command is valid only when it is issued at an end node or migration data host.

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**SCOPE**  
specifies the desired scope of the display.

**SCOPE=ONLY**  
displays the network node server list that is currently active and displays the current network node server.

SCOPE=ALL

displays, in addition to the information shown for SCOPE=ONLY, other network nodes known to the end node that can act as network node servers. Other network nodes are allowed as servers only if the current network node server list contains a nameless entry.

## Resulting Display

The resulting display shows:

- The contents of the active network node server list.
- For each network node in the list, an indication of whether support for SLU-initiated sessions is required or optional in order to establish a CP-CP session with this end node.
- If the list contains explicit entries, the order in which the entries are used (FIRST or NEXT).
- If SCOPE=ALL is specified, other network nodes known to this end node that are allowed as network node servers. Other network nodes are allowed as servers only if the current list contains a nameless entry.
- The name of the current network node server.

For more information on how to code a network node server list, see ["Network Node Server List"](#) in the *VTAM Resource Definition Reference*.

## Examples

Displaying a network node server list with one nameless entry and no explicit entries using SCOPE=ALL:

```
d net,netsrvr,scope=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = NETWORK NODE SERVER LIST
IST1252I DEFINED NETWORK NODE SERVER LIST, NAME = NNSL2J
IST1253I ****NAMELESS****          SLUINIT = OPT
IST924I -----
IST1255I OTHER NETWORK NODES ALLOWED AS SERVERS
IST1253I NETA.SSCP1A              SLUINIT = OPT
IST924I -----
IST1256I CURRENT NETWORK NODE SERVER
IST1253I NETA.SSCP1A              SLUINIT = OPT
IST314I END
```

Displaying a network node server list with one nameless entry and no explicit entries using SCOPE=ONLY:

```
d net,netsrvr,scope=only
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = NETWORK NODE SERVER LIST
IST1252I DEFINED NETWORK NODE SERVER LIST, NAME = NNSL2J
```

```

IST1253I ****NAMELESS****          SLUINIT = OPT
IST924I -----
IST1256I CURRENT NETWORK NODE SERVER
IST1253I NETA.SSCP1A                SLUINIT = OPT
IST314I END

```

Displaying a network node server list with one explicit entry and no nameless entry using SCOPE=ALL:

**d net,netsrvr,scope=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = NETWORK NODE SERVER LIST
IST1252I DEFINED NETWORK NODE SERVER LIST, NAME = NNSL2B
IST1253I NETA.SSCP1A                SLUINIT = OPT
IST924I -----
IST1254I SERVER LIST PROCESSED ORDER = FIRST
IST924I -----
IST1255I OTHER NETWORK NODES ALLOWED AS SERVERS
IST1253I NONE
IST924I -----
IST1256I CURRENT NETWORK NODE SERVER
IST1253I NETA.SSCP1A                SLUINIT = OPT
IST314I END

```

Displaying a network node server list with one explicit entry and no nameless entry using SCOPE=ONLY:

**d net,netsrvr,scope=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = NETWORK NODE SERVER LIST
IST1252I DEFINED NETWORK NODE SERVER LIST, NAME = NNSL2B
IST1253I NETA.SSCP1A                SLUINIT = OPT
IST924I -----
IST1254I SERVER LIST PROCESSED ORDER = FIRST
IST924I -----
IST1256I CURRENT NETWORK NODE SERVER
IST1253I NETA.SSCP1A                SLUINIT = OPT
IST314I END

```



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## 2.1.28 DISPLAY PATHS Command

```
>> vm_prefix DISPLAY NET,PATHS___, ID=switched_pu_name_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
PATHS	P

### Purpose

The DISPLAY PATHS command displays dial-out path information about a switched physical unit.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=switched\_pu\_name  
specifies the name of a switched physical unit.

### Resulting Display

The resulting display shows the physical unit name, line groups, telephone number or line name, path identifier, group identifier, retry count, availability of the path, and user-defined DLCADDR subfields (if any) containing additional dial information.

If the DLCADDR subfields are coded in binary-coded decimal (BCD) or hexadecimal (X) and contain an odd number of digits, the display is padded on the left with zeros. If the data type is BCD or X, a blank separates every eight characters of data.

**Examples**

Displaying dial-out path information:

```

d net,paths,id=swpuaio1
IST097I DISPLAY ACCEPTED
IST148I DIAL OUT PATH INFORMATION FOR PHYSICAL UNIT SWPUAIO1
IST149I LINE GRP TELEPHONE NUMBER OR LINE NAME PID GID CNT
IST168I GP3AAIO1          APATH21A-390-3333      001 001 003 NAV
IST168I GP3AAIO1          APATH21B-390-3333      003 001 003 NAV
IST1317I DLCADDR SUBFIELDS FOR PID: 001
IST1318I 1,C'SAMPLESAMPLE'
IST1318I 2,C'1234567890QWERTYUIOPASDFGHJKLZXCVB0QWERTYUIOPASDFGHJKRT
IST1319I YUIOPASDFGHJKLZXCVBNM1234567890AS'
IST1318I 3,C'1234567890QWERTYUIOPASDFGHJKLZXCVBGHJKLZXCVBNMASDFGHJKL
IST1319I 23412341234123456781234'
IST1317I DLCADDR SUBFIELDS FOR PID: 003
IST1318I 1,C'SAMPLESAMPLE'
IST1318I 2,A'ALPHA      '
IST1318I 3,D'12345'
IST1318I 1,X'02345678 98907897 13289789 30247089 123497'
IST1318I 2,BCD'23456789 89078971 32897893 02470891 23497344
IST1319I 33333333 33333333 34567898 90789713 28978930 24708912
IST1319I 3497'
IST1318I 3,BCD'02345678 98907897 13289789 30247089 123497'
IST1318I 8,X'02345678 98907897 13289789 30247089 123497'
IST314I END

```



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## 2.1.29 DISPLAY PATHTAB Command

```
>> vm_prefix DISPLAY NET, PATHTAB _____><
                                     |_, ADJSUB=subarea_number_|
                                     |_, DESTSUB=subarea_number_|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY PATHTAB (path table) command displays the status of explicit routes and their associated virtual routes for this host. You can use this command to display information about all routes, or you can limit it by specifying the ADJSUB or DESTSUB operands. The DISPLAY PATHTAB command provides information similar to the "[DISPLAY ROUTE Command](#)," but in a different format. However, the DISPLAY ROUTE command provides some additional information not provided by the DISPLAY PATHTAB command.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ADJSUB=subarea\_number  
specifies that information about routes *passing through* the named adjacent subarea is the only information to be displayed.

DESTSUB=subarea\_number  
specifies that information about routes *going to* the named destination subarea is the only information to be displayed.

### Resulting Display

The resulting display shows the host path table contents. Included in the display are the destination subarea, the adjacent subarea (through which the listed explicit route flows), the explicit route number, the status (the current state of the listed explicit route as known to the host), the virtual route number, and the transmission group number.

### Examples

Displaying routes going to a destination subarea:

```
d net,pathtab,destsub=2
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = PATH TABLE CONTENTS
IST516I DESTSUB    ADJSUB  TGN   ER   ER STATUS    VR(S)
IST517I          2        4    1    5    INOP          1
IST517I          2        4    1    2    INACT         0
IST517I          2        4    1    1    INOP          2
IST517I          2        4    1    0    INOP          3
IST517I          2        4    1    3    PDEFO
IST517I          2        4    1    4    PDEFO
IST517I          2        4    1    6    PDEFO
IST314I END
```

Displaying routes passing through an adjacent subarea:

```
d net,pathtab,adjsub=310
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = PATH TABLE CONTENTS
IST516I DESTSUB    ADJSUB  TGN   ER   ER STATUS    VR(S)
IST517I          1        310   1    4    INOP          2
IST517I          1        310   1    3    INOP          3
IST517I          1        310   1    0    INACT         0
IST517I          1        310   1    1    PDEFO
IST517I          2        310   1    4    INOP          3
IST517I          2        310   1    3    INOP          4
IST517I          2        310   1    0    INACT         0
IST517I          2        310   1    1    PDEFO
IST517I          2        310   1    5    PDEFO
IST517I          3        310   1    5    INOP          2
IST517I          3        310   1    3    INOP          3
IST517I          3        310   1    2    INOP          1
IST517I          4        310   1    5    INOP          3
IST517I          4        310   1    3    INOP          2
IST517I          4        310   1    0    INACT         0
IST517I          4        310   1    1    PDEFO
IST517I          310      310   1   14    PDEFO
IST517I          310      310   1   15    PDEFO
IST314I END
```



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## 2.1.30 DISPLAY PENDING Command

```
>> vm_prefix DISPLAY NET,PENDING _____><
                                     |_, ID= _name _____|
                                     |<_,'_ _|_ _|
                                     |_( _name |_) _|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY PENDING command displays information about resources in the domain that are in a "pending" state. A resource can be a major node, a minor node, an application program, a PU, or an LU.

You can limit the amount of display output (and the amount of time to process this command) by specifying one or more resources on the ID operand whose pending subordinate resources are to be displayed.

*Warning: If you leave out the ID operand, this command causes VTAM to check every resource and could have an adverse effect on VTAM performance.*

A pending state is:

- A transient state to or from a fully active state
- **MVS,VSE** A state of "recovery pending" or "recovery in progress" for application programs that have been retained due to the failure or takeover of an application program enabled for persistence. To observe these recovery states, enter the DISPLAY command on the system in which the application program resides.

**VSE** VTAM displays a PU when the PU is:

- Supported by X.21 short-hold mode/multiple port sharing (SHM/MPS).
- Active.
- Waiting for a call progress signal (CPS) delay timer to expire before



attempting a call retry.

**Note:** Use the ["DISPLAY ID Command"](#) (DISPLAY NET,ID=*shmpu*) to get more information about these PUs.

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**ID=name**

specifies the name of one or more active major nodes, groups, lines, or PUs whose pending resources are to be displayed.

## Resulting Display

The resulting display shows the name and status of each node in a pending state.

## Examples

Displaying all nodes in a pending state:

```
d net,pending
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = PENDING
IST159I THE FOLLOWING NODES ARE IN A PENDING STATE
IST080I C04T0011 PACTL      C04T0012 PACTL      C04T0013 PACTL
IST080I C04T0014 PACTL      C04T0015 PACTL      C04T0021 PACTL
IST080I C04T0025 PACTL
IST314I END
```

Displaying all nodes under a specific resource that are in a pending state:

```
d net,pending,id=a0362zc
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = PENDING
IST089I A0362ZC TYPE = PU T4/5 MAJ NODE , ACTIV
IST159I THE FOLLOWING NODES ARE IN A PENDING STATE
IST080I A03P161 PREQC      A03P162 PREQC      A03P163 PREQC
IST080I A03P164 PREQC      A03P165 PREQC      A03P166 PREQC
IST080I A03P167 PREQC      A03P168 PREQC      A03P169 PREQC
IST080I A03P16A PREQC      A03P16B PREQC      A03P16C PREQC
IST080I A03P201 PREQC      A03P202 PREQC      A03P203 PREQC
IST080I A03P204 PREQC      A03P205 PREQC      A03P206 PREQC
IST080I A03P207 PREQC      A03P208 PREQC      A03P209 PREQC
IST080I A03P20A PREQC      A03P20B PREQC      A03P20C PREQC
IST314I END
```



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## 2.1.31 DISPLAY ROUTE Command

```
>> vm_prefix DISPLAY NET,ROUTE_,DESTSUB=subarea_number_____>

>_|_,ER=ALL_____|_____>
  |_,COSNAME=name_|_|_,NETID=netid_|_|_,ORIGIN=subarea_pu_name_|_____>
  |_,ER=ALL_____|_____>
  |_,ER=er number_____|_____>
  |_,VR=vr_number_____|_____>

>_|_,TEST=NO_____|_____><
  |_,TEST=|_|NO_____|_____><
  |_,TEST=|_|YES_____|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
DESTSUB	DESTSA

### Purpose

The DISPLAY ROUTE command displays the status of explicit routes and virtual routes and tests whether a route is operational.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

Route selection specifies which explicit routes or virtual routes are to be displayed. A blank COS entry is used when no COSNAME entry has been coded in the LOGMODE table for LU-LU sessions or when an ISTVTCOS entry for SSCP-type sessions cannot be found.

**COSNAME=name**

specifies a class-of-service name. If this operand is specified, all virtual routes to the specified destination subarea within this class of service are displayed.

The class-of-service table associated with the origin node (where applicable) and the *netid* specified in the ORIGIN and NETID operands are used to resolve the class-of-service name to a list of virtual routes.

If COSNAME is specified, neither the VR nor the ER operands can be specified.

**ER=er\_number**

specifies the explicit route number (an integer 0-15). If this operand is specified, all the explicit routes identified by this explicit route number that are defined to VTAM through activation of a path definition statement are displayed. An explicit route becomes known to VTAM either by having been defined at one time (through the activation of a path definition set defining the ER), or by having been operative at one time (through the receipt of an ER\_OP request unit from the network).

If ER is specified, neither the COSNAME nor the VR operands can be specified.

**ER=ALL**

specifies that every explicit route to the specified destination subarea is to be displayed.

If ER is specified, neither the COSNAME nor the VR operands can be specified.

If none of the COSNAME, ER, or VR options is specified, ER=ALL is assumed.

**VR=vr\_number**

specifies the virtual route number (an integer 0-7). If this operand is specified, the virtual routes identified by this virtual route number to the specified destination subarea are displayed. There can be up to three virtual routes identified by the virtual route number, with one route for each of the three transmission priority levels.

If VR is specified, neither the COSNAME nor the ER operands may be specified.

**DESTSUB=subarea\_number**

specifies the subarea address of the destination subarea of the routes to be displayed.

**NETID=netid**

specifies the network attached to the origin node that contains the routes. VTAM sends the requested NETID to the origin node in the route test request. The request succeeds if the origin node can recognize the NETID. NETID is a required start option.

If the *netid* specified is not the network in which the command is issued, or the host is not gateway capable, the ORIGIN operand is required for the command to succeed.

If you do not specify a NETID, the default is the network identifier supplied by the NETID option at start time.

ORIGIN=subarea\_pu\_name

specifies the node where the route starts. VTAM must have an SSCP-PU session with this node to forward the route display request to the node. In addition, the node must be an NCP subarea node or the host physical unit name (as specified in the HOSTPU start option). The command fails if you specify an external host subarea node because VTAM has no SSCP-PU session with the physical unit in another host subarea.

The default for the ORIGIN operand is the host physical unit specified in the HOSTPU start option.

TEST

specifies whether an explicit route test is to be performed for a route to a destination subarea. Testing is not supported for APPN routes.

TEST=YES

specifies that VTAM is to perform an explicit route test for each explicit route contained in the requested display. That is, if the VR operand is specified, the explicit route defined to be used by the specified virtual route is tested; if the COSNAME operand is specified, those explicit routes defined to be used by the virtual routes within the specified class of service are tested. When the test results are received, these test results are sent to the operator that requested the display; however, these test results are sent separately from the initial display results. The test results include a display number that allows the results to be correlated to the original status display.

For an explicit route to be tested, it must be known to VTAM, either by having been defined at one time (through the activation of a path definition set defining the ER), or by having been operative at one time (through the receipt of an ER\_OP request unit from the network).

If a node or link along a route becomes inoperative after the ER test request unit has been sent, VTAM might never receive any test results for that explicit route.

TEST=NO

specifies that the requested route status is to be displayed, but that no explicit route test is to be performed.

## Resulting Display

The resulting display shows:

- The subarea number of the nodes
- The origin of the physical unit (PU) name (if known)
- The destination of the PU name (if known)
- The network ID (where applicable) of the network attached to the

origin PU that contains the routes

- The virtual route
- The transmission priority, status, explicit route number, adjacent subarea and its status, and the transmission group number.

### Examples

Displaying one virtual route to a destination subarea:

```
d net,route,destsub=01,netid=netc,origin=c0453le,vr=0
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 8 FROM SA 4 TO SA 1
IST808I ORIGIN PU = C0453LE DEST PU = C01NPU NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 0 ACTIV 5 1 1 ACTIV3
IST537I 0 1 INACT 5 1 1 ACTIV3
IST537I 0 2 INACT 5 1 1 ACTIV3
IST314I END
```

Displaying one explicit route to a destination subarea:

```
d net,route,destsub=01,netid=netc,origin=a03n43a,er=5
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 7 FROM SA 4 TO SA 1
IST808I ORIGIN PU = C0453LE DEST PU = C01NPU NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 0 ACTIV 5 1 1 ACTIV3
IST537I 0 1 INACT 5 1 1 ACTIV3
IST537I 0 2 INACT 5 1 1 ACTIV3
IST314I END
```

Displaying all virtual routes in a class of service to a destination subarea:

```
d net,route,destsub=01,netid=netc,origin=a0362zc,cosname=ist
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 4 FROM SA 31 TO SA 1
IST808I ORIGIN PU = A0362ZC DEST PU = ***NA*** NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 2 ACTIV 0 1 1 ACTIV3
IST537I 1 2 INACT 1 1 1 ACTIV1
IST537I 2 2 INACT 2 1 1 ACTIV1
IST537I 3 2 INACT 3 1 1 ACTIV1
IST537I 4 2 INACT 4 1 1 ACTIV1
IST537I 5 2 UNDEF
IST537I 6 2 UNDEF
IST537I 7 2 UNDEF
IST537I 0 1 INACT 0 1 1 ACTIV3
IST537I 1 1 INACT 1 1 1 ACTIV1
IST537I 2 1 INACT 2 1 1 ACTIV1
IST537I 3 1 INACT 3 1 1 ACTIV1
IST537I 4 1 INACT 4 1 1 ACTIV1
IST537I 5 1 UNDEF
IST537I 6 1 UNDEF
IST537I 7 1 UNDEF
IST537I 0 0 ACTIV 0 1 1 ACTIV3
IST537I 1 0 INACT 1 1 1 ACTIV1
IST537I 2 0 INACT 2 1 1 ACTIV1
IST537I 3 0 INACT 3 1 1 ACTIV1
IST537I 4 0 INACT 4 1 1 ACTIV1
IST537I 5 0 UNDEF
IST537I 6 0 UNDEF
```

```
IST537I 7 0 UNDEF
IST314I END
```

Displaying and testing all virtual routes in a class of service to a destination subarea:

**d net,route,destsub=01,netid=netc,origin=a0362zc,cosname=ist,test=yes**

```
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 6 FROM SA 31 TO SA 1
IST808I ORIGIN PU = A0362ZC DEST PU = ***NA*** NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 2 ACTIV 0 1 1 ACTIV3
IST537I 1 2 INACT 1 1 1 ACTIV1
IST537I 2 2 INACT 2 1 1 ACTIV1
IST537I 3 2 INACT 3 1 1 ACTIV1
IST537I 4 2 INACT 4 1 1 ACTIV1
IST537I 5 2 UNDEF
IST537I 6 2 UNDEF
IST537I 7 2 UNDEF
IST537I 0 1 INACT 0 1 1 ACTIV3
IST537I 1 1 INACT 1 1 1 ACTIV1
IST537I 2 1 INACT 2 1 1 ACTIV1
IST537I 3 1 INACT 3 1 1 ACTIV1
IST537I 4 1 INACT 4 1 1 ACTIV1
IST537I 5 1 UNDEF
IST537I 6 1 UNDEF
IST537I 7 1 UNDEF
IST537I 0 0 ACTIV 0 1 1 ACTIV3
IST537I 1 0 INACT 1 1 1 ACTIV1
IST537I 2 0 INACT 2 1 1 ACTIV1
IST537I 3 0 INACT 3 1 1 ACTIV1
IST537I 4 0 INACT 4 1 1 ACTIV1
IST314I END
IST538I ROUTE TEST 6 IN PROGRESS
IST533I ER 0 SUCCEEDED IN ROUTE TEST 6
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA*** ***NA***
IST533I ER 0 SUCCEEDED IN ROUTE TEST 6
IST534I 31 1 1 1 1
IST798I NETC
IST533I ER 1 SUCCEEDED IN ROUTE TEST 6
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA*** ***NA***
IST534I 31 1 1 1 1
IST798I NETC
IST533I ER 2 SUCCEEDED IN ROUTE TEST 6
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA*** ***NA***
IST534I 31 1 1 1 1
IST798I NETC
```

Displaying and testing one explicit route to a destination subarea:

**d net,route,destsub=01,netid=netc,origin=c0453le,er=5,test=yes**

```
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 11 FROM SA 4 TO SA 1
IST808I ORIGIN PU = C0453LE DEST PU = C01NPU NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 0 ACTIV 5 1 1 ACTIV3
IST537I 0 1 INACT 5 1 1 ACTIV3
IST537I 0 2 INACT 5 1 1 ACTIV3
IST314I END
```

Displaying and testing all explicit routes to a destination subarea:

**d net,route,destsub=01,netid=netc,origin=a0362zc,test=yes**

```
IST097I DISPLAY ACCEPTED
IST535I ROUTE DISPLAY 8 FROM SA 31 TO SA 1
IST808I ORIGIN PU = A0362ZC DEST PU = ***NA*** NETID = NETC
IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I 0 0 ACTIV 0 1 1 ACTIV3
IST537I 0 1 INACT 0 1 1 ACTIV3
IST537I 0 2 ACTIV 0 1 1 ACTIV3
IST537I 1 0 INACT 1 1 1 ACTIV1
```

```

IST537I 1 1 INACT 1 1 1 ACTIV1
IST537I 1 2 INACT 1 1 1 ACTIV1
IST537I 2 0 INACT 2 1 1 ACTIV1
IST537I 2 1 INACT 2 1 1 ACTIV1
IST537I 2 2 INACT 2 1 1 ACTIV1
IST537I 3 0 INACT 3 1 1 ACTIV1
IST537I 3 1 INACT 3 1 1 ACTIV1
IST537I 3 2 INACT 3 1 1 ACTIV1
IST537I 4 0 INACT 4 1 1 ACTIV1
IST537I 4 1 INACT 4 1 1 ACTIV1
IST537I 4 2 INACT 4 1 1 ACTIV1
IST314I END
IST538I ROUTE TEST 8 IN PROGRESS
IST533I ER 0 SUCCEEDED IN ROUTE TEST 8
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA***
IST533I ER 0 SUCCEEDED IN ROUTE TEST 8
IST534I 31 1 1 1
IST798I NETC
IST533I ER 1 SUCCEEDED IN ROUTE TEST 8
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA***
IST534I 31 1 1 1
IST798I NETC
IST533I ER 2 SUCCEEDED IN ROUTE TEST 8
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I A0362ZC TG ***NA***
IST534I 31 1 1 1
IST798I NETC

```



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## 2.1.32 DISPLAY RSCLIST Command

```

>> vm_prefix DISPLAY NET,RSCLIST___, ID= name _____>
      |_____|
      |<_,'_>|
      |_(name |_)_|

> |___, EXCLUDE= name _____| |___, IDTYPE=* _____| _____>
  |_____| |_____| |
  |<_,'_>| |___, IDTYPE= APPLS _____|
  |_(name |_)_| |___, IDTYPE= APPLSEG _____|
  |_____| |___, IDTYPE= CDRMS _____|
  |_____| |___, IDTYPE= CDRMSEG _____|
  |_____| |___, IDTYPE= CDRSCS _____|
  |_____| |___, IDTYPE= CDRSCSEG _____|
  |_____| |___, IDTYPE= CLSTRS _____|
  |_____| |___, IDTYPE= GROUPS _____|
  |_____| |___, IDTYPE= LINKS _____|
  |_____| |___, IDTYPE= LINKSTA _____|
  |_____| |___, IDTYPE= MAJNODES _____|
  |_____| |___, IDTYPE= PUT45 _____|
  |_____| |___, IDTYPE= TERMS _____|
  |_____| |___, IDTYPE= * _____|
  |_____| |_____|

> |___, MAX=DSPLYMAX start option value _____| |___, SCOPE=ALL _____| _____><
  |_____| |_____| |_____|
  |___, MAX= number_of_resources _____| |___, SCOPE= ACT _____|
  |_____| |_____| |___, SCOPE= ACTONLY _____|
  |_____| |_____| |___, SCOPE= ALL _____|
  |_____| |_____| |___, SCOPE= CONCT _____|
  |_____| |_____| |___, SCOPE= INACT _____|
  |_____| |_____| |___, SCOPE= INACTONLY _____|
  |_____| |_____| |___, SCOPE= PENDING _____|
  |_____| |_____| |___, SCOPE= RESET _____|
  |_____| |_____| |_____|
  
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using abbreviations in commands, code the abbreviation exactly as shown in the table. Do not use the operand name in the command unless it is shown as part of the abbreviation in the table. For example, when coding the abbreviation for SCOPE=ALL, use E or EVERY. SCOPE=E is not a valid option.

## Purpose

The DISPLAY RSCLIST command displays information about resources whose names match a particular pattern.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

EXCLUDE=name

specifies a maximum of five names or patterns of resources to be excluded from the display. The names or patterns can be network-qualified. If you do not specify the network identifier, VTAM uses the identifier of the host from which you are issuing the command.

You can specify wildcard values for this operand, but \* and \*.\* are not valid for the list of resources to be excluded. For more information about using wildcards, see ["Using Wildcard Names."](#)

ID=name

specifies the name of one or more resources to be displayed. The resource name can be network-qualified. If you do not specify the network identifier, VTAM uses the identifier of the host from which you are issuing the command.

You can specify \* as the network ID portion of a network-qualified name. The \* is useful for displaying information about a resource for which you do not know the network ID. The \* is also useful for displaying information about several resources with the same name that are found in multiple networks, provided that you also specify the MAX operand on the command.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every resource in the network, depending on the value of the IDTYPE operand.*

IDTYPE

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE can be used to identify which resource the command should act on. The default is IDTYPE=\*

IDTYPE=APPLS

displays only application minor nodes.

IDTYPE=APPLSEG

displays only application major nodes.

IDTYPE=CDRMS

displays only cross-domain resource managers known to this host processor.

IDTYPE=CDRMSEG

displays only CDRM major nodes.

IDTYPE=CDRSCS

displays only cross-domain resources known to this domain.

IDTYPE=CDRSCSEG

displays only CDRSC major nodes.

IDTYPE=CLSTRS

displays only physical units in this domain.

IDTYPE=GROUPS

displays only groups in this domain.

IDTYPE=LINES

displays only lines in this domain.

IDTYPE=LINKSTA

displays only link stations in this domain.

IDTYPE=MAJNODES

displays only major nodes.

IDTYPE=PUT45

displays only type 4 and type 5 PUs.

IDTYPE=TERMS

displays only logical units.

IDTYPE=\*

displays all resources.

MAX=number\_of\_resources

specifies the maximum number of resources that VTAM displays for this command. The valid range is 1-65535. The default is the value specified for the DSPLYMAX start option.

Specifying MAX limits the display output. VTAM searches only for the number of instances that you have specified. When that number is found, VTAM does not search any further. This saves processing time for the command and gives you control over the amount of display output generated by the command. If fewer resources are found than you have specified on MAX, VTAM displays only the resources that are found.

SCOPE

specifies the desired scope of the display.

SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable resources. If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

SCOPE=ACTONLY

specifies that information is to be displayed about all resources in an active state. The display does **not** include resources in pending or connectable states. If no resources are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to active, connectable, and pending resources.

SCOPE=ALL

specifies that information is to be displayed about all resources (regardless of their status).

SCOPE=CONCT

specifies that information is to be displayed about all resources in a CONCT (connectable) state. If no applications are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to active, connectable, and pending resources.

SCOPE=INACT

specifies that information is to be displayed about all inactive resources. If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

SCOPE=INACTONLY

specifies that information is to be displayed about all inactive resources. Resources in a RESET state are not included in the SCOPE=INACTONLY display.

SCOPE=PENDING

specifies that information is to be displayed about all pending resources. A pending state is a transient state to or from the fully active state.

SCOPE=RESET

specifies that information is to be displayed about all resources in a RESET state.

## Resulting Display

The resulting VTAM display shows:

- The NETID and name of each resource that matches the pattern specified on the ID operand and the status specified on the SCOPE operand
- The current resource status
- The resource type
- The name of the major node where the resource is defined.

**Examples**

Displaying all active resources in this network with names starting with "app":

```
d net,rsclist,id=app*,scope=actonly
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = RSCLIST
IST1417I NETID      NAME      STATUS      TYPE          MAJNODE
IST1418I NETA      APPLAA3  ACTIV      CDRSC         ISTPDILU
IST1418I NETA      APPLAA2  ACTIV      CDRSC         ISTPDILU
IST1418I NETA      APPLCA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPLBA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPLDA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPL1A   ACTIV      APPL SEGMENT  APPL1A
IST1418I NETA      APPL1    ACT/S      APPL          APPL1A
IST1418I NETA      APPL8    ACTIV--S-- CDRSC         CDRSC1A
IST1418I NETA      APPLAA1  ACTIV      CDRSC         CDRSC1A
IST314I END
```

Displaying resources in this network with names starting with "app," limiting output to 6 resources:

```
d net,rsclist,id=app*,max=6
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = RSCLIST
IST1417I NETID      NAME      STATUS      TYPE          MAJNODE
IST1418I NETA      APPLAA3  ACTIV      CDRSC         ISTPDILU
IST1418I NETA      APPLAA2  ACTIV      CDRSC         ISTPDILU
IST1418I NETA      APPLCA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPLBA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPLDA1  ACT/S----Y CDRSC         ISTCDRDY
IST1418I NETA      APPL1A   ACTIV      APPL SEGMENT  APPL1A
IST1315I DISPLAY TRUNCATED AT MAX = 6
IST314I END
```



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## 2.1.33 DISPLAY SESSIONS Command

**Display all sessions:**

```
>> vm_prefix DISPLAY NET,SESSIONS_____>

> _____>
| _____|
| LU1=lu_name_ | _____| _____| | |
| _____| | LIST=COUNT | _____|
| LU2=lu_name_ | LU2=lu_name_ | _____| | LIST=ALL |
| _____| | COUNT |
| PLU=plu_name_ | LU1=lu_name_ | _____| | SUMMARY |
| _____| | _____|
| SLU=slu_name_ | SLU=slu_name_ | _____|
| _____| | PLU=plu_name_ | _____|

> _____>
| _____|
| SCOPE=ALL | _____|
| _____|
| SCOPE=ACT | _____|
| ALL |
| PENDING |
| O |
```

**Display a specific session:**

```
>> vm_prefix DISPLAY NET,SESSIONS___,SID=session_id_____>>
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ALL	EVERY or E
SCOPE=PENDING	SCOPE=PEND or PEND
SESSIONS	SESSION

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY SESSIONS command displays LU-LU session status information. The command can display status information for:

- A single session identified by its session identifier
- All sessions in which a specified logical unit is the primary session partner
- All sessions in which a specified logical unit is the secondary session partner
- All sessions in which a pair of logical units have a specified primary/secondary relationship as session partners
- All sessions in which a specified logical unit is a session partner (without regard to its primary or secondary status)
- All sessions between a pair of logical units regardless of their primary/secondary relationship as session partners
- All sessions known to VTAM, limited with the SCOPE operand to all pending sessions, all queued sessions, or all active sessions.

#### Notes:

1. To display sessions between specified logical units, one of the session partners must reside in the host VTAM network.
2. If you issue the DISPLAY SESSIONS command at a network node server that is not an interchange node, control point, or SSCP for either session partner, this command might show duplicate information for some sessions. This might occur briefly during BIND processing in a normal session setup or it might indicate a hung session. If subsequent displays continue to show duplicate information for the same session, the session might be hung.

#### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**LIST**  
specifies the level of detail to display.

**LIST=ALL**  
displays all session status information for sessions with the status specified in the SCOPE operand. If SCOPE=ALL, the display includes active, pending, and queued sessions.

**LIST=COUNT**  
displays only the total number of sessions with the status specified in the SCOPE operand. If SCOPE=ALL, the number includes all sessions, regardless of whether they are active, pending, or

queued.

**LIST=SUMMARY**

displays the total number of sessions with the status specified in the SCOPE operand (same as LIST=COUNT), plus the actual session state codes for pending and queued sessions. For a description of possible session initiation and termination states, see [Chapter 16, "Status Codes"](#) in *VTAM Messages and Codes*.

**LU1=lu\_name**

identifies the logical unit for which sessions are displayed. *lu\_name* can be specified as a network-qualified name. If you also specify the LU2 operand, the command displays only sessions involving both named logical units.

**MVS** If *lu\_name* is a generic resource name, VTAM will display session status information for all members known by that generic name.

**LU2=lu\_name**

identifies the logical unit for which sessions are displayed. *lu\_name* can be specified as a network-qualified name. If you also specify the LU1 operand, the command displays only sessions involving both named logical units.

**MVS** If *lu\_name* is a generic resource name, VTAM will display session status information for all members known by that generic name.

**PLU=plu\_name**

identifies the logical unit that is the primary session partner. *plu\_name* can be specified as a network-qualified name. If you specify the PLU operand, the command displays only sessions in which this logical unit is the primary session partner. If you also specify the SLU operand, the command displays only sessions involving both named logical units in the specified primary/secondary relationship.

**MVS** If *plu\_name* is a generic resource name, VTAM will display session status information for all members known by that generic name.

**SCOPE**

specifies the status of the sessions to display. See [Chapter 16, "Status Codes"](#) in *VTAM Messages and Codes* for a description of the initiation states "queued," "pending active," and "active" for each session status. You cannot use this operand with the SID operand.

**SCOPE=ACT**

displays only active sessions.

**SCOPE=ALL**

displays all sessions, whether active, pending, or queued.

**SCOPE=PENDING**

displays only pending sessions. A pending state is:

- A transient state to or from a fully active state.
- **MVS, VSE** A state of "recovery pending" or "recovery in progress" for sessions that have been retained due to the failure or takeover of an application enabled for persistence.



**Note:** In either situation, the state of the half-session as seen by the PLU is the status reported for the session. Because of this, you must enter the DISPLAY command on the system in which the application resides.

SCOPE=Q  
displays only queued sessions.

SID=session\_id  
identifies the VTAM LU-LU session to display. To display the session identifier named in this operand, issue either the DISPLAY SESSIONS,SCOPE=ALL command or a DISPLAY ID=resource\_name,SCOPE=ALL command. The session ID is identified by SID on the display and is 16 characters long.

If you specify the SID operand, you cannot specify SCOPE or LIST on the same command.

SLU=slu\_name  
identifies the logical unit that is the secondary session partner. *slu\_name* can be specified as a network-qualified name. If you specify the SLU operand, the command displays only sessions in which this logical unit is the secondary session partner. If you also specify the PLU operand, the command displays only sessions involving both named logical units in the specified primary/secondary relationship.

**MVS** If *slu\_name* is a generic resource name, VTAM will display session status information for all members known by that generic name.

## Resulting Display

The resulting display shows:

- For LIST=COUNT:
  - The number of sessions with the status specified in the SCOPE operand, optionally limited by LU1, LU2, PLU, or SLU.
  - A summary of active SSCP sessions, showing the number of SSCP-LU sessions, the number of SSCP-PU sessions, and the number of SSCP-SSCP sessions. This includes both active and pending sessions. These counts of SSCP sessions are not included in the number of total sessions (message IST878I). This summary of active SSCP sessions does not appear if the display has been limited by the LU1, LU2, PLU, or SLU operands, or if SCOPE excludes active sessions.
- For LIST=SUMMARY:
  - The number of sessions with the status specified in the SCOPE operand, optionally limited by LU1, LU2, PLU, or SLU.

- For queued and pending sessions, the number of sessions with each status code.
  - For active sessions, the number of LU-LU sessions, the number of CP-CP contention winner sessions, and the number of CP-CP contention loser sessions.
  - A summary of active SSCP sessions, showing the number of SSCP-LU sessions, the number of SSCP-PU sessions, and the number of SSCP-SSCP sessions. This includes both active and pending sessions. These counts of SSCP sessions are not included in the number of total sessions (message IST878I). This summary of active SSCP sessions does not appear if the display has been limited by the LU1, LU2, PLU, or SLU operands, or if SCOPE excludes active sessions.
- o For LIST=ALL:
- The names of the resources in the sessions.
  - Each session's identifier.
  - Each session's status code.
  - The number of sessions with the status specified in the SCOPE operand, optionally limited by LU1, LU2, PLU, or SLU.
  - For queued and pending sessions, the number of sessions with each status code.
  - For active sessions, the number of LU-LU sessions, the number of CP-CP or CPSVRMGR contention winner sessions, and the number of CP-CP or CPSVRMGR contention loser sessions.
  - A summary of active SSCP sessions, showing the number of SSCP-LU sessions, the number of SSCP-PU sessions, and the number of SSCP-SSCP sessions. This includes both active and pending sessions. These counts of SSCP sessions are not included in the number of total sessions (message IST878I). This summary of active SSCP sessions does not appear if the display has been limited by the LU1, LU2, PLU, or SLU operands, or if SCOPE excludes active sessions.
- o For SID:
- The real and alias (if available) names of the primary session partner.
  - The real and alias (if available) names of the secondary session partner.
  - The session status.
  - The adjacent SSCP toward the PLU or SLU, if cross-domain (if

available).

- The gateway NCP toward the PLU or SLU, if cross-network (if available).
- The signals needed to complete a session, if the session is pending session setup or takedown.
- The class-of-service table entry and logon mode entry used.
- The APPN class-of-service toward the PLU or SLU, (if available).
- Compression information, if compression is being used on the session in either the PLU-to-SLU or the SLU-to-PLU direction.
  - The compression-level values (0-4) in use for input and output messages
  - The percentage of reduction in length for input and output messages
  - The indicator "NA" (not applicable) if there has been no message traffic or if compression is not being used on either the inbound or outbound half-session.

If compression is not being used in either direction, this information is not displayed.

## Examples

Displaying a specific session, with compression being used:

```
d net,sessions,sid=eaabeec3fd825dec
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST879I PLU/OLU REAL = NETA.ECHO50      ALIAS = NETA.ECHO50
IST879I SLU/DLU REAL = NETA.ECHO02      ALIAS = NETA.ECHO02
IST880I SETUP STATUS = ACTIV
IST875I ADJSSCP TOWARDS PLU = A500N
IST933I LOGMODE=DCRAPIR, COS=*BLANK*
IST1048I COMPRESSION LEVEL - INPUT = 1, OUTPUT = 1
IST1049I PERCENT REDUCTION - INPUT = 35, OUTPUT = 35
IST314I END
```

Displaying all sessions:

```
d net,sessions,scope=all,list=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST873I          PLU          SLU          SID          STATUS
IST874I NETA.SSCP1A          NETA.ENCPA4          EAABEEC3297ED9FC  ACTIV/DL
IST874I NETB.SSCP7B          NETA.SSCP1A          C2BB19BC57AD196C  ACTIV/CP
IST874I NETA.SSCP1A          NETB.SSCP7B          EAABEEC3297ED9FA  ACTIV/CP
IST874I NETA.SSCP2A          NETA.SSCP1A          F6ABEEC32C7EDA76  ACTIV/CP
IST874I NETA.SSCP1A          NETA.SSCP2A          EAABEEC3297ED9F8  ACTIV/CP
```

```

IST874I NETA. ENCPA4          NETA. SSCP1A          E2C5E2E2D6D50013  ACTIV/DL
IST924I -----
IST878I NUMBER OF PENDING SESSIONS =          0
IST924I -----
IST878I NUMBER OF ACTIVE  SESSIONS =          6
IST1162I    LU-LU              =          2
IST1162I    CP-CP CONWINNER    =          2
IST1162I    CP-CP CONLOSER    =          2
IST924I -----
IST878I NUMBER OF QUEUED  SESSIONS =          0
IST924I -----
IST878I NUMBER OF TOTAL   SESSIONS =          6
IST924I -----
IST1161I ACTIVE SSCP SESSIONS
IST1162I    SSCP-LU              =          6
IST1162I    SSCP-PU              =          4
IST1162I    SSCP-SSCP           =          0
IST314I END

```

Displaying a summary of all sessions:

**d net,sessions,scope=all,list=summary**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST924I -----
IST878I NUMBER OF PENDING SESSIONS =          0
IST924I -----
IST878I NUMBER OF ACTIVE  SESSIONS =          4
IST1162I    LU-LU              =          2
IST1162I    CP-CP CONWINNER    =          1
IST1162I    CP-CP CONLOSER    =          1
IST924I -----
IST878I NUMBER OF QUEUED  SESSIONS =          0
IST924I -----
IST878I NUMBER OF TOTAL   SESSIONS =          4
IST924I -----
IST1161I ACTIVE SSCP SESSIONS
IST1162I    SSCP-LU              =         10
IST1162I    SSCP-PU              =          4
IST1162I    SSCP-SSCP           =          0
IST314I END

```

Displaying all sessions for a specific LU:

**d net,sessions,lu1=appl0001,scope=all,list=summary**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST924I -----
IST878I NUMBER OF PENDING SESSIONS =          0
IST924I -----
IST878I NUMBER OF ACTIVE  SESSIONS =          1
IST924I -----
IST878I NUMBER OF QUEUED  SESSIONS =          0
IST924I -----
IST878I NUMBER OF TOTAL   SESSIONS =          1
IST314I END

```

Displaying active sessions for a specific LU:

**d net,sessions,lu1=appl1,scope=act,list=count**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST878I NUMBER OF ACTIVE  SESSIONS =          1
IST314I END

```

Displaying pending sessions for a specific LU:

**d net,sessions,lu1=appl1,scope=pending,list=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST873I    PLU              SLU              SID              STATUS
IST874I NETA. APPL1          NETA. NETAPPL1          EAABEEC3FD825DEA  PSEST/B

```

```

IST878I NUMBER OF PENDING SESSIONS =          1
IST1237I   PSEST      = 1
IST314I END

```

Displaying queued sessions between two LUs:

```

d net,sessions,lu1=appl1,lu2=appl0001,scope=q,list=count
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST1284I LUALIAS APPL0001 IS NETA.NETAPPL1 FOR APPLICATIONS
IST878I NUMBER OF QUEUED SESSIONS =          2
IST314I END

```

Displaying a count of active sessions with a USERVAR:

```

d net,sessions,lu1=echo01a,scope=act,list=count
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST113I ECHO01A IS A USERVAR WITH VALUE ECHO01A IN NETWORK NETA
IST1057I NETA.ECHO01A IS ALSO A REAL RESOURCE
IST878I NUMBER OF ACTIVE SESSIONS =         61
IST314I END

```

**MVS** Displaying a generic resource name for LU1:

```

d net,sessions,lu1=cics,list=all
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = SESSIONS
IST1364I CICS IS A GENERIC RESOURCE NAME FOR:
IST1154I NETA.CICS1          NETA.CICS2          NETA.CICS3
IST924I -----
IST873I          PLU              SLU              SID              STATUS
IST874I NETA.CICS1          NETA.APPL1A2          EAABEEC3F8FE476C  ACTIV
IST874I NETA.APPL1A1        NETA.CICS2          EAABEEC3F8FE476B  ACTIV
IST874I NETA.APPL1A1        NETA.CICS2          EAABEEC3F8FE476A  ACTIV
IST874I NETA.CICS3          NETA.APPL1A5          EAABEEC3F8FE4769  ACTIV
IST874I NETA.CICS3          NETA.APPL1A9          EAABEEC3F8FE4768  ACTIV
IST878I NUMBER OF PENDING SESSIONS =          0
IST878I NUMBER OF ACTIVE SESSIONS =          5
IST878I NUMBER OF QUEUED SESSIONS =          0
IST878I NUMBER OF TOTAL SESSIONS =          5
IST314I END

```



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## 2.1.34 DISPLAY STATIONS Command

```
>> vm_prefix DISPLAY NET, STATIONS _____ >
      |_, ID=name_|
> _____ ><
  |_, SCOPE=ALL _____|
  |_, SCOPE= |
  |   ACT |
  |   ALL |
  |   INACT |
  |   PENDING |
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ALL	EVERY or E
SCOPE=INACT	INACT or I
SCOPE=PENDING	PEND

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY STATIONS command displays the status of all cross-subarea link stations for all active major nodes or a specific major node.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=name  
 specifies the name of a major node, group, line, or link station. If

this operand is specified, information is displayed about only the link stations associated with the specified node. If this operand is omitted, information is displayed about all link stations in every active major node.

#### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active cross-subarea link stations within each major node or associated with a specific node.

#### SCOPE=ALL

specifies that information is to be displayed about all cross-subarea link stations within each major node or associated with a specific node (regardless of their status).

#### SCOPE=INACT

specifies that information is to be displayed about all inactive cross-subarea link stations within each major node or associated with a specific node.

#### SCOPE=PENDING

specifies that information is to be displayed about all pending cross-subarea link stations within each major node or associated with a specific node. A pending state is a transient state to or from the fully active state.

### Resulting Display

The resulting display shows:

- ° For each major node containing physical units that have subordinate link stations (host PU, NCP major node, or channel-attachment major node), or a node with subordinate or associated link stations:
  - The name of the major node
  - The subarea address of the major node (if it has one)
  
- ° For each link station:
  - The name and status of the link.
  - The name and status of the link station.
  - The current transmission group number.
  - The defined transmission group number. (If no specific transmission group number was defined, it is displayed as 0.)
  - The name (if known) and subarea (if known) of any adjacent NCP or host with which the link station is currently associated, and the name of the network in which the adjacent NCP or host reside.

**Examples**

Displaying a specific cross-subarea link station:

```
d net,stations,id=a31p04a
```

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATIONS
IST393I PU T4/5 MAJOR NODE A3162ZC, SUBAREA = 310
IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID
IST397I A31P04A NEVAC 1 1 0
IST610I LINE A31C04 - STATUS NEVAC
IST314I END
```

Displaying all cross-subarea link stations:

```
d net,stations
```

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATIONS
IST393I PU T4/5 MAJOR NODE ISTPUS , SUBAREA = 500
IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID
IST397I 0016-S ACTIV----I 1 1 A3162ZC 310 NETA
IST610I LINE 0016-L - STATUS ACTIV----I
IST397I 0015-S ACTIV----I 1 1 A0362ZC 3 NETA
IST610I LINE 0015-L - STATUS ACTIV----I
IST393I PU T4/5 MAJOR NODE A0362ZC, SUBAREA = 3
IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID
IST397I A03P08A NEVAC 0 0 0
IST610I LINE A03C08 - STATUS NEVAC
IST397I A03P10A NEVAC 1 1 0
IST610I LINE A03C10 - STATUS NEVAC
IST393I PU T4/5 MAJOR NODE A3162ZC, SUBAREA = 310
IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID
IST397I A31P00A NEVAC 1 1 0
IST610I LINE A31C00 - STATUS NEVAC
IST397I A31P01A NEVAC 1 1 0
IST610I LINE A31C01 - STATUS NEVAC
IST397I A31P02A NEVAC 1 1 0
IST610I LINE A31C02 - STATUS NEVAC
IST397I A31P03A NEVAC 1 1 0
IST610I LINE A31C03 - STATUS NEVAC
IST397I A31P04A NEVAC 1 1 0
IST610I LINE A31C04 - STATUS NEVAC
IST397I A31P05A NEVAC 1 1 0
IST610I LINE A31C05 - STATUS NEVAC
IST397I A31P06A NEVAC 1 1 0
IST610I LINE A31C06 - STATUS NEVAC
IST314I END
```



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## 2.1.35 DISPLAY STATS Command

### Display resource statistics:

```
>> vm_prefix DISPLAY NET,STATS___,TYPE=VTAM_____>
```

```
> | NUM=10 _____ | _____><
  | NUM= * _____ |
  | number of output lines |
```

### Display data compression statistics:

```
>> vm_prefix DISPLAY NET,STATS,TYPE=COMPRESS_____><
```

### MVS Display coupling facility structure statistics:

```
>> vm_prefix DISPLAY NET,STATS___,TYPE=CFS_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY STATS (statistics) command displays information about the network, such as the number of resources of each type, the values of certain start options, the MVS coupling facility structure, and data compression.

This information can be used by the *Estimating Storage for VTAM* program to calculate the amount of storage required for VTAM. For information on how to use the host-based storage information in this display, see the online help or the information booklet for the *Estimating Storage for VTAM* program.

*Warning:* Depending on the size and configuration of your network, issuing this command from the console or from the ISTSTATS program operator might affect system performance. Issuing the DISPLAY STATS command from the console is not recommended.

For information on using the ISTSTATS program operator to issue the DISPLAY STATS command, see the online help or the information booklet for the *Estimating Storage for VTAM* program.

## Operands

### vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### NUM

specifies the maximum number of output lines that VTAM displays for this command. The NUM operand determines the number of lines to be displayed at the console, but does not limit the processing of the command. NUM is valid only when TYPE=VTAM is specified.

#### NUM=number\_of\_output\_lines

specifies the maximum number of output lines to display. The valid range is 5-2147483646. The default is 10.

#### NUM=\*

displays all output lines.

*Warning: NUM=\* might generate an undesirably large display. Do not use NUM=\* until you understand the potential effect of this command on your console.*

### TYPE

specifies what type of statistical information to display.

#### TYPE=VTAM

displays information about the type and number of resources in the network and the values of certain start options.

#### TYPE=COMPRESS

displays information about data compression.

#### TYPE=CFS **MVS**

displays attributes for the MVS coupling facility structure.

## Resulting Display

The resulting display shows:

- For TYPE=VTAM, a function ID for each resource type, the number of resources of each type, and the values of certain start options.
- For TYPE=COMPRESS, the number of half-sessions by active compression level that use data compression on input and output flows.

**MVS,VSE** Output values for adaptive compression levels are split into

BASIC and FROZEN. BASIC indicates the number of half-sessions currently using compression tables in the adaptive mode. FROZEN indicates the number of half-sessions currently using static compression tables.

Output values for sessions using run-length encoding (RLE) compression levels are also split into BASIC and FROZEN. BASIC indicates the number of half-sessions currently using compression tables in the basic mode. FROZEN does not apply to RLE compression.

- **MVS** For TYPE=CFS, displays attributes for the MVS coupling facility structure.

## Examples

**MVS** Displaying statistical information:

```
d net,stats,type=vtam,num=*
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=VTAM
IST1349I COMPONENT ID IS 5695-11701-201
IST1345I      ID      VALUE      DESCRIPTION
IST1227I      151      0 = DEPENDENT LU TOTAL FOR ISTEPUS
IST1227I      151      32 = DEPENDENT LU TOTAL FOR NCP3AB7
IST1227I      11       0 = CHANNEL-TO-CHANNEL ATTACHMENTS
IST1227I      61       0 = SNA DATA COMPRESSION SESSIONS
IST1227I      63       20 = RECOVERABLE SESSIONS
IST1227I      56       6 = TOTAL APPL SESSIONS
IST1227I      58       6 = LU6.2 SESSIONS
IST1227I      60       0 = ICSF ENCRYPTION SERVICES
IST1227I      67       0 = PU STATEMENTS UNDER SW LINES
IST1227I      15       0 = SNA PU TOTAL MAXBFPU
IST1227I      21       0 = ICA DEVICES
IST1227I      51       40 = ACTIVE LU TOTAL
IST1227I      10       0 = TOTAL LINE STATEMENTS FOR XCA MAJOR NODES
IST1227I      14       0 = CA CLUSTER CONTROLLER TOTAL
IST1227I      2       200 = VIT TABLE SIZE
IST1227I      65       61 = NUMBER OF LINES DEFINED
IST1227I      3       256 = IOBUF SIZE
IST1227I      47       511 = MAXIMUM SUBAREA
IST1227I      48       88 = DEFINED PU TOTAL
IST1227I      49       5 = ACTIVE PU TOTAL
IST1227I      16       0 = LOCAL NON-SNA TERMINALS
IST1227I      80       28 = NETWORK INDEPENDENT LU TOTAL
IST1227I      81       0 = DYNAMICALLY DEFINED LU TOTAL
IST1227I      6       16 = MAXBFPU FOR CHANNEL-ATTACHED CONTROLLERS
IST1227I      8       0 = XCA MAJOR NODES
IST1227I      74       0 = CROSS NETWORK APPL SESSIONS
IST1227I      17       0 = NETVIEW PIU TRACE BUFFER SIZE
IST1227I      18       2 = NETVIEW PIU TRACE BUFFERS
IST1227I      19       0 = NETVIEW SAW BUFFER SIZE
IST1227I      68       0 = MAXNO OPERAND
IST1227I      46       27 = INDEPENDENT LU TOTAL
IST1227I      52       0 = ACTIVE DEPENDENT LU TOTAL
IST1227I      66       2 = SWNET STATEMENTS
IST1227I      69       0 = MXGRP OPERAND
IST1227I      99       ICN = VTAM CONFIGURATION
IST1227I      70       7 = PATH STATEMENTS
IST1227I      77       6 = SAME DOMAIN LU6.2 SESSIONS
IST1227I      78       0 = CROSS DOMAIN LU6.2 SESSIONS
IST1227I      79       0 = CROSS NETWORK LU6.2 SESSION
IST1227I      50       76 = DEFINED LU TOTAL
IST1227I      57       1 = LU6.2 APPLICATIONS
IST1227I      53       0 = LOCAL LU-LU SESSIONS
IST1227I      55       0 = LU TOTAL TSO SESSIONS
IST1227I      71       0 = APPL - LU SESSIONS
IST1227I      73       0 = CROSS DOMAIN LU SESSIONS
IST1227I      5       2 = CHANNEL-ATTACHED CONTROLLERS
IST1227I      12       0 = TOTAL MAXBFPU FOR CTC ATTACHMENTS
```

IST1227I	13	0	= CTC TOTAL MAXBFRU CROSS DOMAIN
IST1227I	54	0	= PERSISTENT LU-LU SESSIONS
IST1227I	20	0	= NETVIEW SAW BUFFERS
IST1227I	22	2	= DESTINATION SUBAREAS
IST1227I	101	NO	= CENTRAL DIRECTORY SERVER SUPPORT
IST1227I	123	0	= MPC READ BUFFER
IST1227I	64	6	= CURRENT NUMBER OF SESSION PARTNERS
IST1227I	100	2	= DYNAMIC DIRECTORY ENTRIES
IST1227I	102	1	= REGISTERED DIRECTORY ENTRIES
IST1227I	103	0	= SYSTEM DEFINED DIRECTORY ENTRIES
IST1227I	104	0	= ADJACENT END NODES
IST1227I	106	0	= CENTRAL DIRECTORY SERVER
IST1227I	107	1	= ADJACENT NETWORK NODES
IST1227I	108	7	= APPN CLASS OF SERVICE
IST1227I	109	3	= NETWORK NODES IN THE NETWORK
IST1227I	111	0	= CONNECTION NETWORKS
IST1227I	116	0	= INTERMEDIATE ROUTED SESSIONS
IST1227I	119	0	= CROSS NETWORK LU SESSIONS
IST1227I	120	0	= MULTIPATH CHANNEL MAJOR NODES
IST1227I	121	0	= MPC READ SUBCHANNEL ADDRESSES
IST1227I	122	0	= MPC WRITE SUBCHANNEL ADDRESSES
IST1227I	124	0	= MPC WRITE BUFFER
IST1227I	125	0	= APPLICATION SESSIONS
IST1227I	113	0	= PARALLEL SESSION PER LU
IST1227I	112	0	= CROSS DOMAIN APPL SESSIONS
IST1227I	130	NO	= ANYNET/MVS SNA OVER TCP/IP INSTALLED
IST1227I	127	0	= TCP/IP MAJOR NODES
IST1227I	128	0	= MAXIMUM TCB VALUE FOR TCP/IP MAJOR NODES
IST1227I	129	0	= TCP/IP LU-LU SESSIONS
IST1227I	140	2147483647	= MAXIMUM DIRECTORY SIZE
IST1227I	141	100	= MAXIMUM TRS ROUTING TREES
IST1227I	142	0	= END NODE TRANSMISSION GROUPS
IST1227I	143	1	= NETWORK NODE TRANSMISSION GROUPS
IST1227I	144	0	= VIRTUAL NODE TRANSMISSION GROUPS
IST1227I	152	2	= ACTIVE DEPENDENT LU REQUESTERS
IST1227I	153	3	= ACTIVE DLUR SERVED PU TOTAL
IST1227I	154	12	= ACTIVE DLUR SERVED LU TOTAL
IST1227I	155	0	= VR-BASED TRANSMISSION GROUPS
IST1227I	156	0	= CONNECTION NETWORK DYNAMIC TGS
IST1227I	157	0	= TRANSPORT RESOURCE LIST ENTRIES
IST1227I	159	UNKNOWN	= ADJACENT CLUSTER TABLE CPNAME ENTRIES
IST314I	END		

VM Displaying statistical information:

**d net,stats,type=vtam,num=\***

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=VTAM
IST1349I COMPONENT ID IS 5654-01001-420
IST1345I  ID      VALUE      DESCRIPTION
IST1227I  151      0 = DEPENDENT LU TOTAL FOR ISTEPUS
IST1227I  151      250 = DEPENDENT LU TOTAL FOR A0371ZB
IST1227I  151      204 = DEPENDENT LU TOTAL FOR A3171ZB
IST1227I  45       0 = DEPENDENT LU TOTAL FOR A50LSNAB
IST1227I  1       0 = EXTERNAL VSCS
IST1227I  11      0 = CHANNEL-TO-CHANNEL ATTACHMENTS
IST1227I  61      0 = SNA DATA COMPRESSION SESSIONS
IST1227I  63      34 = RECOVERABLE SESSIONS
IST1227I  56      13 = TOTAL APPL SESSIONS
IST1227I  58      4 = LU6.2 SESSIONS
IST1227I  60      0 = ICSF ENCRYPTION SERVICES
IST1227I  67      0 = PU STATEMENTS UNDER SW LINES
IST1227I  15      1 = SNA PU TOTAL MAXBFRU
IST1227I  21      0 = ICA DEVICES
IST1227I  51      115 = ACTIVE LU TOTAL
IST1227I  10      0 = TOTAL LINE STATEMENTS FOR XCA MAJOR NODES
IST1227I  14      1 = CA CLUSTER CONTROLLER TOTAL
IST1227I  2       150 = VIT TABLE SIZE
IST1227I  65      230 = NUMBER OF LINES DEFINED
IST1227I  3       384 = IOBUF SIZE
IST1227I  47      511 = MAXIMUM SUBAREA
IST1227I  48      269 = DEFINED PU TOTAL
IST1227I  49      6 = ACTIVE PU TOTAL
IST1227I  16      23 = LOCAL NON-SNA TERMINALS
IST1227I  80      110 = NETWORK INDEPENDENT LU TOTAL
IST1227I  81      0 = DYNAMICALLY DEFINED LU TOTAL

```

IST1227I	6	32 = MAXBFRU FOR CHANNEL-ATTACHED CONTROLLERS
IST1227I	8	0 = XCA MAJOR NODES
IST1227I	74	2 = CROSS NETWORK APPL SESSIONS
IST1227I	17	4080 = NETVIEW PIU TRACE BUFFER SIZE
IST1227I	18	2 = NETVIEW PIU TRACE BUFFERS
IST1227I	19	3996 = NETVIEW SAW BUFFER SIZE
IST1227I	68	56 = MAXNO OPERAND
IST1227I	46	110 = INDEPENDENT LU TOTAL
IST1227I	52	0 = ACTIVE DEPENDENT LU TOTAL
IST1227I	66	3 = SWNET STATEMENTS
IST1227I	69	5 = MXGRP OPERAND
IST1227I	99	ICN = VTAM CONFIGURATION
IST1227I	70	3 = PATH STATEMENTS
IST1227I	77	2 = SAME DOMAIN LU6.2 SESSIONS
IST1227I	78	2 = CROSS DOMAIN LU6.2 SESSIONS
IST1227I	79	0 = CROSS NETWORK LU6.2 SESSION
IST1227I	50	621 = DEFINED LU TOTAL
IST1227I	57	1 = LU6.2 APPLICATIONS
IST1227I	53	0 = LOCAL LU-LU SESSIONS
IST1227I	55	0 = LU TOTAL TSO SESSIONS
IST1227I	71	1 = APPL - LU SESSIONS
IST1227I	73	0 = CROSS DOMAIN LU SESSIONS
IST1227I	5	3 = CHANNEL-ATTACHED CONTROLLERS
IST1227I	12	0 = TOTAL MAXBFRU FOR CTC ATTACHMENTS
IST1227I	13	0 = CTC TOTAL MAXBFRU CROSS DOMAIN
IST1227I	54	0 = PERSISTENT LU-LU SESSIONS
IST1227I	20	2 = NETVIEW SAW BUFFERS
IST1227I	22	3 = DESTINATION SUBAREAS
IST1227I	101	NO = CENTRAL DIRECTORY SERVER SUPPORT
IST1227I	123	6 = MPC READ BUFFER
IST1227I	23	0 = SDLC LINKS
IST1227I	24	0 = SDLC PU
IST1227I	25	0 = TYPE 2 PU
IST1227I	26	0 = MAXBFRU SDLC ICA
IST1227I	27	0 = BSC LINK
IST1227I	28	0 = CLUSTER CONTROLLERS
IST1227I	29	0 = BSC TERMINALS
IST1227I	30	0 = LAN DEVICES
IST1227I	31	0 = LAN MAJOR NODES
IST1227I	32	0 = MAXDATA LAN
IST1227I	33	0 = LAN PU
IST1227I	34	0 = X.25 PSDN
IST1227I	35	0 = OSI/CS AND SNA X.25 SHARED NODES
IST1227I	36	0 = OSI/CS SVC
IST1227I	37	0 = SNA X.25 PVC/SVC DEFINED
IST1227I	38	0 = OSI/CS NODES
IST1227I	39	0 = OSI/CS SVC CONNECTIONS ESTABLISHED
IST1227I	40	0 = SNA X.25 MAJOR NODES
IST1227I	41	0 = PLENGTH
IST1227I	42	0 = SNA X.25 PVC AND SVC DEFINED
IST1227I	43	0 = SNA X.25 PU
IST1227I	44	0 = SPLLENGTH
IST1227I	64	28 = CURRENT NUMBER OF SESSION PARTNERS
IST1227I	500	YES = VSCS IS IN SAME VIRTUAL MACHINE AS VTAM
IST1227I	501	2000 = VSCS TRACE TABLE SIZE
IST1227I	502	400 = MAXCONN
IST1227I	503	NO = LU TRACE OPTION
IST1227I	504	0 = LU TRACE ENTRIES
IST1227I	505	NO = RECEIVE SPECIFIC
IST1227I	506	8 = RECEIVE RPL
IST1227I	507	284 = RECEIVE ANY BUFFER SIZE
IST1227I	508	0 = RECEIVE SPECIFIC BUFFER SIZE
IST1227I	509	0 = EXTENDED DATA STREAM DISPLAY
IST1227I	510	16 = PRINTER LU
IST1227I	511	YES = DEFINITE RESPONSE MODE
IST1227I	512	0 = DISPLAY LU
IST1227I	513	1948 = DISPLAY TRANSMIT BUFFER SIZE
IST1227I	514	0 = KEYBOARD/PRINTER LU
IST1227I	515	284 = KEYBOARD/PRINTER DATA BUFFER SIZE
IST1227I	516	10 = MESSAGE LIMIT VALUE
IST1227I	100	6 = DYNAMIC DIRECTORY ENTRIES
IST1227I	102	1 = REGISTERED DIRECTORY ENTRIES
IST1227I	103	0 = SYSTEM DEFINED DIRECTORY ENTRIES
IST1227I	104	0 = ADJACENT END NODES
IST1227I	106	0 = CENTRAL DIRECTORY SERVER
IST1227I	107	4 = ADJACENT NETWORK NODES
IST1227I	108	7 = APPN CLASS OF SERVICE
IST1227I	109	3 = NETWORK NODES IN THE NETWORK
IST1227I	111	1 = CONNECTION NETWORKS
IST1227I	116	0 = INTERMEDIATE ROUTED SESSIONS
IST1227I	119	0 = CROSS NETWORK LU SESSIONS

```

IST1227I 120 0 = MULTIPATH CHANNEL MAJOR NODES
IST1227I 121 1 = MPC READ SUBCHANNEL ADDRESSES
IST1227I 122 1 = MPC WRITE SUBCHANNEL ADDRESSES
IST1227I 124 0 = MPC WRITE BUFFER
IST1227I 125 2 = APPLICATION SESSIONS
IST1227I 113 0 = PARALLEL SESSION PER LU
IST1227I 112 0 = CROSS DOMAIN APPL SESSIONS
IST1227I 130 NO = ANYNET/MVS SNA OVER TCP/IP INSTALLED
IST1227I 127 0 = TCP/IP MAJOR NODES
IST1227I 128 0 = MAXIMUM TCB VALUE FOR TCP/IP MAJOR NODES
IST1227I 129 0 = TCP/IP LU-LU SESSIONS
IST1227I 140 2147483647 = MAXIMUM DIRECTORY SIZE
IST1227I 141 100 = MAXIMUM TRS ROUTING TREES
IST1227I 142 0 = END NODE TRANSMISSION GROUPS
IST1227I 143 2 = NETWORK NODE TRANSMISSION GROUPS
IST1227I 144 2 = VIRTUAL NODE TRANSMISSION GROUPS
IST1227I 152 0 = ACTIVE DEPENDENT LU REQUESTERS
IST1227I 153 0 = ACTIVE DLUR SERVED PU TOTAL
IST1227I 154 0 = ACTIVE DLUR SERVED LU TOTAL
IST1227I 155 2 = VR-BASED TRANSMISSION GROUPS
IST1227I 156 1 = CONNECTION NETWORK DYNAMIC TGS
IST1227I 157 1 = TRANSPORT RESOURCE LIST ENTRIES
IST1227I 159 2 = ADJACENT CLUSTER TABLE CPNAME ENTRIES
IST314I END

```

**VSE** Displaying statistical information:

**d net,stats,type=vtam,num=\***

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=VTAM
IST1349I COMPONENT ID IS 5686-06501-FE6
IST1345I ID VALUE DESCRIPTION
IST1227I 151 0 = DEPENDENT LU TOTAL FOR ISTPUS
IST1227I 11 0 = CHANNEL-TO-CHANNEL ATTACHMENTS
IST1227I 61 0 = SNA DATA COMPRESSION SESSIONS
IST1227I 63 5 = RECOVERABLE SESSIONS
IST1227I 56 0 = TOTAL APPL SESSIONS
IST1227I 58 0 = LU6.2 SESSIONS
IST1227I 60 0 = ICSF ENCRYPTION SERVICES
IST1227I 67 0 = PU STATEMENTS UNDER SW LINES
IST1227I 15 0 = SNA PU TOTAL MAXBFRU
IST1227I 21 0 = ICA DEVICES
IST1227I 51 3 = ACTIVE LU TOTAL
IST1227I 10 0 = TOTAL LINE STATEMENTS FOR XCA MAJOR
IST1227I 14 0 = CA CLUSTER CONTROLLER TOTAL
IST1227I 2 200 = VIT TABLE SIZE
IST1227I 65 0 = NUMBER OF LINES DEFINED
IST1227I 3 256 = IOBUF SIZE
IST1227I 47 511 = MAXIMUM SUBAREA
IST1227I 48 0 = DEFINED PU TOTAL
IST1227I 49 0 = ACTIVE PU TOTAL
IST1227I 16 3 = LOCAL NON-SNA TERMINALS
IST1227I 80 0 = NETWORK INDEPENDENT LU TOTAL
IST1227I 81 0 = DYNAMICALLY DEFINED LU TOTAL
IST1227I 6 0 = MAXBFRU FOR CHANNEL-ATTACHED CONTROL
IST1227I 8 0 = XCA MAJOR NODES
IST1227I 74 0 = CROSS NETWORK APPL SESSIONS
IST1227I 17 0 = NETVIEW PIU TRACE BUFFER SIZE
IST1227I 18 2 = NETVIEW PIU TRACE BUFFERS
IST1227I 19 0 = NETVIEW SAW BUFFER SIZE
IST1227I 68 0 = MAXNO OPERAND
IST1227I 46 0 = INDEPENDENT LU TOTAL
IST1227I 52 0 = ACTIVE DEPENDENT LU TOTAL
IST1227I 66 1 = SWNET STATEMENTS
IST1227I 69 0 = MXGRP OPERAND
IST1227I 99 ICN = VTAM CONFIGURATION
IST1227I 70 0 = PATH STATEMENTS
IST1227I 77 0 = SAME DOMAIN LU6.2 SESSIONS
IST1227I 78 0 = CROSS DOMAIN LU6.2 SESSIONS
IST1227I 79 0 = CROSS NETWORK LU6.2 SESSION
IST1227I 50 3 = DEFINED LU TOTAL
IST1227I 57 1 = LU6.2 APPLICATIONS
IST1227I 53 0 = LOCAL LU-LU SESSIONS
IST1227I 55 0 = LU TOTAL TSO SESSIONS
IST1227I 71 0 = APPL - LU SESSIONS
IST1227I 73 0 = CROSS DOMAIN LU SESSIONS

```

```

IST1227I      5      1 = CHANNEL-ATTACHED CONTROLLERS
IST1227I     12      0 = TOTAL MAXBFRR FOR CTC ATTACHMENTS
IST1227I     13      0 = CTC TOTAL MAXBFRR CROSS DOMAIN
IST1227I     54      0 = PERSISTENT LU-LU SESSIONS
IST1227I     20      0 = NETVIEW SAW BUFFERS
IST1227I     22      1 = DESTINATION SUBAREAS
IST1227I    101     NO = CENTRAL DIRECTORY SERVER SUPPORT
IST1227I    123      0 = MPC READ BUFFER
IST1227I     23      0 = SDLC LINKS
IST1227I     24      0 = SDLC PU
IST1227I     25      0 = TYPE 2 PU
IST1227I     26      0 = MAXBFRR SDLC ICA
IST1227I     27      0 = BSC LINK
IST1227I     28      0 = CLUSTER CONTROLLERS
IST1227I     29      0 = BSC TERMINALS
IST1227I     30      0 = LAN DEVICES
IST1227I     31      0 = LAN MAJOR NODES
IST1227I     32      0 = MAXDATA LAN
IST1227I     33      0 = LAN PU
IST1227I     34      0 = X.25 PSDN
IST1227I     35      0 = OSI/CS AND SNA X.25 SHARED NODES
IST1227I     36      0 = OSI/CS SVC
IST1227I     37      0 = SNA X.25 PVC/SVC DEFINED
IST1227I     38      0 = OSI/CS NODES
IST1227I     39      0 = OSI/CS SVC CONNECTIONS ESTABLISHED
IST1227I     40      0 = SNA X.25 MAJOR NODES
IST1227I     41      0 = PLENGTH
IST1227I     42      0 = SNA X.25 PVC AND SVC DEFINED
IST1227I     43      0 = SNA X.25 PU
IST1227I     44      0 = SPLENGTH
IST1227I     64      0 = CURRENT NUMBER OF SESSION PARTNERS
IST1227I    100      0 = DYNAMIC DIRECTORY ENTRIES
IST1227I    102      1 = REGISTERED DIRECTORY ENTRIES
IST1227I    103      0 = SYSTEM DEFINED DIRECTORY ENTRIES
IST1227I    104      0 = ADJACENT END NODES
IST1227I    106      0 = CENTRAL DIRECTORY SERVER
IST1227I    107      0 = ADJACENT NETWORK NODES
IST1227I    108      7 = APPN CLASS OF SERVICE
IST1227I    109      1 = NETWORK NODES IN THE NETWORK
IST1227I    111      0 = CONNECTION NETWORKS
IST1227I    116      0 = INTERMEDIATE ROUTED SESSIONS
IST1227I    119      0 = CROSS NETWORK LU SESSIONS
IST1227I    120      0 = MULTIPATH CHANNEL MAJOR NODES
IST1227I    121      0 = MPC READ SUBCHANNEL ADDRESSES
IST1227I    122      0 = MPC WRITE SUBCHANNEL ADDRESSES
IST1227I    124      0 = MPC WRITE BUFFER
IST1227I    125      0 = APPLICATION SESSIONS
IST1227I    113      0 = PARALLEL SESSION PER LU
IST1227I    112      0 = CROSS DOMAIN APPL SESSIONS
IST1227I    130     NO = ANYNET/MVS SNA OVER TCP/IP INSTALLED
IST1227I    127      0 = TCP/IP MAJOR NODES
IST1227I    128      0 = MAXIMUM TCB VALUE FOR TCP/IP MAJOR N
IST1227I    129      0 = TCP/IP LU-LU SESSIONS
IST1227I    140 2147483647 = MAXIMUM DIRECTORY SIZE
IST1227I    141      100 = MAXIMUM TRS ROUTING TREES
IST1227I    142      0 = END NODE TRANSMISSION GROUPS
IST1227I    143      0 = NETWORK NODE TRANSMISSION GROUPS
IST1227I    144      0 = VIRTUAL NODE TRANSMISSION GROUPS
IST1227I    152      0 = ACTIVE DEPENDENT LU REQUESTERS
IST1227I    153      0 = ACTIVE DLUR SERVED PU TOTAL
IST1227I    154      0 = ACTIVE DLUR SERVED LU TOTAL
IST1227I    155      0 = VR-BASED TRANSMISSION GROUPS
IST1227I    156      0 = CONNECTION NETWORK DYNAMIC TGS
IST1227I    157      0 = TRANSPORT RESOURCE LIST ENTRIES
IST1227I    159     UNKNOWN = ADJACENT CLUSTER TABLE CPNAME ENTRIE
IST314I END

```

**MVS,VSE** Displaying data compression statistics:

**d net,stats,type=compress**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=COMPRESS
IST1435I LEVEL      INPUT      OUTPUT
IST1176I           BASIC      FROZEN
IST1177I      0      13910    13800    **NA**
IST1177I      1         489      164      **NA**
IST1177I      2         701      833      404
IST1177I      3         286       55       20

```

```
IST1177I 4 90 147 53
IST314I END
```

VM Displaying data compression statistics:

**d net,stats,type=compress**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=COMPRESS
IST1435I LEVEL INPUT OUTPUT
IST1176I BASIC FROZEN
IST1177I 0 15 15 **NA**
IST1177I 1 0 0 **NA**
IST1177I 2 0 0 0
IST1177I 3 0 0 0
IST1177I 4 0 0 0
IST314I END
```

MVS Displaying a coupling facility structure:

**d net,stats,type=cfs**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STATS,TYPE=CFS
IST1370I NETA.SSCP1A IS CONNECTED TO STRUCTURE ISTGENERIC
IST1371I STRUCTURE TYPE = LIST - VERSION NUMBER = A84BFDF260F31422
IST1373I STORAGE ELEMENT SIZE = 1024
IST924I -----
IST1374I CURRENT MAXIMUM
IST1375I STRUCTURE SIZE 10240K 10240K
IST1376I STORAGE ELEMENTS 3 116
IST1377I LIST ENTRIES 63 29798
IST314I END
```



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## 2.1.36 DISPLAY STORUSE Command

**MVS,VSE Display storage usage for applications:**

```
>> __DISPLAY NET,STORUSE __,APPL=__ * _____ >
          |<_, _____|
          |_( __ appl name |_)_|

> | _____,NUM=DSPLYMAX start option value _____ ><
  | _____,NUM=__ * _____
  | _____|
  | _____ number of output lines _____|
```

**MVS,VSE Display storage usage for application jobs:**

```
>> __DISPLAY NET,STORUSE __,JOBNAME=__ * _____ >
          |<_, _____|
          |_( __ appl job name |_)_|

> | _____,NUM=DSPLYMAX start option value _____ ><
  | _____,NUM=__ * _____
  | _____|
  | _____ number of output lines _____|
```

**MVS,VSE Display storage usage for data spaces:**

```
>> __DISPLAY NET,STORUSE __,DSPNAME=__ * _____ >
          |<_, _____|
          |_( __ data space name |_)_|

> | _____,NUM=DSPLYMAX start option value _____ ><
  | _____,NUM=__ * _____
  | _____|
  | _____ number of output lines _____|
```

**Display storage usage for storage pools:**

```
>> __ vm prefix DISPLAY NET,STORUSE _____ >

> | _____,POOL=* _____ >
  | _____,POOL=__ * _____
  | _____|
  | _____<_, _____|
  | _____ storage pool name |_)_|

> | _____,NUM=DSPLYMAX start option value _____ ><
  | _____,NUM=__ * _____
  | _____|
  | _____ number of output lines _____|
```

**Abbreviations**

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY STORUSE (storage usage) command provides information about storage usage of VTAM **MVS,VSE** data spaces and storage pools.

You can specify the name of any one of the following:

- **MVS,VSE** Application
- **MVS,VSE** Application job
- **MVS,VSE** Data space
- Storage pool.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

APPL **MVS,VSE**  
specifies the applications about which storage usage information is to be displayed.

APPL=appl\_name  
displays storage usage information for one or more applications.

APPL=\*  
displays storage usage information for all applications.

DSPNAME **MVS,VSE**  
specifies the data spaces about which storage usage information is to be displayed.

DSPNAME=data\_space\_name  
displays storage usage information for one or more VTAM data spaces.

DSPNAME=\*  
displays storage usage information for all VTAM data spaces.

**JOBNAME MVS,VSE**

specifies the VTAM application jobs about which storage usage information is to be displayed.

JOBNAME=appl\_job\_name

displays storage usage information for one or more VTAM application jobs.

JOBNAME=\*

displays storage usage information for all VTAM application jobs.

**NUM**

specifies the maximum number of output lines that VTAM displays for this command.

NUM=number\_of\_output\_lines

specifies the maximum number of output lines to display. The valid range is 1-65535. The default is the value specified for the DSPLYMAX start option.

NUM=\*

displays all output lines.

**POOL**

specifies the VTAM storage pools about which usage information is to be displayed. Use \* to display a list of valid pool names available in your system.

POOL=storage pool name

displays storage usage information for one or more VTAM storage pools.

POOL=\*

displays storage usage information for all VTAM storage pools.

For descriptions of the functions and characteristics of the storage pools displayed, see ["DISPLAY STORUSE Pools"](#) in the *VTAM Network Implementation Guide*.

**Resulting Display**

The resulting display shows:

- Pool name or **MVS,VSE** data space name
- **MVS,VSE** Job name

- **MVS,VSE** Application name
- **MVS,VSE** Number of applications
- Current storage
- Maximum storage.

## Examples

Displaying data space usage for a specific pool:

```
d net,storuse,pool=sibext
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1242I POOL          CURRENT MAXIMUM
IST1243I SIBEXT       128          128
IST314I END
```

**MVS,VSE** Displaying data space usage for all data space names, limiting output to 8 lines:

```
d net,storuse,dspname=*,num=8
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1238I DSPNAME     CURRENT MAXIMUM  QUEUED
IST1239I ISTNMPDS    0             0      0
IST1239I ISTNMSDS    0             0      0
IST924I -----
IST1240I DSPNAME     CURRENT MAXIMUM  JOBNAME  APPL      COUNT
IST1241I 00000IST    16             16  NVASR3   NVASA50   3
IST1315I DISPLAY TRUNCATED AT NUM = 8
IST314I END
```

**MVS,VSE** Displaying data space usage for a specific data space:

```
d net,storuse,dspname=istnmsds
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1238I DSPNAME     CURRENT MAXIMUM  QUEUED
IST1239I ISTNMSDS    0             0      0
IST314I END
```

**MVS,VSE** Displaying data space usage for all applications, limiting output to 10 lines:

```
d net,storuse,appl=*,num=10
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1240I DSPNAME     CURRENT MAXIMUM  JOBNAME  APPL      COUNT
IST1241I 00000IST    16             16  NVASR3   NVASA50   3
IST1241I 00001IST    0             0    TSO     TSO        2
IST1241I 00002IST    0             0  ECHO31E  ECHO50A   1
IST1241I 00000IST    16             16  NVASR3   E5000001  3
IST1241I 00000IST    16             16  NVASR3   E5000002  3
IST1241I 00003IST    0             0  ECHO31E  ECHO50    1
IST1241I 00004IST    0             0  VTAMAPPL A50APPC   2
IST1315I DISPLAY TRUNCATED AT NUM = 10
IST314I END
```

**MVS,VSE** Displaying data space usage for a specific job:

```
d net,storuse,jobname=echo31e
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1240I DSPNAME     CURRENT MAXIMUM  JOBNAME  APPL      COUNT
```

```
IST1241I 00002IST      0      0 ECHO31E  ECHO50A  1
IST1241I 00003IST      0      0 ECHO31E  ECHO50   1
IST314I  END
```

**MVS,VSE** Displaying data space usage for a specific application:

**d net,storuse,appl=echo02a**

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = STORAGE USAGE
IST1240I DSPNAME  CURRENT MAXIMUM JOBNAME  APPL      COUNT
IST1241I 00001IST      4      16 ECHO31E  ECHO02A  1
IST314I  END
```



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## 2.1.37 DISPLAY TABLE Command

```
>> vm_prefix DISPLAY NET, TABLE __, ID=table_name | SCOPE=ONLY | __><
| SCOPE= | ONLY |
| ALL |
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE or N

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

This command displays the table type and the number of resources that are associated with the table (use count) and identifies the users of a table. The tables displayed include:

- Associated LU (ASLTAB)
- Class-of-service (COSTAB)
- Logon interpret (LOGTAB)
- Logon mode (MODETAB)
- Message-flooding prevention (FLDTAB)
- Model name (MDLTAB)
- USS (USSTAB).

**Note:** SAW data filter tables are not displayed by this command.

**VSE** Call progress signal (CPS) tables are not displayed by this command. (Use the ["DISPLAY CPS Command \(VSE\)"](#) to show CPS tables.)

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=table\_name  
specifies the name of the table.

SCOPE  
specifies whether to display a list of users of the table.

SCOPE=ALL  
displays the name of each resource associated with the table. For a COS table, the use count might be higher than the number of user resource names displayed for SCOPE=ALL, if the COS table is used by a type 4 or type 5 physical unit for multiple networks.

SCOPE=ONLY  
does not display the names of the resources associated with the table.

### Resulting Display

The resulting display shows:

- For SCOPE=ONLY, the table name, type, and use count
- For SCOPE=ALL, the table name, type, use count, and the resources associated with the table.

### Examples

Displaying all resources for an associated LU table:

```
d net,table,id=asltab1,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=ASLTAB1 TYPE=ASLTAB USE COUNT=62
IST987I THE RESOURCES THAT USE THE TABLE ARE:
IST988I A04D88A1 A04D88A2 A04D88A3
IST988I A04D8817 A04D8818 A04D8819
IST988I A04D881A A04D881B A04D881C
IST988I A04D881D A04D881E A04D881F
IST988I C23MMNLU A04MMNLU
IST314I END
```

Displaying all resources for a class-of-service table:

```
d net,table,id=istsdcos,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=ISTSDCOS TYPE=COSTAB USE COUNT=1
IST987I THE RESOURCES THAT USE THE TABLE ARE:
IST988I ISTPUS
IST314I END
```

Displaying all resources for a message-flooding prevention table:

```
d net,table,id=istmsfld,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=ISTMSFLD TYPE=FLDTAB USE COUNT=1
IST987I THE RESOURCES THAT USE THE TABLE ARE:
IST988I ISTNOP
IST314I END
```

Displaying the use count for a logon interpret table:

```
d net,table,id=interp,scope=only
IST097I DISPLAY ACCEPTED
IST986I TABLE=INTERP TYPE=LOGTAB USE COUNT=832
IST314I END
```

Displaying all resources for a logon mode table:

```
d net,table,id=amodetab,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=AMODETAB TYPE=MODETAB USE COUNT=1227
IST987I THE RESOURCES THAT USE THE TABLE ARE:
IST988I A04I0421 A04I0422 A04I0423
IST988I A04I0424 A04I0425 A04I0431
IST988I A04D52AA A04D52AB A04D52AC
IST988I A04D52AD A04D52AE A04D52AF
IST988I A04D52C1 A04D52C2 A04D52C3
IST988I A04D52C4 A04D52C5 A04D52C6
IST988I A04D52C7 A04D52C8 A04D52C9
IST988I A04D52CA A04D52CB A04D52CC
IST988I A04D52CD A04D52CE A04D52CF
IST314I END
```

Displaying all resources for a model name table:

```
d net,table,id=mdltab1,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=MDLTAB1 TYPE=MDLTAB USE COUNT=61
IST987I THE RESOURCES THAT USE THE TABLE ARE:
IST1154I NETA.A03D88A1 NETA.A03D88A2 NETA.A03D88A3
IST1154I NETA.A03D88A4 NETA.A03D88A5 NETA.A03D88A6
IST1154I NETA.A03D88A7 NETA.A03D88A8 NETA.A03D88A9
IST1154I NETA.A03D88AA NETA.A03D88AB NETA.A03D88AC
IST1154I NETA.A03D88AD NETA.A03D88AE NETA.A03D88AF
IST1154I NETA.A03D8871 NETA.A03D8872 NETA.A03D8873
IST1154I NETA.A03D8874 NETA.A03D8875 NETA.A03D8876
IST1154I NETA.A03D8877 NETA.A03D8878 NETA.A03D8879
IST1154I NETA.A03D887A NETA.A03D887B NETA.A03D887C
IST1154I NETA.A03D887D NETA.A03D887E NETA.A03D887F
IST1154I NETA.A03D8841 NETA.A03D8842 NETA.A03D8843
IST1154I NETA.A03D8844 NETA.A03D8845 NETA.A03D8846
IST1154I NETA.A03D8847 NETA.A03D8848 NETA.A03D8849
IST1154I NETA.A03D884A NETA.A03D884B NETA.A03D884C
IST1154I NETA.A03D884D NETA.A03D884E NETA.A03D884F
IST1154I NETX.A03D8811 NETX.A03D8812 NETX.A03D8813
IST1154I NETX.A03D8814 NETX.A03D8815 NETX.A03D8816
IST1154I NETX.A03D8817 NETX.A03D8818 NETX.A03D8819
IST1154I NETX.A03D881A NETX.A03D881B NETX.A03D881C
IST1154I NETX.A03D881D NETX.A03D881E NETX.A03D881F
IST1154I NETA.A03MMNLU
IST314I END
```

Displaying all resources for a USS table:

```
d net,table,id=ausstab,scope=all
IST097I DISPLAY ACCEPTED
IST986I TABLE=AUSSTAB TYPE=USSTAB USE COUNT=912
IST987I THE RESOURCES THAT USE THE TABLE ARE:
```



```
IST988I A04D88A1 A04D88A2 A04D88A3  
IST988I A04D88A4 A04D88A5 A04D88A6  
IST988I A04D52CD A04D52CE A04D52CF  
IST988I A04PT88A A04PT89A A04PT92A  
IST314I END
```

---



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## 2.1.38 DISPLAY TERMS Command

```
>> vm_prefix DISPLAY NET,TERMS _____>
                                     |_,ID=  name  _____|
                                     |<_,_____|_____|
                                     |_(name|_)_|_____|

> _____><
  |_,SCOPE=ALL|_____
  |_,SCOPE=  ACT |_____
  |              ACTONLY |_____
  |              ALL      |_____
  |              CONCT   |_____
  |              INACT   |_____
  |              INACTONLY |_____
  |              PENDING |_____
  |              RESET   |_____
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
SCOPE=ACT	ACT or A
SCOPE=ACTONLY	ACTONLY
SCOPE=ALL	EVERY or E
SCOPE=CONCT	CONCT
SCOPE=INACT	INACT or I
SCOPE=INACTONLY	INACTONL
SCOPE=PENDING	PEND
SCOPE=RESET	RESET

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

### Purpose

The DISPLAY TERMS (terminals) command displays the status of device-type logical units (terminals) that are in active major nodes. The command does not display information about independent LUs.

### Notes:

1. In a domain that has many terminals, this command might result in an undesirably large display, especially if the SCOPE=ALL operand, which is the default, is used. You can limit the display by using a more restrictive SCOPE value and by specifying the desired major node or nodes on the ID operand.
2. To display device-type logical units independently of the major nodes that contain them, use the DISPLAY RSCLIST command with IDTYPE=TERMS.

## Operands

### vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ID=name

specifies the name of one or more active NCP, local SNA, local non-SNA, **VM,VSE** channel-attachment, or switched major nodes whose device-type LUs are to be displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every major node in the network.*

### SCOPE

specifies the desired scope of the display.

#### SCOPE=ACT

specifies that information is to be displayed about all active, pending, and connectable device-type logical units within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=ACTONLY or SCOPE=CONCT to further limit the display.

#### SCOPE=ACTONLY

specifies that information is to be displayed about all device-type logical units in an active state within the specified major nodes (or within all major nodes if the ID operand is omitted). The display does **not** include terminals in pending or connectable states. If no terminals are found in an active state, you can use SCOPE=ACT to broaden the scope of the display to include terminals in active, connectable, and pending states.

#### SCOPE=ALL

specifies that information is to be displayed about all device-type logical units (regardless of their status) within the specified major nodes (or within all major nodes if the ID operand is omitted).

**SCOPE=CONCT**

specifies that information is to be displayed about all device-type logical units in a CONCT (connectable) state within the specified major nodes (or within all major nodes if the ID operand is omitted). If no terminals are found in a connectable state, you can use SCOPE=ACT to broaden the scope of the display to include terminals in active, connectable, and pending states.

**SCOPE=INACT**

specifies that information is to be displayed about all inactive device-type logical units within the specified major nodes (or within all major nodes if the ID operand is omitted). If this display is undesirably large, you can use SCOPE=INACTONLY or SCOPE=RESET to further limit the display.

**SCOPE=INACTONLY**

specifies that information is to be displayed about all inactive device-type logical units within the specified major nodes (or within all major nodes if the ID operand is omitted). Resources in a RESET state are not included in the SCOPE=INACTONLY display.

**SCOPE=PENDING**

specifies that information is to be displayed about all pending device-type logical units within the specified major nodes (or within all major nodes if the ID operand is omitted). A pending state is a transient state to or from the fully active state.

**SCOPE=RESET**

specifies that information is to be displayed about all device-type logical units in a RESET state within the specified major nodes (or within all major nodes if the ID operand is omitted).

**Resulting Display**

For each major node with terminals, the resulting display shows:

- The major node name
- The line name and status (if the terminal is attached over a line)
- The name and status of the associated physical unit (if any)
- The name and status of the logical unit.

**VSE** For lines supported by X.21 short-hold mode/multiple port sharing (SHM/MPS), VTAM displays PUs. If the PUs are waiting to be retried under X.21 call progress signal retry, VTAM adds a modifier to the message. To see more information about these signals, use the ["DISPLAY CPS Command \(VSE\)."](#)

**Note:** Physical units and logical units in a switched major node are always listed under the switched major node and never under the NCP or channel-attachment major node containing the switched link through which they are attached. To determine the name of this NCP or channel-attachment major node and line, enter a ["DISPLAY ID Command"](#) with ID=*pu\_name* or ID=*lu\_name*.

**Examples**

Displaying terminals within a specific node:

**d net,terms,id=a50local**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LOGICAL UNITS/TERMS
IST351I LOCAL 3270 MAJOR NODE = A50LOCAL
IST089I A50A720 TYPE = LOGICAL UNIT , NEVAC , CUA=0720
IST089I A50A721 TYPE = LOGICAL UNIT , ACTIV , CUA=0721
IST089I A50A722 TYPE = LOGICAL UNIT , ACT/S , CUA=0722
IST089I A50A723 TYPE = LOGICAL UNIT , ACTIV , CUA=0723
IST089I A50A724 TYPE = LOGICAL UNIT , ACTIV , CUA=0724
IST089I A50A725 TYPE = LOGICAL UNIT , ACTIV , CUA=0725
IST089I A50A726 TYPE = LOGICAL UNIT , NEVAC , CUA=0726
IST314I END

```

Displaying all terminals:

**d net,terms**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = LOGICAL UNITS/TERMS
IST354I PU T4/5 MAJOR NODE = ISTPUS
IST172I NO LOGICAL UNITS EXIST
IST353I SWITCHED SNA MAJOR NODE = ISTDWMMN
IST146I LINE NAME = J000400B, STATUS = ACTIV
IST359I ATTACHMENT = SWITCHED
IST089I A04P88A TYPE = PHYSICAL UNIT , ACTIV---X-
IST355I LOGICAL UNITS:
IST080I A04D88A1 ACTIV---X- A04D88A2 ACTIV---X- A04D88A3 ACT/S---X-
IST080I A04D88A4 ACTIV---X- A04D88A5 ACTIV---X- A04D88A6 ACTIV---X-
IST080I A04D88A7 ACTIV---X- A04D88A8 ACTIV---X- A04D88A9 ACTIV---X-
IST080I A04D88AA ACTIV---X- A04D88AB ACT/S---X- A04D88AC ACT/S---X-
IST080I A04D88AD ACT/S---X- A04D88AE ACT/S---X- A04D88AF ACT/S---X-
IST146I LINE NAME = J0004011, STATUS = ACTIV
IST359I ATTACHMENT = SWITCHED
IST089I A04P887 TYPE = PHYSICAL UNIT , ACTIV---X-
IST355I LOGICAL UNITS:
IST080I A04D8871 ACTIV---X- A04D8872 ACTIV---X- A04D8873 ACTIV---X-
IST080I A04D8874 ACTIV---X- A04D8875 ACTIV---X- A04D8876 ACTIV---X-
IST080I A04D8877 ACTIV---X- A04D8878 ACTIV---X- A04D8879 ACTIV---X-
IST080I A04D887A ACTIV---X- A04D887B ACT/S---X- A04D887C ACT/S---X-
IST080I A04D887D ACT/S---X- A04D887E ACT/S---X- A04D887F ACT/S---X-
IST146I LINE NAME = J0004017, STATUS = ACTIV
IST359I ATTACHMENT = SWITCHED
IST089I A04P884 TYPE = PHYSICAL UNIT , ACTIV---X-
IST355I LOGICAL UNITS:
IST080I A04D8841 ACTIV---X- A04D8842 ACT/S---X- A04D8843 ACT/S---X-
IST080I A04D8844 ACT/S---X- A04D8845 ACTIV---X- A04D8846 ACTIV---X-
IST080I A04D8847 ACTIV---X- A04D8848 ACTIV---X- A04D8849 ACTIV---X-
IST080I A04D884A ACTIV---X- A04D884B ACT/S---X- A04D884C ACT/S---X-
IST080I A04D884D ACT/S---X- A04D884E ACT/S---X- A04D884F ACT/S---X-
IST146I LINE NAME = J000401D, STATUS = ACTIV
IST359I ATTACHMENT = SWITCHED
IST089I A04P881 TYPE = PHYSICAL UNIT , ACTIV---X-
IST355I LOGICAL UNITS:
IST080I A04D8811 ACTIV---X- A04D8812 ACT/S---X- A04D8813 ACTIV---X-
IST080I A04D8814 ACTIV---X- A04D8815 ACT/S---X- A04D8816 ACTIV---X-
IST080I A04D8817 ACTIV---X- A04D8818 ACTIV---X- A04D8819 ACTIV---X-
IST080I A04D881A ACTIV---X- A04D881B ACTIV---X- A04D881C ACTIV---X-
IST080I A04D881D ACT/S---X- A04D881E ACT/S---X- A04D881F ACTIV---X-
IST314I END

```



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## 2.1.39 DISPLAY TGPS Command

```
>> vm_prefix DISPLAY NET,TGPS _____><
                                     |_,ID= tg_profile_name _____|
                                     |<_,_____||
                                     |_(tg_profile_name|_)_|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
TGPS	TGP

### Purpose

The DISPLAY TGPS (transmission group profiles) command displays the currently defined TG profiles by name, along with the transmission group characteristics that they represent. For more information on defining a transmission group profile, see ["APPN Transmission Group Profile"](#) in the *VTAM Resource Definition Reference*. This command is valid only when it is issued at an APPN node (network node, end node, interchange node, or migration data host).

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=tg\_profile\_name  
specifies the name of one or more transmission group profiles to display. If you omit the ID operand, all profiles are displayed.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every transmission group profile in the network.*

## Resulting Display

The resulting display shows the TG profile names and the TG characteristics that are defined to VTAM. The TG characteristics are shown in a 16-byte hex string.

Byte	Description														
1	Flag byte. This byte is zero when you display a TG profile, but other values might appear when you display the TG characteristics for an active resource (for example, the output of the DISPLAY ADJCP command).														
2	Capacity. This value corresponds to the CAPACITY value coded in the TGP definition statement. The displayed value is an internal representation of the coded value. For more information on how the CAPACITY value coded in the TG profile is mapped to the internal representation used by VTAM, see <a href="#">"APPN Transmission Group Profile"</a> in the <i>VTAM Resource Definition Reference</i> .														
3-7	Reserved (zero)														
8	Cost per unit time. This value corresponds to the COSTTIME value coded in the TGP definition statement.														
9	Cost per byte. This value corresponds to the COSTBYTE value coded in the TGP definition statement.														
10	Reserved (zero)														
11	Security. This value corresponds to the SECURITY value coded in the TGP definition statement as follows: <table border="0"> <tr><td>X'01'</td><td>UNSECURE</td></tr> <tr><td>X'20'</td><td>PUBLIC</td></tr> <tr><td>X'40'</td><td>UNDERGRO</td></tr> <tr><td>X'60'</td><td>SECURE</td></tr> <tr><td>X'80'</td><td>GUARDED</td></tr> <tr><td>X'A0'</td><td>ENCRYPT</td></tr> <tr><td>X'C0'</td><td>SHIELDED</td></tr> </table>	X'01'	UNSECURE	X'20'	PUBLIC	X'40'	UNDERGRO	X'60'	SECURE	X'80'	GUARDED	X'A0'	ENCRYPT	X'C0'	SHIELDED
X'01'	UNSECURE														
X'20'	PUBLIC														
X'40'	UNDERGRO														
X'60'	SECURE														
X'80'	GUARDED														
X'A0'	ENCRYPT														
X'C0'	SHIELDED														
12	Propagation delay. This value corresponds to the PDELAY value coded in the TGP definition statement as follows: <table border="0"> <tr><td>X'4C'</td><td>NEGLIGIB</td></tr> <tr><td>X'71'</td><td>TERRESTR</td></tr> <tr><td>X'91'</td><td>PACKET</td></tr> <tr><td>X'99'</td><td>LONG</td></tr> </table>	X'4C'	NEGLIGIB	X'71'	TERRESTR	X'91'	PACKET	X'99'	LONG						
X'4C'	NEGLIGIB														
X'71'	TERRESTR														
X'91'	PACKET														
X'99'	LONG														
13	Reserved (zero)														
14-16	User-defined. These values correspond to the values coded for UPARM1, UPARM2, and UPARM3 respectively in the TGP definition statement.														

**Examples**

Displaying a specific transmission group profile:

```
d net,tgps,id=secure
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TGPS
IST1107I TGP NAME TG CHARACTERISTICS
IST1108I SECURE 00750000000000969600604C00000000
IST314I END
```

Displaying all transmission group profiles:

```
d net,tgps
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TGPS
IST1107I TGP NAME TG CHARACTERISTICS
IST1108I UNSECURE 00750000000000646400014C00000000
IST1108I UNDERGRO 007500000000007D7D00404C00000000
IST1108I SECURE 00750000000000969600604C00000000
IST1108I GUARDED 00750000000000C8C800804C00000000
IST1108I SHIELDED 00750000000000C8FF00C04C00000000
IST1108I TGPL11 00750000000000000000014C00000000
IST1108I TGPL12 00B40000000000000000604C00808080
IST1108I TGPL21 00430000000000000000014C00000000
IST1108I TGPL22 00B4000000000000A0A006071003C3C3C
IST1108I TGPL31 005200000000000000000204C003D3D3D
IST1108I TGPL32 00B4000000000000A0A00409100808080
IST1108I LOWSWCH 002D000000000003CB400207100808080
IST1108I MEDSWCH 002D00000000000787800207100808080
IST1108I HIGHSWCH 002D00000000000B43C00207100808080
IST1108I LOWLEASE 002D00000000000507800017100808080
IST1108I MEDLEASE 002D00000000000645000017100808080
IST1108I HIGHLEAS 002D00000000000782800017100808080
IST1108I TRINGLOW 007500000000000A1400014C00808080
IST1108I TRINGHI 008500000000000A1400014C00808080
IST1108I CHANNEL 002D0000000000050500604C00808080
IST1108I CHANESCA 002D0000000000050A00604C00808080
IST1108I TGPTESTA 00140000000000FF0000804C00818181
IST1108I TGPTESTB 004A0000000000064000014C003D3D3D
IST1108I TGPTESTC 005200000000000A0000204C003D3D3D
IST1108I TGPLOW 00140000000000FFC800804C00818181
IST1108I TGPMED 004A000000000006400014C003D3D3D
IST314I END
```



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## 2.1.40 DISPLAY TOPO Command

Display a summary of the topology database:

```
>> vm_prefix DISPLAY NET, TOPO_ | LIST=SUMMARY | _____ ><
```

Display a specific node:

```
>> vm_prefix DISPLAY NET, TOPO_ | ID=cp_name | _____ >
| APPNCOS=cos_name | _____ ><
> _____ ><
| LIST=ALL | _____ ><
```

Display adjacent nodes:

```
>> vm_prefix DISPLAY NET, TOPO_ | ID=cp_name | LIST=ADJ _____ >
> _____ ><
| APPNCOS=cos_name | _____ ><
```

Display nodes of a specific type:

```
>> vm_prefix DISPLAY NET, TOPO_ | LIST=
| BN | _____ >
| CDSEVR | _____ >
| EN | _____ >
| ICN | _____ >
| NN | _____ >
| VN | _____ >
> _____ ><
| APPNCOS=cos_name | _____ ><
| ID=*.* | _____ ><
| ID= name | _____ ><
| * | _____ ><
```

Display a specific TG or TGs:

```
>> vm_prefix DISPLAY NET, TOPO_ | ORIG=cp_name _____ >
> _____ ><
| DEST=cp_name | _____ ><
| TGN=tg_number | _____ ><
| APPNCOS=cos_name | _____ ><
```

Abbreviations

Operand	Abbreviation
---------	--------------

DISPLAY	D
---------	---

## Purpose

The DISPLAY TOPO (topology) command displays information about the topology of an APPN network. This command is valid only when it is issued at a network node or an interchange node.

This command displays only the information that is found in the topology database. Some resources might not be displayed because no CP-CP session path exists between the resource and the node from which this command is issued. Also, some resources might not be displayed because information about end nodes and the resources they own is not broadcast to the network.

When you display transmission group (TG) information, the order in which you specify the origin and destination can make a difference. ORIG=A,DEST=B does not necessarily display the same results as ORIG=B,DEST=A.

The following examples illustrate how this command works.

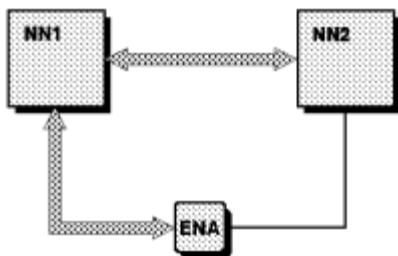


Figure 3. DISPLAY TOPO Topology Example 1

In [Figure 3](#), end node A (ENA) has a CP-CP session with network node 1 (NN1) and an active link to network node 2 (NN2). Also, a CP-CP session exists between NN1 and NN2. The command:

```
D NET,TOPO,ORIG=NN2,DEST=ENA
```

issued from NN2 displays the requested TG information. However, the command:

```
D NET,TOPO,ORIG=ENA,DEST=NN2
```

issued from NN2 causes an error message, RESOURCE NOT FOUND. Because ENA is an end node, its TGs are not broadcast to the network, so NN2 does not know that ENA has a TG from ENA to NN2.

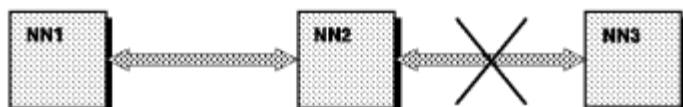


Figure 4. DISPLAY TOPO Topology Example 2

In [Figure 4](#), CP-CP sessions exist between NN1 and NN2 and between NN2 and NN3. Suppose the link between NN2 and NN3 goes down. The command:

```
D NET,TOPO,ORIG=NN2,DEST=NN3
```

issued from NN1 indicates that the TG is inactive, but the command:

```
D NET,TOPO,ORIG=NN3,DEST=NN2
```

issued from NN1 indicates that the TG is still active. This is because the link between NN2 and NN3 appears to VTAM's topology component to be two one-way TGs, and there is no CP-CP session path available to NN1 so that NN3 can report that the TG from NN3 to NN2 is inactive.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

APPNCOS=cos\_name

specifies the class of service to be used to calculate the node weight or the TG weight.

DEST=cp\_name

specifies the destination node (a control point) for a transmission group (TG).

ID

specifies the name of the resource to display.

ID=cp\_name

specifies the name of a control point to display.

ID=name **VM,VSE**

specifies the name of a resource to display when used with the following operands:

- LIST=BN
- LIST=CDSERVR
- LIST=EN
- LIST=ICN
- LIST=NN
- LIST=VN.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about using wildcards, see ["Using Wildcard Names."](#)

ID=\* **VM,VSE**

specifies that all resources are to be displayed.

**LIST**  
specifies the type of information to be displayed.

**LIST=ADJ**  
displays information about nodes that are adjacent to the node specified on the ID operand. (For the purpose of this command, a node is considered to be adjacent if it is attached by an active transmission group.)

**LIST=ALL**  
displays detailed information about the node specified on the ID operand. If you omit LIST=ALL, VTAM displays brief information about the node.

**LIST=BN**  
displays information about the border nodes specified on the ID operand. If you omit the ID operand, information about all border nodes is displayed.

**LIST=CDSERVR**  
displays information about the central directory servers specified on the ID operand. If you omit the ID operand, information about all central directory servers is displayed.

**LIST=EN VM,VSE**  
displays information about the end nodes specified on the ID operand, including migration data hosts (MDH). If you omit the ID operand, information about all end nodes is displayed.

**LIST=ICN**  
displays information about the interchange nodes specified on the ID operand. If you omit the ID operand, information about all interchange nodes is displayed.

**LIST=NN VM,VSE**  
displays information about the network nodes specified on the ID operand, including interchange nodes (ICN). If you omit the ID operand, information about all network nodes is displayed.

**LIST=VN**  
displays information about the virtual nodes specified on the ID operand. If you omit the ID operand, information about all virtual nodes is displayed.

**LIST=SUMMARY**  
displays a summary, including how many nodes of each type are in the database. LIST=SUMMARY is the default.

**ORIG=cp\_name**  
specifies the origin node (a control point) for a transmission group (TG).

**TGN=tg\_number**  
specifies the transmission group number of the route to be displayed. The number must be an integer 1-255.

## Resulting Display

The resulting display depends on the kind of information that was requested.

- ° For a summary of the topology, VTAM displays:
  - The time and date of the last database checkpoint
  - The number of adjacent nodes
  - The number of network nodes
  - The number of end nodes with a direct APPN connection to this node
  - The number of end nodes served
  - The number of central directory servers
  - The number of interchange nodes
  - The number of border nodes.
  
- ° For brief information for a specific node, VTAM displays:
  - The network-qualified name of the control point
  - The node type
  - The route addition resistance value
  - Whether the node is congested
  - The current weight of the node, if the class of service was specified.
  
- ° For detailed information for a specific node, VTAM displays the short form plus the following:
  - An indication of whether the node is a border node
  - An indication of whether the node is a central directory server
  - An indication of whether the node is an interchange node
  - The resource sequence number
  - All TGs owned by the node
  - The base weight of the node.
  
- ° For a display of adjacent nodes, VTAM displays the short form of node information for all nodes known to be adjacent to the node specified on the ID operand. If ID specifies the name of (a) the node from which you are issuing this command, or (b) a node immediately adjacent to the node from which you are issuing this command, the display indicates whether a CP-CP session exists between this node and the adjacent nodes. The existence of a CP-CP session is not displayed if there is one or more nodes between the node from which the command is issued and the node that is named on the ID operand.
 

If ID specifies the name of the node from which you are issuing this command, it is possible for the display to indicate TDU congestion, which means that a large number of topology update transactions are in progress on the CP-CP session with an adjacent node. This is a transient condition; the congestion should clear in a short time.
  
- ° For a display of one or more TGs, VTAM displays:
  - The network-qualified name of the origin control point.
  - The network-qualified name of the destination control point.
  - The TG number.
  - The TG status.

- The TG type.
  - An indication of CP-CP session support.
  - The current weight of the TG, if a class of service was specified on the command. If the origin or destination of the TG is a virtual node, the weight of the TG is divided by two. This smaller weight value is shown in the display.
  - The resource sequence number.
  - The base weight of the TG, if a class of service was specified on the command. If the origin or destination of the TG is a virtual node, the weight of the TG is divided by two. This smaller weight value is shown in the display.
  - The capacity (line speed) of the TG. The value displayed for capacity might not exactly match the value you coded for the resource. See "[APPN Transmission Group Profile](#)" in the *VTAM Resource Definition Reference* for information about how VTAM maps the defined value to the value it actually uses.
  - The propagation delay.
  - The cost per unit time.
  - The cost per byte.
  - The security level of the TG.
  - Three user-defined parameters (default is zero).
- ° For a display of a particular type of node, VTAM displays the short form of node information for each node in the topology database that matches the pattern specified on the ID operand and the type specified on the LIST operand (BN, CDSERVER, EN, ICN, NN, or VN).

### Examples

Displaying a summary of the topology database:

```
d net,topo,list=summary
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1306I LAST CHECKPOINT   ADJ  NN   EN   SERVED EN  CDSERVER ICN  BN
IST1307I NONE              2    3    0    0      0      0      2    2
IST314I END
```

Displaying brief information for a specific node:

```
d net,topo,id=a01n
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
```

```

IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.A01N      NN          1          NONE          *NA*  *NA*
IST314I  END

```

Displaying brief information for a specific node, including its weight:

```
d net,topo,id=a01n,appncos=#connect
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.A01N      NN          1          NONE          *NA*  115
IST314I  END

```

Displaying detailed information for a specific node:

```
d net,topo,id=sscp2a,list=all
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.SSCP2A     NN          1          NONE          *NA*  *NA*
IST1297I                  ICN/MDH  CDSERVR  RSN          BASEWEIGHT
IST1298I                  YES        NO        2          *NA*
IST1223I                  BN          NATIVE
IST1224I                  NO          YES
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP2A
IST1357I                  CPCP
IST1300I DESTINATION CP   TGN          STATUS   TGTYPE     VALUE WEIGHT
IST1301I NETA.SSCP1A     255         OPER     INTERM VRTG YES  *NA*
IST314I  END

```

Displaying nodes that are adjacent to the specified node:

```
d net,topo,id=a01n,list=adj,appncos=#connect
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.A02N      NN          1          NONE          *NA*  65
IST1296I NETA.A500N     NN          1          NONE          YES   145
IST314I  END

```

Displaying border nodes:

```
d net,topo,list=bn
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.SSCP1A     NN          1          NONE          *NA*  *NA*
IST1296I NETB.SSCP7B     NN          128         NONE          NO    *NA*
IST314I  END

```

Displaying central directory servers:

```
d net,topo,list=cdservr,appncos=#connect
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.A500N     NN          1          NONE          YES   5
IST314I  END

```

**VM,VSE** Displaying end nodes whose names begin with "CM2" and end with "A":

```
d net,topo,list=en,id=cm2*a
```

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.CM2AA     EN          *NA*      *NA*      YES  *NA*

```

```

IST1296I NETA.CM2BA      EN      *NA*      *NA*      YES      *NA*
IST1296I NETA.CM2CDA    EN      *NA*      *NA*      NO       *NA*
IST314I  END

```

Displaying interchange nodes:

**d net,topo,list=icn**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE  ROUTERES  CONGESTION  CP-CP  WEIGHT
IST1296I NETA.A500N      NN        1         NONE        YES    *NA*
IST1296I NETA.A02N       NN        1         NONE        *NA*   *NA*
IST1296I NETA.A01N       NN        1         NONE        NO     *NA*
IST314I  END

```

**VM,VSE** Displaying network nodes:

**d net,topo,list=nn**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE  ROUTERES  CONGESTION  CP-CP  WEIGHT
IST1296I NETA.SSCP1A     NN        1         NONE        *NA*   *NA*
IST1296I NETA.SSCP2A     NN        1         NONE        YES    *NA*
IST1296I NETA.SSCP7B     NN        128      NONE        NO     *NA*
IST314I  END

```

Displaying virtual nodes:

**d net,topo,list=vn**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE  ROUTERES  CONGESTION  CP-CP  WEIGHT
IST1296I NETA.VN1        VN        128      NONE        *NA*   *NA*
IST314I  END

```

Displaying transmission group information:

**d net,topo,orig=sscp2a,dest=sscpca,tgn=21**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP2A
IST1357I
IST1300I DESTINATION CP    TGN      STATUS   TGTYPE   CPCP    VALUE  WEIGHT
IST1301I NETA.SSCP2A      21      OPER     INTERM   YES     *NA*
IST1163I RSN                      BASEWEIGHT
IST1164I 0                      *NA*
IST1302I CAPACITY PDELAY   COSTTIME  COSTBYTE
IST1303I 8K      TERRESTR  0         0
IST1304I SECURITY UPARM1  UPARM2    UPARM3
IST1305I UNSECURE 0         0         0
IST314I  END

```

Displaying transmission group information for a specific class of service:

**d net,topo,orig=sscpca,dest=sscpba,tgn=21,appncos=#connect**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TOPOLOGY
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP2A
IST1357I
IST1300I DESTINATION CP    TGN      STATUS   TGTYPE   CPCP    VALUE  WEIGHT
IST1301I NETA.SSCPBA      21      OPER     INTERM   YES     210
IST1163I RSN                      BASEWEIGHT
IST1164I 0                      210
IST1302I CAPACITY PDELAY   COSTTIME  COSTBYTE
IST1303I 8K      TERRESTR  0         0
IST1304I SECURITY UPARM1  UPARM2    UPARM3
IST1305I UNSECURE 0         0         0
IST314I  END

```



Displaying information about virtual-route-based transmission groups:

**d net,topo,orig=sscp2a,dest=sscp1a,tgn=255**

IST097I DISPLAY ACCEPTED

IST350I DISPLAY TYPE = TOPOLOGY

IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP2A

IST1357I

DESTINATION CP	TGN	STATUS	TGTYPE	CPCP	VALUE	WEIGHT
NETA.SSCP1A	255	OPER	INTERM VRTG	YES	*NA*	

IST1163I

CAPACITY	PDELAY	COSTTIME	COSTBYTE
8K	TERRESTR	0	0

IST1302I

IST1303I

IST1304I

IST1305I

IST314I END



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## 2.1.41 DISPLAY TRACES Command

Display the status of BUF, GPT, IO, LINE, SIT, and TG traces:

```
>> vm_prefix DISPLAY NET,TRACES___, TYPE=NODES _____>
```

```
> __, ID= _____><
|_(*)_|_____
|_name_|_ , IDTYPE=RESOURCE _____| | |
|_(<_,'_|_)|_ , IDTYPE=_____ |
|_(_name|_)_|_ | CP _____|
|_ |_ | SSCP _____|
|_ |_ | RESOURCE _____|
```

MVS Display the status of communication network management traces:

```
>> __DISPLAY NET,TRACES___, TYPE=CNM _____><
```

Display the status of a network controller line trace:

```
>> vm_prefix DISPLAY NET,TRACES___, TYPE=NETCTLR , ID=3710_pu_name _____><
```

Display the status of an SMS (buffer use) trace:

```
>> vm_prefix DISPLAY NET,TRACES___, TYPE=SMS | ID=VTAMBUF _____><
```

MVS Display the status of a TSO user trace:

```
>> __DISPLAY NET,TRACES___, TYPE=TSO , ID= _____><
|_(*)_|_____
|_user_id_|_ |_____
|_(<_,'_|_)|_ |_____
|_(_user_id|_)_|_ |_____
```

Display the status of the VTAM internal trace:

```
>> vm_prefix DISPLAY NET,TRACES___ | TYPE=VTAM _____><
```

Display the status of all active traces:

```
>> vm_prefix DISPLAY NET,TRACES___, TYPE=ALL _____><
```

Abbreviations

Operand	Abbreviation
DISPLAY	D
TRACES	TRACE
TYPE=NODES	TYPE=NODE

## Purpose

The DISPLAY TRACES command displays the status of a trace.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID

specifies a value that varies depending on the type of trace.

- For **TYPE=NODES**, ID specifies the name of one or more resources whose trace status is to be displayed. The ID operand is required with TYPE=NODES. You can specify major or minor node names. Resource names can be network-qualified.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. However, if you specify a wildcard, trace status information is displayed only for resources that match the wildcard value, and not for subordinate resources. For more information about using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every major or minor node in the network.*

See the ["MODIFY TRACE Command"](#) for information about which trace types are applicable to various VTAM resource types.

- **MVS** For **TYPE=CNM**, the ID operand is not valid.
- For **TYPE=NETCTLR**, ID specifies the name of the 3710 physical unit that is to perform the trace. The ID operand is required and wildcard names are not valid for TYPE=NETCTLR.
- For **TYPE=SMS**, ID=VTAMBUF is the only valid value for the ID operand. ID=VTAMBUF can be specified or assumed by default.
- **MVS** For **TYPE=TSO**, ID specifies the user IDs for which trace status is to be displayed. The ID operand is required with TYPE=TSO. User IDs that do not have an active TSO trace are not displayed. Network-qualified names are not allowed with TYPE=TSO.

Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand. For more information about

using wildcards, see ["Using Wildcard Names."](#)

*Warning: Specifying a wildcard name might degrade performance because VTAM checks every TSO user ID in the network.*

- For **TYPE=VTAM**, the ID operand is not valid.
- For **TYPE=ALL**, the ID operand is not valid.

#### IDTYPE

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE identifies which resource the command should act on. The IDTYPE operand is valid only when TYPE=NODES is specified and the ID operand specifies a value other than an asterisk (\*).

#### IDTYPE=CP

displays information for the CP with the name specified on the ID operand. The control point that is displayed can be the host CP or a CDRSC representing an adjacent CP.

#### IDTYPE=SSCP

displays information for the SSCP with the name specified on the ID operand.

#### IDTYPE=RESOURCE

displays information for a CP, an SSCP, or another resource with the name specified on the ID operand. If both an SSCP and a CP are found, VTAM displays information for both of them.

#### TYPE

If TYPE is not specified, TYPE=VTAM is used by default.

#### TYPE=CNM **MVS**

displays information about communication network management (CNM) traces.

#### TYPE=NODES

displays information about BUF, GPT, IO, LINE, SIT, and TG traces for the resources named on the ID operand.

BUF	Buffer contents trace
GPT	Generalized PIU trace
IO	Input/output trace
LINE	NCP line trace
SIT	Scanner interface trace
TG	Transmission group trace

#### TYPE=NETCTLR

displays information about a 3710 Network Controller line trace.

#### TYPE=SMS

displays information about the storage management services (SMS) buffer use trace.

**TYPE=TSO MVS**

displays trace information for the TSO user IDs specified on the ID operand. This function is similar to that provided by the ["DISPLAY TSOUSER Command \(MVS\)."](#)

**TYPE=VTAM**

displays information about the VTAM internal trace (VIT).

**TYPE=ALL**

displays information for the following types of traces, if they are active:

- **MVS** TYPE=CNM
- TYPE=NODES, ID=\*
- **MVS** TYPE=TSO, ID=\*
- TYPE=SMS
- TYPE=VTAM.

No information is displayed for the CNM, TSO, SMS and VTAM traces if they are not active.

## Resulting Display

The resulting display shows information specific to the trace type and ID specified.

- **MVS** For TYPE=CNM, the resulting display shows the status for session awareness and problem determination PIU buffer traces (on or off).
- For TYPE=NODES, the resulting display shows:
  - For ID=*major node name*, the resources subordinate to the named resource that have an active BUF, GPT, IO, LINE, SIT, or TG trace.
  - For ID=*minor node name*, the status of BUF, GPT, IO, LINE, SIT, or TG tracing for this resource.
  - For ID=\*, all resources that have an active BUF, GPT, IO, LINE, SIT, or TG trace, along with the name of the resource's major node.
  - For ID=*wildcard name*, the status of BUF, GPT, IO, LINE, SIT, or TG tracing for the resources that match the wildcard value.

**Note:** For ID=*name* in any form, the display also shows whether BUF and IO trace requests are saved, with saved trace requests for unknown resources.

- For TYPE=NETCTLR, the resulting display shows the name of the 3710 performing the trace, and the PU name and line name of each resource

being traced.

- For TYPE=SMS, the resulting display shows the trace status (on or off).
- **MVS** For TYPE=TSO, the resulting display shows:
  - For ID=name, the trace status for the named user ID (on or off).
  - For ID=\*, all user IDs that have an active trace.
- For TYPE=VTAM, the resulting display shows the mode (internal or both internal and external), the trace table size (applicable only to MODE=INT), and the **user-specified** trace options that are currently in effect. The default trace options are active, but are not displayed unless you explicitly specified them on the TRACE,TYPE=VTAM start option or the MODIFY TRACE command.
- For TYPE=ALL, the resulting display shows all of the information for the following traces, if they are active:
  - **MVS** TYPE=CNM
  - TYPE=NODES,ID=\*
  - **MVS** TYPE=TSO,ID=\*
  - TYPE=SMS
  - TYPE=VTAM.

## Examples

**MVS** Displaying the status of communication network management (CNM) traces:

```
d net,traces,type=cnm
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=CNM
IST655I PDPIUBUF TRACE STATUS = ON
IST655I SAWBUF TRACE STATUS = ON
IST314I END
```

Displaying node traces for a few resources with saved trace requests:

```
d net,traces,type=nodes,id=(appl1,appl2,netappl1,noappl1)
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES
IST075I NAME = APPL1A, TYPE = APPL SEGMENT
IST1041I NETA.APPL1      APPL
IST1042I   BUF  = ON    - AMOUNT = PARTIAL  - SAVED = YES
IST1041I NETA.APPL2      APPL
IST1042I   BUF  = ON    - AMOUNT = PARTIAL  - SAVED = NO
IST924I -----
IST075I NAME = CDRSC1A, TYPE = CDRSC SEGMENT
IST1041I NETA.NETAPPL1   CDRSC
IST1042I   IO   = ON    - AMOUNT = **NA**   - SAVED = YES
IST924I -----
IST1422I SAVED TRACE REQUESTS FOR NETA.NOAPPL1
IST1041I NETA.NOAPPL1    N/A
IST1042I   BUF  = SAVED - AMOUNT = PARTIAL
IST314I END
```

Displaying node traces for all resources:

**d net, traces, type=nodes, id=\***

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES 506
IST075I NAME = A50CDRMC, TYPE = CDRM SEGMENT
IST1041I C01N          CDRM
IST1042I   BUF  = ON    - AMOUNT = PARTIAL  - SAVED = NO
IST924I -----
IST075I NAME = A0362ZC, TYPE = PU T4/5 MAJ NODE
IST1041I A03S16          LINE
IST1042I   LINE = TRACT
IST314I END

```

Displaying node traces for a control point:

**d net, traces, type=nodes, id=a500n, idtype=cp**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES
IST075I NAME = NETA.A500N, TYPE = APPL
IST1041I NETA.A500N    APPL
IST1042I   BUF  = ON    - AMOUNT = PARTIAL  - SAVED = NO
IST314I END

```

Displaying node traces for an SSCP:

**d net, traces, type=nodes, id=a500n, idtype=sscp**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES
IST075I NAME = A500N, TYPE = CDRM
IST1041I A500N          CDRM
IST1042I   BUF  = ON    - AMOUNT = PARTIAL  - SAVED = NO
IST314I END

```

Displaying the status of the SMS trace:

**d net, traces, type=sms**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=SMS
IST655I SMS TRACE STATUS = OFF
IST314I END

```

**MVS** Displaying a TSO user trace:

**d net, traces, type=tso, id=user1**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=TSO
IST1200I USER1      TSO USERID  TRACE = OFF
IST314I END

```

**MVS** Displaying the status of the VTAM internal trace:

**d net, traces, type=vtam**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 050
IST199I OPTIONS = API APPC CFS CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST199I OPTIONS = SSCP TCP VCNS
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = EXT, SIZE = NA
IST199I OPTIONS = API APPC CFS CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST199I OPTIONS = SSCP TCP VCNS
IST314I END

```

**VM** Displaying the status of the VTAM internal trace:

**d net, traces, type=vtam**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 150

```

```

IST199I OPTIONS = API APPC CIO ESC LCS LOCK MSG NRM PIU PSS SMS SSCP
IST199I OPTIONS = VCNS
IST314I END

```

**VSE** Displaying the status of the VTAM internal trace:

**d net,traces,type=vtam**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 200
IST199I OPTIONS = API APPC CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST314I END

```

**MVS** Displaying all active traces:

**d net,traces,type=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES 549
IST075I NAME = A50CDRMC, TYPE = CDRM SEGMENT
IST1041I C01N CDRM
IST1042I BUF = ON - AMOUNT = PARTIAL
IST924I -----
IST075I NAME = A0362ZC, TYPE = PU T4/5 MAJ NODE
IST1041I A03S16 LINE
IST1042I LINE = TRACT
IST924I -----
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 050
IST199I OPTIONS = API APPC CFS CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST199I OPTIONS = SSCP TCP VCNS
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = EXT, SIZE = 050
IST199I OPTIONS = API APPC CFS CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST199I OPTIONS = SSCP TCP VCNS
IST314I END

```

**VM** Displaying all active traces:

**d net,traces,type=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES
IST1313I NO TRACES ACTIVE FOR *.*
IST924I -----
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 150
IST199I OPTIONS = API APPC CIO ESC LCS LOCK MSG NRM PIU PSS SMS SSCP
IST199I OPTIONS = VCNS
IST314I END

```

**VSE** Displaying all active traces:

**d net,traces,type=all**

```

IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRACES,TYPE=NODES
IST1313I NO TRACES ACTIVE FOR *.*
IST924I -----
IST350I DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I VTAM INTERNAL TRACE ACTIVE - MODE = INT, SIZE = 200
IST199I OPTIONS = API APPC CIO ESC LCS LOCK MSG NRM PIU PSS SMS
IST314I END

```



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## 2.1.42 DISPLAY TRL Command

```
>> vm_prefix DISPLAY NET,TRL _____><
      |_,TRLE=trl_entry_name_|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY TRL (transport resource list) command provides information about the TRL major node or about a single TRLE (transport resource list entry). TRLEs define the connectivity characteristics of PUs that provide APPN host-to-host channel connection.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

TRLE=trl\_entry\_name  
specifies the name of the TRLE to be displayed. This is an optional operand. If you leave it out, VTAM displays all TRLEs defined in the major node.

### Resulting Display

The resulting display shows:

- The name and status of all TRLEs in the TRL major node if the TRLE operand is not specified

- The name and status of the TRLE specified on the TRLE operand. If the status is active, the display also includes the address and operational status of WRITE and READ subchannels and the name of the physical resource associated with this TRLE.

### Examples

Displaying all TRL entries:

```
d net,trl
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = TRL
IST1314I TRLE = ML1A2A1    STATUS = NEVAC          CONTROL = MPC
IST1314I TRLE = ML1A2A2    STATUS = NEVAC          CONTROL = MPC
IST1314I TRLE = ML1A2A3    STATUS = NEVAC          CONTROL = MPC
IST1314I TRLE = ML1A2A4    STATUS = NEVAC          CONTROL = MPC
IST314I  END
```

Displaying an active TRL entry:

```
d net,trl,trle=ml1a2a2
IST097I DISPLAY ACCEPTED
IST075I NAME = ML1A2A2, TYPE = TRLE
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST087I TYPE = LEASED      , CONTROL = MPC
IST1221I WRITE  DEV = 02F0 STATUS = ACTIVE
IST1221I READ   DEV = 0502 STATUS = ACTIVE
IST1068I PHYSICAL RESOURCE (PHYSRSC) = AHHCPU1
IST314I  END
```

Displaying an inactive TRL entry:

```
d net,trl,trle=ml1a2a1
IST097I DISPLAY ACCEPTED
IST075I NAME = ML1A2A1, TYPE = TRLE
IST486I STATUS= NEVAC, DESIRED STATE= INACT
IST087I TYPE = LEASED      , CONTROL = MPC
IST314I  END
```



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## 2.1.43 DISPLAY TSOUSER Command (MVS)

```
>>__DISPLAY NET,TSOUSER__,ID=user_id_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
TSOUSER	U

### Purpose

The DISPLAY TSOUSER (TSO user) command displays the status of a TSO user ID.

### Operands

ID=user\_id  
 specifies the TSO user ID about which information is to be displayed.  
 Data for all address spaces started by a TSO user is shown if ID is specified.

### Resulting Display

The resulting display shows:

- The name and status of the TSO user ID
- An indication of whether the TSO trace is active for this user ID
- The application program name associated with the TSO user space
- The device-type logical unit the TSO user is using.

### Examples

Displaying a TSO user ID:

**d net,tsouser,id=user1**

```
IST097I DISPLAY ACCEPTED
IST075I NAME = USER1, TYPE = TSO USERID
IST486I STATUS= ACTIV, DESIRED STATE= N/A
IST576I TSO TRACE = OFF
IST1212I ACBNAME = TSO0001 STATUS = ACT/S
IST1212I LUNAME  = NETA.A50A722 STATUS = ACT/S
IST314I END
```

---



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## 2.1.44 DISPLAY USERVAR Command

```
>> vm_prefix DISPLAY NET,USERVAR _____><
|_,ID=uservar_name_|_____><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

The DISPLAY USERVAR command displays the VTAM application names associated with a specified USERVAR, or all known USERVARs and the application names associated with them.

Network-qualified USERVAR values can be displayed in the output of the DISPLAY USERVAR command. If the VALUE operand on the MODIFY USERVAR command is a network-qualified name, or if the class of USERVAR is automatic (VTAM-managed), the output from the DISPLAY USERVAR command for that USERVAR has the network-qualified name in it. If the VALUE operand on the MODIFY USERVAR command is a non-network-qualified name, the output from the DISPLAY USERVAR command for that USERVAR does not have the network-qualified name in it.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=uservar\_name  
specifies the name of a USERVAR.

### Resulting Display

The resulting display shows:

- The named USERVAR and its corresponding VTAM application program name. If you omit `ID=uservar_name`, VTAM displays all known USERVARs and the application program names associated with them.
- The USERVAR class (automatic or user-managed) and the type of USERVAR (static, dynamic, or volatile).
- Whether an installation-wide exit (UVEXIT) routine is used for the USERVAR.

## Examples

Displaying all USERVARs:

```
d net,uservar
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = USERVAR
IST1019I USERVAR VALUE CLASS TYPE EXIT APPC
IST1029I APPL2 NETB.APPLB22 USER DYNAMIC NO NO
IST1029I APPL1 NETB.APPLB11 USER DYNAMIC NO NO
IST314I END
```

Displaying a specific USERVAR:

```
d net,uservar,id=echo01a
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = USERVAR
IST1019I USERVAR VALUE CLASS TYPE EXIT APPC
IST1029I ECHO01A ECHO01A USER DYNAMIC NO NO
IST314I END
```



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## 2.1.45 DISPLAY VTAMOPTS Command

```
>> vm_prefix DISPLAY NET,VTAMOPTS | FORMAT=CURRENT | _____ >
| FORMAT= CURRENT |
| COMPLETE |
| MODIFIED |
|_____|

> | OPTION=* | _____ ><
| OPTION= * |
| (* |
| option |
| <' |
| ( option | ) |
|_____|
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D
FORMAT=COMPLETE	COMP
FORMAT=CURRENT	CUR
FORMAT=MODIFIED	MOD
OPTION	OPT

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for FORMAT=CURRENT, code only CUR. Do not code FORMAT=CUR.

### Purpose

The DISPLAY VTAMOPTS (VTAM start options) command displays information about VTAM start options. The VTAM version and release, the date and time when VTAM was started, the component ID, and VTAM's node type are also displayed.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

#### FORMAT

specifies the type of information to be displayed.

#### FORMAT=CURRENT

displays the current value of one or more start options.

#### FORMAT=COMPLETE

displays detailed information about one or more start options. For each start option, VTAM displays the current value, the value that VTAM initialized with, and the source of the value that VTAM initialized with. The source can be a value specified in an ATCSTRxx start option list, a value entered by the operator during VTAM start, or a default value used in the absence of any other specification.

#### FORMAT=MODIFIED

displays information about start options that have been modified since VTAM initialization. If an option has not been modified, it is not displayed.

For each modified start option, VTAM displays the current value, the value that VTAM initialized with, and the source of the value that VTAM initialized with. The source can be a value specified in an ATCSTRxx start option list, a value entered by the operator during VTAM start, or a default value used in the absence of any other specification.

#### OPTION=option

specifies one or more start options to display. If OPTION=\* is specified or assumed by default, VTAM displays information about all start options except PROMPT, NOPROMPT, LISTBKUP, and the trace and buffer pool start options. The [DISPLAY TRACES command](#) and the [DISPLAY BFRUSE command](#) can be used to display trace and buffer pool information. See [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference* for a description of each start option.

For OPTION=LIST, VTAM displays the name of the start option list that was used during start processing. The value can be a supplemental list, such as LIST=1A. However, if the supplemental list contains errors and VTAM reverts to using defaults during start processing because LISTBKUP=DEFAULTS is in effect, the user-defined default list will be displayed. You can also issue a D NET,VTAMOPTS,FORMAT=COMPLETE command to find out the origin of the start option values.

For OPTION=ENCRYPTN, the display might not exactly match the value specified for the ENCRYPTN start option. If VTAM was started with ENCRYPTN=NO, this command shows ENCRYPTN as NO. If VTAM was started with ENCRYPTN=YES, this command shows ENCRYPTN as 24 or 31. If ENCRYPTN was not specified during VTAM start, this command shows ENCRYPTN as NO, 24, or 31.

See ["Start Options"](#) in the *VTAM Network Implementation Guide* for more information about the sources of start options and which source takes precedence.

#### Resulting Display



The resulting display shows:

- The VTAM version and release
- The time and date that VTAM was started
- The component ID
- The node type
- Information about the specified start options.

If a start option is not applicable to your configuration, it is displayed with **\*\*\*NA\*\*\***. For example, **ROUTERES** is applicable only when VTAM is a network node. At an end node, it would be displayed as **ROUTERES=\*\*\*NA\*\*\***.

### Examples

**MVS** Displaying start options that have been modified:

```
d net,vtamopts,opt=(msgmod,cmpvtam,hotiotrm),format=modified
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:28:39 ON 11/14/94
IST1349I COMPONENT ID IS 5695-11 701-201
IST1348I VTAM STARTED AS INTERCH ANGE NODE
IST1309I START OPTION  CURRENT V ALUE      ORIGINAL VALUE      ORIGIN
IST1310I CMPVTAM      2                   0                   DEFAULT
IST1310I HOTIOTRM     10                  0                   DEFAULT
IST1310I MSGMOD       NO                   YES                  ATCSTR00
IST314I END
```

**VM** Displaying start options that have been modified:

```
d net,vtamopts,opt=(msgmod,cmpvtam,hotiotrm),format=modified
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:34:02 ON 11/14/94
IST1349I COMPONENT ID IS 5654-01001-420
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1497I VTAM FUNCTIONAL SUPPORT LEVEL IS INTERENTERPRISE
IST1309I START OPTION  CURRENT VALUE      ORIGINAL VALUE      ORIGIN
IST1310I CMPVTAM      1                   0                   DEFAULT
IST1310I HOTIOTRM     10                  0                   DEFAULT
IST1310I MSGMOD       NO                   YES                  ATCSTR00
IST314I END
```

**VSE** Displaying start options that have been modified:

```
d net,vtamopts,opt=(msgmod,cmpvtam,hotiotrm),format=modified
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 12:34:17 ON 11/15/94
IST1349I COMPONENT ID IS 5686-06501-FE6
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1497I VTAM FUNCTIONAL SUPPORT LEVEL IS INTERENTERPRISE
IST1309I START OPTION  CURRENT VALUE      ORIGINAL VALUE      ORIGIN
IST1310I CMPVTAM      2                   0                   DEFAULT
IST1310I HOTIOTRM     10                  0                   DEFAULT
IST1310I MSGMOD       NO                   YES                  ATCSTR00
IST314I END
```

**MVS** Displaying complete information about selected start options:

**d net,vtamopts,opt=(inopdump,fsirfmsg,iomsglim,mihtmout),format=complete**

```
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:28:39 ON 11/14/94
IST1349I COMPONENT ID IS 5695-11701-201
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1309I START OPTION CURRENT VALUE ORIGINAL VALUE ORIGIN
IST1310I FSIRFMSG OLUSSCP OLUSSCP DEFAULT
IST1310I INOPDUMP OFF OFF DEFAULT
IST1310I IOMSGLIM 2147483647 2147483647 DEFAULT
IST1310I MIHTMOUT 1800 1800 DEFAULT
IST314I END
```

**VM** Displaying complete information about selected start options:

**d net,vtamopts,opt=(inopdump,fsirfmsg,iomsglim,mihtmout),format=complete**

```
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:34:02 ON 11/14/94
IST1349I COMPONENT ID IS 5654-01001-420
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1497I VTAM FUNCTIONAL SUPPORT LEVEL IS INTERENTERPRISE
IST1309I START OPTION CURRENT VALUE ORIGINAL VALUE ORIGIN
IST1310I FSIRFMSG OLUSSCP OLUSSCP DEFAULT
IST1310I INOPDUMP OFF OFF DEFAULT
IST1310I IOMSGLIM 2147483647 2147483647 DEFAULT
IST1310I MIHTMOUT 1800 1800 DEFAULT
IST314I END
```

**VSE** Displaying complete information about selected start options:

**d net,vtamopts,opt=(fsirfmsg,iomsglim,mihtmout),format=complete**

```
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 12:34:17 ON 11/15/94
IST1349I COMPONENT ID IS 5686-06501-FE6
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1497I VTAM FUNCTIONAL SUPPORT LEVEL IS INTERENTERPRISE
IST1309I START OPTION CURRENT VALUE ORIGINAL VALUE ORIGIN
IST1310I FSIRFMSG OLUSSCP OLUSSCP DEFAULT
IST1310I IOMSGLIM 2147483647 2147483647 DEFAULT
IST1310I MIHTMOUT 1800 1800 DEFAULT
IST314I END
```

**MVS** Displaying all VTAM start options:

**d net,vtamopts**

```
IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:28:39 ON 11/14/94
IST1349I COMPONENT ID IS 5695-11701-201
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1189I ALSREQ = NO APPNCOS = NONE
IST1189I ASIRFMSG = OLUSSCP ASYDE = TERM
IST1189I AUTHLEN = YES AUTORTRY = AUTOCAP
IST1189I AUTOTI = 0 BN = NO
IST1189I BNDYN = ***NA*** BNORD = ***NA***
IST1189I BSCMDRS = (STATS,INOPS) BSCTMOUT = 286
IST1189I CACHETI = 8 CDRDYN = YES
IST1189I CDRSCTI = 480S CDSERVR = NO
IST1189I CINDXSIZ = 8176 CMPMIPS = 100
IST1189I CMPVTAM = 0 COLD = YES
IST1189I CONFIG = 1A CONNTYPE = APPN
IST1189I CPCDRSC = NO CPCP = YES
IST1189I CSALIMIT = NOLIMIT CSA24 = NOLIMIT
IST1189I DATEFORM = MDY DIRSIZE = 0
IST1189I DIRTIME = 691200S DISCNTIM = 15
IST1189I DLRTCB = 10 DSDPLYMAX = 100
IST1189I DSDPLYWLD = FULLWILD DYNADJCP = YES
IST1189I DYNASSCP = YES DYNLU = YES
IST1189I ENCRYPTN = 24 ENHADDR = NO
IST1189I ESIRFMSG = ALLSSCP FLDTAB = ISTMSFLD
IST1189I FSIRFMSG = OLUSSCP GWSSCP = YES
IST1189I HNTSIZE = 4080 HOSTPU = ISTPUS
IST1189I HOSTSA = 1 HOTIOTRM = 0
```

```

IST1189I HSRTSIZE = 9973
IST1189I INOPDUMP = OFF
IST1189I IOMSGLIM = 2147483647
IST1189I IRNSTRGE = 0
IST1189I LIST = 1A
IST1189I MAXLURU = 6144
IST1189I MAXSUBA = 255
IST1189I MSGLEVEL = BASE
IST1189I MXSAWBUF = 10000
IST1189I MXSUBNUM = 511
IST1189I NETID = NETA
IST1189I NODELST = *BLANKS*
IST1189I NQNMODE = NAME
IST1189I OSRTSIZE = 43
IST1189I PIUMAXDS = 200
IST1189I PPOLOG = NO
IST1189I RESUSAGE = 100
IST1189I SAWMAXDS = 100
IST1189I SDLCMDRS = (STATS,INOPS)
IST1189I SIRFMSG = ALLSSCP
IST1189I SNAPREQ = 1000
IST1189I SONLIM = (60,30)
IST1189I SRCHRED = OFF
IST1189I SRTIMER = 30S
IST1189I SSCPID = 1
IST1189I SSCPORD = PRIORITY
IST1189I SSEARCH = YES
IST1189I SWNORDER = CPNAME
IST1189I TRANSLAT = (0,1,2,3,4,5,6,7)
IST1189I VERIFYCP = NONE
IST1189I VRTGCPCP = YES
IST1189I WARM = NO
IST314I END

INITDB = ALL
IOINT = 180
IOPURGE = 0
ISTCOSDF = INDLU
MAINTLVL = *BLANKS*
MAXSSCPS = 10
MIHTMOUT = 1800
MSGMOD = NO
MXSSCPRU = 4096
NCPBUFSZ = 512
NMVTLOG = NPDA
NODETYPE = NN
NUMTREES = 100
PDTRCBUF = 2
PLUALMSG = NOSUPP
PSSTRACE = NORB
ROUTERES = 1
SAWMXQPK = 0
SECLVLCP = ***NA***
SLUALMSG = NOSUPP
SNVC = ***NA***
SORDER = APPN
SRCOUNT = 10
SSCPDYN = YES
SSCPNAME = SSCP1A
SSDTMOUT = 30
SUPP = NOSUP
TNSTAT = OFF
USSTAB = *BLANKS*
VRTG = NO
VTAMEAS = 32001
XNETALS = NO

```

VM Displaying all VTAM start options:

#### d net,vtamopts

```

IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 17:34:02 ON 11/14/94
IST1349I COMPONENT ID IS 5654-01001-420
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1497I VTAM FUNCTIONAL SUPPORT LEVEL IS INTERENTERPRISE
IST1189I ALSREQ = NO
IST1189I ASIRFMSG = OLUSSCP
IST1189I AUTHLEN = YES
IST1189I AUTOTI = 0
IST1189I BNDYN = ***NA***
IST1189I BSCMDRS = (STATS,INOPS)
IST1189I CACHETI = 8
IST1189I CDRSCTI = 480S
IST1189I CINDXSIZ = 8176
IST1189I CONFIG = 1A
IST1189I CPCDRSC = NO
IST1189I CSALIMIT = NOLIMIT
IST1189I DATEFORM = MDY
IST1189I DIRTIME = 691200S
IST1189I DLRTCB = 10
IST1189I DSPLYWLD = FULLWILD
IST1189I DYNASSCP = YES
IST1189I ENHADDR = NO
IST1189I FLDTAB = ISTMSFLD
IST1189I GWSSCP = YES
IST1189I HOSTPU = ISTPUS
IST1189I HOTIOTRM = 0
IST1189I INITDB = ALL
IST1189I IOINT = 180
IST1189I IOPURGE = 0
IST1189I ISTCOSDF = INDLU
IST1189I MAINTLVL = *BLANKS*
IST1189I MAXSSCPS = 10
IST1189I MIHTMOUT = 1800
IST1189I MSGMOD = NO
IST1189I MXSSCPRU = 4096
IST1189I NCPBUFSZ = 512
IST1189I NMVTLOG = NPDA
IST1189I NQNMODE = NAME
IST1189I OSRTSIZE = 43
IST1189I PLUALMSG = NOSUPP
APPNCOS = NONE
ASYDE = TERM
AUTORTRY = AUTOCAP
BN = NO
BNORD = ***NA***
BSCTMOUT = 286
CDRDYN = YES
CDSERVR = NO
CMPVTAM = 0
CONNTYPE = APPN
CPCP = YES
CSA24 = NOLIMIT
DIRSIZE = 0
DISCNTIM = 15
DSPLYMAX = 100
DYNADJCP = YES
DYNLU = YES
ESIRFMSG = ALLSSCP
FSIRFMSG = OLUSSCP
HNFSIZE = 4080
HOSTSA = 1
HSRTSIZE = 9973
INOPDUMP = OFF
IOMSGLIM = 2147483647
IRNSTRGE = 0
LIST = 1A
MAXLURU = 6144
MAXSUBA = 255
MSGLEVEL = BASE
MXSAWBUF = 10000
MXSUBNUM = 511
NETID = NETA
NODETYPE = NN
NUMTREES = 100
PDTRCBUF = 2
PPOLOG = NO

```

```

IST1189I RESUSAGE = 100
IST1189I SDLCMDRS = (STATS,INOPS)
IST1189I SIRFMSG = ALLSSCP
IST1189I SNAPREQ = 1000
IST1189I SONLIM = (60,30)
IST1189I SRCHRED = OFF
IST1189I SRTIMER = 30S
IST1189I SSCPID = 1
IST1189I SSCPORD = PRIORITY
IST1189I SSEARCH = YES
IST1189I SWNORDER = CPNAME
IST1189I TNSTAT = OFF
IST1189I TRAMNBUF = 14
IST1189I TRANSLAT = (0,1,2,3,4,5,6,7)
IST1189I VERIFYCP = NONE
IST1189I VRTGCPCP = YES
IST1189I XNETALS = NO
IST1189I X25PRIV = 14
IST314I END

ROUTERES = 1
SECLVLCP = ***NA***
SLUALMSG = NOSUPP
SNVC = ***NA***
SORDER = APPN
SRCOUNT = 10
SSCPDYN = YES
SSCPNAME = SSCP1A
SSDTMOUT = 30
SUPP = NOSUP
TNSTAT = OFF
TRABUFSZ = 512
TRAMXBUF = 28
USSTAB = *BLANKS*
VRTG = NO
VTAMEAS = 32001
X25PRIS = 14

```

**VSE** Displaying all VTAM start options:

#### d net,vtamopts

```

IST097I DISPLAY ACCEPTED
IST1188I ACF/VTAM V4R2 STARTED AT 07:23:35 ON 11/15/94
IST1349I COMPONENT ID IS 5686-06501-FE6
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1189I ALSREQ = NO
IST1189I ASIRFMSG = OLUSSCP
IST1189I AUTHLEN = YES
IST1189I AUTOTI = 0
IST1189I BNDYN = ***NA***
IST1189I BSCMDRS = (STATS,INOPS)
IST1189I CACHETI = 8
IST1189I CDRSCTI = 480S
IST1189I CINDXSIZ = 4080
IST1189I CMPVTAM = 0
IST1189I CONFIG = 1A
IST1189I CPCDRSC = NO
IST1189I CPSTAB = *BLANKS*
IST1189I DIRSIZE = 0
IST1189I DISCNTIM = 15
IST1189I DSPLYWLD = FULLWILD
IST1189I DYNASSCP = YES
IST1189I ENHADDR = NO
IST1189I FLDTAB = ISTMSFLD
IST1189I HNTSIZE = 4080
IST1189I HOSTSA = 1
IST1189I HSRTSIZE = 9973
IST1189I IOINT = 180
IST1189I IOPURGE = 0
IST1189I ISTCOSDF = INDLU
IST1189I MAINTLVL = *BLANKS*
IST1189I MAXSSCPS = 10
IST1189I MIHTMOUT = 1800
IST1189I MSGMOD = YES
IST1189I MXSSCPRU = 4096
IST1189I NCPBUFSZ = 512
IST1189I NMVTLOG = NPDA
IST1189I NODETYPE = NN
IST1189I NUMTREES = 100
IST1189I PDTRCBUF = 2
IST1189I PPOLOG = NO
IST1189I ROUTERES = 1
IST1189I SGALIMIT = NOLIMIT
IST1189I SIRFMSG = ALLSSCP
IST1189I SNAPREQ = 1000
IST1189I SONLIM = (60,30)
IST1189I SRCHRED = OFF
IST1189I SRTIMER = 30S
IST1189I SSCPID = 1
IST1189I SSCPORD = PRIORITY
IST1189I SSEARCH = YES
IST1189I SWNORDER = CPNAME
IST1189I TNSTAT = OFF
IST1189I TRAMNBUF = 14
IST1189I TRANSLAT = (0,1,2,3,4,5,6,7)
IST1189I VRTG = NO

APPNCOS = NONE
ASYDE = TERM
AUTORTRY = AUTOCAP
BN = NO
BNORD = ***NA***
BSCTMOUT = 286
CDRDYN = YES
CDSERVR = NO
CMPMIPS = 100
COLD = YES
CONNTYPE = APPN
CPCP = YES
DATEFORM = MDY
DIRTIME = 691200S
DSPLYMAX = 100
DYNADJCP = YES
DYNLU = YES
ESIRFMSG = ALLSSCP
FSIRFMSG = OLUSSCP
HOSTPU = ISTPUS
HOTIOTRM = 0
INITDB = ALL
IOMSGLIM = 2147483647
IRNSTRGE = 0
LIST = 1A
MAXLURU = 6144
MAXSUBA = 255
MSGLEVEL = BASE
MXSAWBUF = 500
MXSUBNUM = 511
NETID = NETA
NODELST = *BLANKS*
NQNMODE = NAME
OSRTSIZE = 43
PLUALMSG = NOSUPP
RESUSAGE = 100
SDLCMDRS = (STATS,INOPS)
SGA24 = NOLIMIT
SLUALMSG = NOSUPP
SNVC = ***NA***
SORDER = APPN
SRCOUNT = 10
SSCPDYN = YES
SSCPNAME = SSCP1A
SSDTMOUT = 30
SUPP = NOSUP
TNSTAT = OFF
TRABUFSZ = 512
TRAMXBUF = 28
USSTAB = *BLANKS*
VRTGCPCP = YES

```

```
IST1189I VTAMEAS = 50          WARM      = NO
IST1189I XNETALS = NO
IST314I  END
```

---



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## 2.1.46 EXEC Command (VSE)

```
>>__EXEC PROC=procname_____><
```

### Purpose

In VSE systems, you can start VTAM with either the EXEC command (entered from the operator console) or the EXEC control statement (included in a job stream). Following is an example of coding EXEC in a job stream:

```
// EXEC ISTINCVT,SIZE=size,PARM='LIST=start_option_list_id'
```

If a start option list is not specified on the EXEC statement, the system programmer can specify the PROMPT start option in the IBM-supplied start option list (ATCSTR00), and the VTAM operator is prompted to enter additional start options. If prompted, the operator enters one or more start options.

Refer to ["Start Options Syntax Diagrams"](#) for the start options that can be specified in a start list or by the operator.

For a description of the start options, see [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference*.

Separate the options with commas and leave no blanks between options. If more than one line is necessary for the start options, enter a comma after the last option, and VTAM prompts for another line. The values established by the start options go into effect when VTAM is started and remain in effect until VTAM is halted. Many of the options, however, can be altered while VTAM is running.

When starting VTAM with X.25 support, you might want to change the buffer pool specifications in the start list, based upon your storage estimates. In addition, you might also want to change the user-defined configuration list to include packet major nodes. This list contains those major nodes that are activated when VTAM is started.

### Operands

PROC=procname

provides the name of the filed procedure that contains the JCL needed to start and run VTAM. Written and named by the user, this start procedure should be on the VSE system procedure library. For detailed information on the JCL needed for VTAM, see [Chapter 4, "Installing VTAM under VSE"](#) in the *VTAM Network Implementation Guide*.

Subtopics:

- [2.1.46.1 Start Options Syntax Diagrams](#)
- 



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## 2.1.46.1 Start Options Syntax Diagrams

Following are the syntax diagrams for the start options that can be specified either in a start option list or by the operator:

### Options:

```
| NETID=network_id SSCPID=sscp_id SSCPNAME=name _____>
```

```
> | ALSREQ=NO _____ | | APPNCOS=NONE _____ | (1) _____>
| ALSREQ= YES _____ | | APPNCOS=class-of-service_name_ | _____>
| NO _____ | | _____ | _____>
```

```
> | ASIRFMSG=OLUSSCP _____ | | ASYDE=TERM _____ | _____>
| ASIRFMSG= ALLSSCP _____ | | ASYDE= KEEP _____ | _____>
| OLUSSCP _____ | | TERM _____ | _____>
| NONE _____ | | _____ | _____>
```

```
> | AUTHLEN=YES _____ | | AUTORTRY=AUTOCAP _____ | _____>
| AUTHLEN= NO _____ | | AUTORTRY= AUTOCAP _____ | _____>
| YES _____ | | CDRM _____ | _____>
| _____ | | ALL _____ | _____>
| _____ | | NONE _____ | _____>
```

```
> | AUTOTI=0 _____ | | BN=NO _____ | (2) _____>
| AUTOTI=time_period _____ | | BN= NO _____ | _____>
| _____ | | YES _____ | _____>
```

```
> | BNDYN=LIMITED _____ | (3) | BNORD=PRIORITY _____ | (4) _____>
| BNDYN= LIMITED _____ | | BNORD= PRIORITY _____ | _____>
| NONE _____ | | DEFINED _____ | _____>
| FULL _____ | | _____ | _____>
```

```
> | BSCMDRS=(STATS,INOPS) _____ | _____>
| BSCMDRS= STATS _____ | _____>
| NOSTATS _____ | _____>
| (,INOPS) _____ | _____>
| (,NOINOPS) _____ | _____>
| (STATS,INOPS) _____ | _____>
| (STATS,NOINOPS) _____ | _____>
| (NOSTATS,INOPS) _____ | _____>
| (NOSTATS,NOINOPS) _____ | _____>
```

```
> | BSCTMOUT=286 _____ | _____>
| BSCTMOUT=units_of_time _____ | _____>
```

```
> | poolname=_ _() _____ | _____>
| _____ | Buffer Pool Values | _____>
```



> CACHETI=8 CDRDYN=YES  
 > | CACHETI=number\_of\_minutes | | CDRDYN= NO |  
 > | | YES |

> CDRSCTI=8M CDSERVR=NO (5)  
 > | CDRSCTI=timeout\_value | | CDSERVR= YES |  
 > | | NO |

> CINDXSIZ=4080 CMPMIPS=100 (6)  
 > | CINDXSIZ=table\_size | | CMPMIPS=compression\_ratio |

> CMPVTAM=0 COLD  
 > | CMPVTAM=compression\_level | | WARM |

> CONFIG=00 CONNTYPE=APPN (7)  
 > | CONFIG= file id | | CONNTYPE= APPN |  
 > | file name | | LEN |

> CPCDRSC=NO CPCP=LEASED (8)  
 > | CPCDRSC= YES | | CPCP= YES |  
 > | NO | | NO |  
 > | | LEASED |  
 > | | SWITCHED |

> DATEFORM=MDY  
 > | CPSTAB=table\_name | | DATEFORM= MDY |  
 > | | DMY |  
 > | | YMD |

> DIRSIZE=0 (9) DIRTIME=8D (10)  
 > | DIRSIZE=number\_of\_resources | | DIRTIME=time\_period |

> DISCNTIM=15 DSPLYMAX=100  
 > | DISCNTIM=time\_period | | DSPLYMAX=number\_of\_messages |

> DSPLYWLD=FULLWILD DYNADJCP=YES (11)  
 > | DSPLYWLD= FULLWILD | | DYNADJCP= YES |  
 > | NOWILD | | NO |  
 > | OPERONLY |  
 > | POAONLY |

> DYNASSCP=YES DYNLU=NO ENHADDR=NO  
 > | DYNASSCP= YES | | DYNLU= YES | | ENHADDR= NO |  
 > | NO | | NO | | YES |

> ESIRFMSG=ALLSSCP FLDTAB=ISTMSFLD  
 > | ESIRFMSG= ALLSSCP | | FLDTAB= table name |  
 > | OLUSSCP | | NONE |  
 > | NONE |

> FSIRFMSG=OLUSSCP HNTSIZE=4080  
 > | FSIRFMSG= ALLSSCP | | HNTSIZE=table\_size |  
 > | OLUSSCP |  
 > | NONE |



```
> |-----|-----|-----|
  |_MXSSCPRU=ru_length_| |_MXSUBNUM= 255_|
  |                     | |511_|
  |                     | |1023_|
  |                     | |2047_|
  |                     | |4095_|
  |                     | |8191_|
  |                     | |16383_|
  |                     | |32767_|
  |                     | |65535_|
```

```
> |_NCPBUFSZ=512_| |_NMVTLOG=NPDA_|
  |_NCPBUFSZ= 512_| |_NMVTLOG= ALWAYS_|
  | 1024_| | NEVER_|
  | 2048_| | NPDA_|
```

```
> |-----|-----|-----|
  |_NODELST=name_| |_NODETYPE= EN_|
  |                     | | NN_|
```

```
> |_NONMODE=NAME_|
  |_NQNMODE= NAME_|
  |  NONAME_|
```

```
> |_NUMTREES=100_| (17)
  |_NUMTREES=number_of_routing_trees_|
```

```
> |_OSRTSIZE=43_|
  |_OSRTSIZE=number_of_queue_pointers_|
```

```
> |_PDTRCBUF=2_| |_PLUALMSG=NOSUPP_|
  |_PDTRCBUF=number_of_buffers_| |_PLUALMSG= SUPPRESS_|
  |                                     | | NOSUPP_|
```

```
> |_PPOLOG=NO_| |_PROMPT_| (18)
  |_PPOLOG= NO_| |_NOPROMPT_|
  | YES_|
```

```
> |_RESUSAGE=100_| (19) |_ROUTERES=128_| (20)
  |_RESUSAGE=usage_limit_| |_ROUTERES=resistance_value_|
```

```
> |_SDLCMDRS=YES_|
  |_SDLCMDRS=(STATS,INOPS)|
  |_SDLCMDRS= YES_|
  | NO_|
  | STATS_|
  | NOSTATS_|
  | (,INOPS)|
  | (,NOINOPS)|
  | (STATS,INOPS)|
  | (,NOINOPS)|
  | NOSTATS,INOPS_|
  | (,NOINOPS)|
```

```
> |_SGALIMIT=0_| |_SGA24=0_| |_SIRFMSG=ALLSSCP_|
  |_SGALIMIT=value_| |_SGA24=value_| |_SIRFMSG= ALLSSCP_|
  |                                     | | OLUSSCP_|
  |                                     | | NONE_|
```



| TRACE,TYPE=IO | IO Trace Operands | \_\_\_\_\_ |

(31)

> | NOTRACE,TYPE=LINE | \_\_\_\_\_ | \_\_\_\_\_ |  
 | TRACE,TYPE=LINE | LINE Trace Operands | \_\_\_\_\_ | (32) |

(33)

> | NOTRACE,TYPE=SIT | \_\_\_\_\_ | \_\_\_\_\_ |  
 | TRACE,TYPE=SIT | SIT Trace Operands | \_\_\_\_\_ | (34) |

(35)

> | NOTRACE,TYPE=SMS | \_\_\_\_\_ | \_\_\_\_\_ |  
 | TRACE,TYPE=SMS,ID=VTAMBUF | \_\_\_\_\_ | (36) |

(38)

> | TRACE,TYPE=VTAM,\_ | VIT Operands | \_\_\_\_\_ |  
 | NOTRACE,TYPE=VTAM | \_\_\_\_\_ | (37) |

> | TRAMNBUF=14 | \_\_\_\_\_ | TRAMXBUF=28 | \_\_\_\_\_ |  
 | TRAMNBUF=number\_of\_buffers | \_\_\_\_\_ | TRAMXBUF=number\_of\_buffers | \_\_\_\_\_ |

> | TRANSLAT=(0,1,2,3,4,5,6,7) | \_\_\_\_\_ | \_\_\_\_\_ |  
 | TRANSLAT= value | \_\_\_\_\_ | USSTAB=table\_name | \_\_\_\_\_ |

| \_ ( ) \_\_\_\_\_ |  
 | \_ ( < , \_\_\_\_\_ |  
 | \_ ( \_\_\_\_\_ | \_ ) \_\_\_\_\_ |

- DLUALIAS \_\_\_\_\_
- | 0 \_\_\_\_\_ |
- DLUREAL \_\_\_\_\_
- | 1 \_\_\_\_\_ |
- DLUSSCP \_\_\_\_\_
- | 2 \_\_\_\_\_ |
- COSNAME \_\_\_\_\_
- | 3 \_\_\_\_\_ |
- LOGMODES \_\_\_\_\_
- | 4 \_\_\_\_\_ |
- LUANAME \_\_\_\_\_
- | 5 \_\_\_\_\_ |
- USERVAR \_\_\_\_\_
- | 6 \_\_\_\_\_ |
- DLUALIAS \_\_\_\_\_
- | 7 \_\_\_\_\_ |

> | VRTG=NO | \_\_\_\_\_ | (39) | VRTGCPCP=YES | \_\_\_\_\_ | (40) |  
 | VRTG= YES | \_\_\_\_\_ | VRTGCPCP= YES | \_\_\_\_\_ |  
 | NO | \_\_\_\_\_ | NO | \_\_\_\_\_ |

> | VTAMEAS=50 | \_\_\_\_\_ | \_\_\_\_\_ |  
 | VTAMEAS=number\_of\_concurrent\_sessions | \_\_\_\_\_ | \_\_\_\_\_ |

> | XNETALS=NO | \_\_\_\_\_ | (41) | \_\_\_\_\_ |  
 | XNETALS= YES | \_\_\_\_\_ | \_\_\_\_\_ |  
 | XNETALS= NO | \_\_\_\_\_ | \_\_\_\_\_ |  
 | YES | \_\_\_\_\_ | \_\_\_\_\_ |

> | X25PRIS=14 | \_\_\_\_\_ | \_\_\_\_\_ |

|\_X25PRIS=priority\_for\_SNA\_connections\_|

> |\_X25PRIV=14\_|  
 |\_X25PRIV=priority\_for\_VCNS\_connections\_|

**Buffer Pool Values:**

|\_(|\_baseno\_|\_|\_bufsize\_|\_|\_slowpt\_|\_|\_F\_|\_|\_|\_|>  
 > |\_(|\_xpanno\_|\_|\_xpanpt\_|\_|\_xpanlim\_|\_|\_|\_|)

**BUF Trace Operands:**

|\_|\_ID=node\_name\_|\_|\_EVERY\_|\_|\_|\_AMOUNT=PARTIAL\_|\_|\_|>  
 |\_|\_AMOUNT=|\_|\_FULL\_|\_|\_|\_PARTIAL\_|\_|\_|>  
 > |\_|\_IDTYPE=RESOURCE\_|\_|\_|>  
 |\_|\_IDTYPE=|\_|\_CP\_|\_|\_|\_SSCP\_|\_|\_|\_RESOURCE\_|\_|\_|

**IO Trace Operands:**

|\_|\_ID=node\_name\_|\_|\_EVERY\_|\_|\_|\_IDTYPE=RESOURCE\_|\_|\_|>  
 |\_|\_IDTYPE=|\_|\_CP\_|\_|\_|\_SSCP\_|\_|\_|\_RESOURCE\_|\_|\_|

**LINE Trace Operands:**

|\_|\_ID=line\_name\_|\_|\_|\_COUNT=ALL\_|\_|\_| (42)  
 |\_|\_COUNT=|\_|\_ALL\_|\_|\_|\_|\_number\_of\_bytes\_|\_|\_|

**SIT Trace Operands:**

|\_|\_ID=line\_name\_|\_|\_|\_COUNT=ALL\_|\_|\_| (43)  
 |\_|\_COUNT=|\_|\_ALL\_|\_|\_|\_|\_number\_of\_bytes\_|\_|\_|>

> |\_|\_TRACEPT=trace\_point\_id\_|\_|\_|

**VIT Operands:**

|\_|\_MODE=INT, SIZE=50\_|\_|\_|>  
 |\_|\_MODE=|\_|\_EXT\_|\_|\_|\_|\_INT\_|\_|\_|\_|\_SIZE=size\_|\_|\_|

> |\_|\_OPTION=(API,MSG,NRM,PIU,SSCP)|\_|\_|>  
 |\_|\_OPTION=|\_|\_ALL\_|\_|\_|\_|\_NONE\_|\_|\_|\_|\_option\_|\_|\_|\_|\_(option)|\_|\_|\_|\_|<\_|\_|\_|\_|\_|>  
 |\_|\_API\_|\_|\_|\_APPC\_|\_|\_|\_CIO\_|\_|\_|\_ESC\_|\_|\_|\_LCS\_|\_|\_|\_LOCK\_|\_|\_|\_MSG\_|\_|\_|

<a href="#">NRM</a>
<a href="#">PIU</a>
<a href="#">PSS</a>
<a href="#">SMS</a>
<a href="#">SSCP</a>

**Notes:**

- (1) APPNCOS is meaningful only if the NODETYPE start option is also used.
- (2) BN is meaningful only if the NODETYPE=NN start option is also used.
- (3) BNDYN is meaningful only if the BN=YES start option is also used.
- (4) BNORD is meaningful only if the BN=YES start option is also used.
- (5) CDSERVR is meaningful only if the NODETYPE=NN start option is also used.
- (6) The CMPMIPS start option is meaningful only if the value for CMPVTAM is greater than 1.
- (7) CONNTYPE is meaningful only if the NODETYPE start option is also used.
- (8) CPCP is meaningful only if the NODETYPE start option is also used.
- (9) DIRSIZE is meaningful only if the NODETYPE=NN start option is also used.
- (10) DIRTIME is meaningful only if the NODETYPE=NN start option is also used.
- (11) DYNADJCP is meaningful only if the NODETYPE start option is also used.
- (12) HOSTSA provides subarea function. If you do not specify HOSTSA, but you specify NODETYPE, there is no default for HOSTSA and subarea function is not provided. If you do not specify HOSTSA and NODETYPE, a default of HOSTSA=1 is assumed and APPN function is not provided.
- (13) INITDB is meaningful only if the NODETYPE=NN start option is also used.
- (14) LIST can be entered by a VTAM operator only. If LIST is coded in an ATCSTRxx file, it is considered to be an error and is ignored.
- (15) LISTBKUP can only be coded in a start option file. If you enter it on the START command or at an operator prompt, VTAM will ignore it.
- (16) NODETYPE provides APPN function. The combination of NODETYPE and HOSTSA determines the configuration (subarea node, interchange node, migration data host, network node, or end node).
- (17) NUMTREES is meaningful only if the NODETYPE=NN start option is also used.
- (18) A VTAM operator cannot enter the PROMPT or NOPROMPT start option; it can be coded only in ATCSTR00. The value coded in ATCSTR00 is ignored if start options are entered on the START command or if VTAM finds an error in a start list. Upon finding an error in a start list, VTAM prompts the operator so that the operator can specify the

option correctly.

- (19) RESUSAGE is meaningful only if the NODETYPE=NN start option is also used.
- (20) ROUTERES is meaningful only if the NODETYPE=NN start option is also used.
- (21) SNVC is meaningful only if the BN=YES start option is also used.
- (22) SORDER is meaningful only in a network node, interchange node, or migration data host.
- (23) SRCOUNT is meaningful only if the SRCHRED=ON start option is also used.
- (24) SRTIMER is meaningful only if the SRCHRED=ON start option is also used.
- (25) The SSCPDYN start option applies only for interconnected networks (that is, GWSSCP=YES is used).
- (26) SSEARCH is meaningful only if the NODETYPE=NN start option is also used.
- (27) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (28) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (29) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (30) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (31) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (32) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (33) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (34) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (35) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (36) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (37) NOTRACE,TYPE=VTAM is accepted but ignored. Tracing is started with the default trace table size and the default options.
- (38) Code TRACE and its qualifiers on one line. Code the TYPE qualifier



immediately following TRACE.

- (39) VRTG is meaningful only if the NODETYPE and HOSTSA start options are also used.
  - (40) VRTGCPCP is meaningful only if the NODETYPE and HOSTSA start options are also used.
  - (41) The default for XNETALS is NO if BN=NO. The default for XNETALS is YES if BN=YES.
  - (42) COUNT applies only to the IBM 3720 and 3745 Communication Controllers.
  - (43) COUNT applies only to the IBM 3720 and 3745 Communication Controllers.
- 



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---



## 2.1.47 HALT Command

```
>> vm_prefix HALT NET | -,CDLINK=ACT | _____ ><
                        | -,CDLINK=- | ACT
                        | INACT |
```

### Abbreviations

Operand	Abbreviation
HALT	Z

### Purpose

The HALT command requests a normal halt of VTAM without disrupting active LU-LU sessions. (See also the ["HALT CANCEL Command \(MVS, VM\)"](#) and the ["HALT QUICK Command."](#)) If VTAM was defined as a network node or interchange node and a checkpoint data set is available, VTAM takes checkpoints of the directory database and the topology database during normal HALT processing.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**CDLINK**  
specifies whether any active, leased, cross-domain SDLC links between NCPs are to remain active after the NCPs have been deactivated.

This operand is effective only on the first HALT command. Any CDLINK specifications on subsequent HALT commands are ignored.

**CDLINK=ACT**  
specifies that any active cross-domain SDLC links are to remain active after the NCP major nodes are deactivated, so that information being routed through the NCPs can continue to be so routed. That is, any cross-domain sessions that use the NCPs as transit nodes can continue.

CDLINK=INACT

specifies that cross-domain SDLC links are to be deactivated,  
along with the rest of the domain. This disrupts any sessions  
through those cross-domain links.

---



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## 2.1.48 HALT CANCEL Command (MVS, VM)

```
>> vm_prefix HALT NET,CANCEL | -,DUMP=NO | (1) _____ ><
| -,DUMP=- | NO |
| YES |
```

### Note:

(1) The DUMP operand applies to MVS only.

### Abbreviations

Operand	Abbreviation
HALT	Z

### Purpose

The HALT CANCEL command should be used if the HALT and HALT QUICK commands do not terminate VTAM. This command depends only on the proper functioning of the operating system's abnormal termination facilities.

Under VSE, similar results can be obtained by canceling the VTAM partition.

The HALT CANCEL command results in an abend of VTAM with a system completion code of **MVS** X'0A9' or **VM** X'13E'. No further I/O operations are performed. VTAM application programs having a TPEND exit are notified of a VTAM shutdown, and data in the process of being transmitted might be lost. If the TPEND exit cannot be scheduled, the application program is abnormally terminated. In extraordinary circumstances, the operator might have to cancel some application programs. It is a good idea to shut down application programs (have them close their VTAM ACB) before you issue the HALT CANCEL command.

It is possible that the MVS operator console might be hung after you issue a HALT CANCEL command, for example if a message group is truncated before it can be displayed. You can clear the console by issuing the MVS command **K Q**.

VTAM does **not** take checkpoints of the directory database and the topology database during HALT CANCEL processing.

## Operands

### vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS** Do not use a command prefix.

### DUMP **MVS**

specifies whether a dump is to be taken as a result of the abend.

In most error situations where a VTAM dump is needed, take an MVS console dump (SVC dump) before halting VTAM. A console dump of VTAM is more useful for problem determination than the abend dump that is generated for a HALT CANCEL,DUMP=YES command. If you specify SDATA=(RGN,CSA,PSA,LSQA,TRT) on the MVS DUMP command, the console dump contains the information that is needed for problem diagnosis.

The following is an explanation of the abbreviations in the SDATA operand of the MVS DUMP command:

RGN	VTAM private area region
CSA	Common system area storage
PSA	"Low core" storage
LSQA	System storage for the region
TRT	The system trace table

See the MVS system commands manual for details about the MVS DUMP command.

### DUMP=YES

specifies that an abend dump is to be taken. The dump is written to the data set specified on the SYSABEND DD statement.

### DUMP=NO

specifies that a dump is not to be taken.



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## 2.1.49 HALT QUICK Command

```
>> vm_prefix HALT NET,QUICK | CDLINK=ACT | _____ ><
| CDLINK=- | ACT |
| INACT | _____ ><
```

### Abbreviations

Operand	Abbreviation
HALT	Z

### Purpose

You can use the HALT QUICK command to halt VTAM more quickly than with a normal HALT command. However, HALT QUICK disrupts LU-LU sessions. In a session using multiple resources, you must wait for any deactivation requests to complete before you issue this command. Otherwise, you will have to issue the VARY INACT command to force deactivation of the session. (See the [TYPE=FORCE](#) operand of the [VARY INACT](#) command in topic [2.1.97](#) for more information on forced deactivation.)

If a VTAM dump, load, or restart subtask is active when a HALT QUICK command is issued, the subtask is detached and a system completion code of X'13E' or X'33E' results. VTAM termination continues.

If VTAM was defined as a network node or interchange node and a checkpoint data set is available, VTAM takes checkpoints of the directory database and the topology database during HALT QUICK processing.

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**CDLINK**  
specifies whether any active cross-domain SDLC links between NCPs are to remain active after the NCPs have been deactivated.

This operand is effective only on the first HALT QUICK command. Any

CDLINK specifications on subsequent HALT QUICK commands are ignored.

CDLINK=ACT

specifies that any active, leased, cross-domain SDLC links are to remain active after the NCP major nodes are deactivated, so that information being routed through the NCPs can continue to be so routed. That is, any cross-domain sessions that use the NCPs as transit nodes can continue.

CDLINK=INACT

specifies that cross-domain SDLC links are to be deactivated, along with the rest of the domain. This disrupts any sessions through these cross-domain links.



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## 2.1.50 MODIFY ALSLIST Command

Add an entry to an adjacent link station list:

```
>> vm_prefix MODIFY procname,ALSLIST___, ACTION=ADD _____>
>___, ID= * _____, NEWALS=adjacent_link_station_name _____><
| cdrsc_major_node |
| cdrsc_name |
```

Delete an entry from an adjacent link station list:

```
>> vm_prefix MODIFY procname,ALSLIST___, ACTION=DELETE _____>
>___, ID= * _____, OLDALS=adjacent_link_station_name _____><
| cdrsc_major_node |
| cdrsc_name |
```

Replace an entry in an adjacent link station list:

```
>> vm_prefix MODIFY procname,ALSLIST___, ACTION=REPLACE _____>
>___, ID= * _____, NEWALS=adjacent_link_station_name _____>
| cdrsc_major_node |
| cdrsc_name |
>___, OLDALS=adjacent_link_station_name _____><
```

Create a dynamic CDRSC and add entry in adjacent link station list:

```
>> vm_prefix MODIFY procname,ALSLIST___, ACTION=CREATE___, ID=cdrsc_name _____>
>___, NEWALS=adjacent_link_station_name _____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
ACTION=CREATE	ACTION=CRE
ACTION=DELETE	ACTION=DEL
ACTION=REPLACE	ACTION=REP
NEWALS	NEW
OLDALS	OLD



---

## Purpose

The MODIFY ALSLIST (adjacent link station list) command enables you to create or change an entry in the default adjacent link station list for an independent LU. A change to the adjacent link station list affects only sessions established after the change is made. It does not affect active or pending active sessions.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

## ACTION

specifies whether VTAM is to create a dynamic cross-domain resource, add a PU to the adjacent link station list, delete a PU from the list, or replace a PU currently named in the adjacent link station list with another PU.

### ACTION=ADD

adds a new PU to the adjacent link station list for the already existing independent LU specified. Specify the name of the PU on the NEWALS operand.

**Note:** You can code NEWALS=ISTAPNPU instead of a real adjacent link station name. ISTAPNPU is a generic representation for any APPN-capable adjacent link station. If VTAM finds ISTAPNPU in the adjacent link station list for an independent LU, VTAM treats ISTAPNPU as if it were any active APPN-capable adjacent link station when trying to determine whether to attempt routing through the APPN network.

### ACTION=CREATE

creates a dynamic cross-domain resource for the independent LU specified on the ID operand. The dynamic cross-domain resource is created only if the independent LU does not already exist. If the

independent LU already exists or if it is dynamically created, the adjacent link station list for the independent LU is updated to include the specified adjacent link station (ALS).

If the specified independent LU is dynamic (that is, it was created as a dynamic cross-domain resource and ACTION=ADD or ACTION=CREATE added an ALS to the list, or, ACTION=CREATE created the resource), but the ALS (PU) has DYNLU=NO specified on its definition statement, the ALS will be added to the ALS list but it will not be usable for sessions with the dynamically defined independent LU.

The CDRSCTI start option determines how long the newly created dynamic cross-domain resource can remain without active sessions before it is deleted.

Specify the name of the PU to be created on the NEWALS operand.

#### ACTION=DELETE

deletes an existing PU from the adjacent link station list. Specify the name of the PU to be deleted on the OLDALS operand.

**Note:** You can code OLDALS=ISTAPNPU instead of a real adjacent link station name. ISTAPNPU is a generic representation for any APPN-capable adjacent link station. If VTAM finds ISTAPNPU in the adjacent link station list for an independent LU, VTAM treats ISTAPNPU as if it were any active APPN-capable adjacent link station when trying to determine whether to attempt routing through the APPN network. This command does **not** delete any real PU names that are APPN-capable; it only deletes the ISTAPNPU entry.

#### ACTION=REPLACE

adds a new PU to the adjacent link station list and deletes an existing PU from that list. Specify the name of the PU to be added on the NEWALS operand and the name of the PU to be deleted on the OLDALS operand. Both the NEWALS and the OLDALS operands are required if ACTION=REPLACE.

**Note:** You can code NEWALS=ISTAPNPU or OLDALS=ISTAPNPU instead of a real adjacent link station name. ISTAPNPU is a generic representation for any APPN-capable adjacent link station. If VTAM finds ISTAPNPU in the adjacent link station list for an independent LU, VTAM treats ISTAPNPU as if it were any APPN-capable adjacent link station when trying to determine whether to attempt routing through the APPN network.

#### ID

specifies the cross-domain resources that are to be changed.

#### ID=cdrsc\_major\_node

specifies that this command applies to all cross-domain resources that apply to that major node.

#### ID=cdrsc\_name

specifies that this command applies to the specified cross-domain resource (independent LU) that is to be created or changed. You can specify a network-qualified name for the independent LU.

#### ID=\*

specifies that this command applies to all cross-domain resources.

NEWALS=adjacent\_link\_station\_name  
specifies the name of the new adjacent link station (PU) for the independent LU specified. You use this operand to add a PU or to identify a new PU that will replace an existing one in the adjacent link station list.

OLDALS=adjacent\_link\_station\_name  
specifies the name of the existing adjacent link station (PU) for the independent LU specified. You use this operand to delete a PU or to identify an existing PU that is to be replaced by another PU in the adjacent link station list.

---



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## 2.1.51 MODIFY CDRM Command

```
>> vm_prefix MODIFY procname, CDRM= new_cdrm >
      | (new_cdrm) |
      | (new_cdrm, old_cdrm) |

> ID= * | TYPE=NORM ><
      | cdrsc major node name | | TYPE= | IMMED |
      | cdrsc minor node name | | NORM |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
TYPE=IMMED	IMMED or I or TYPE=I
TYPE=NORM	NORM or N or TYPE=N

### Purpose

The MODIFY CDRM (cross-domain resource manager) command tells VTAM which SSCP (CDRM) is the owner of a particular cross-domain resource (CDRSC) or set of CDRSCs. Ongoing sessions of CDRSCs affected by this command are not disrupted. The command changes only the name of the external CDRM responsible for all future session setups with these CDRSCs.

DISPLAY commands issued before a new name takes effect show the old owner CDRM name.

If the cross-domain resource affected by the MODIFY CDRM command was predefined with a CDRM coded on the CDRSC definition statement, the MODIFY CDRM command changes the CDRM that owns the CDRSC for the current and subsequent sessions. If the CDRSC was not predefined with CDRM coded, the change is temporary. After such new or existing sessions terminate, the CDRM is changed back to having no predefined CDRM coded.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

*procname*

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

CDRM

specifies the new CDRM to be associated with the CDRSCs, and the CDRM that it replaces.

**Note:** For a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.

CDRM=new\_cdrm

specifies the name of the new CDRM to associate with the CDRSCs.

CDRM=(new\_cdrm,old\_cdrm)

specifies both the new CDRM to associate with the CDRSCs and the CDRM that was previously associated with the CDRSCs. If *old\_cdrm* is specified, only the CDRM names that match this *old\_cdrm* name are changed.

ID

identifies the CDRSC major or minor node for which the owning CDRM name is to be changed.

ID=cdrsc\_major\_node\_name

changes the owning CDRM for all CDRSCs in the hierarchy under the major node. The major node name can be specified as a network-qualified name.

ID=cdrsc\_minor\_node\_name

changes the owning CDRM for only the specified minor node. The minor node name can be specified as a network-qualified name.

ID=\*

changes the owning CDRM for all CDRSCs known to VTAM.

TYPE

indicates whether CDRM takeover occurs without waiting for any sessions that are present to end.

TYPE=IMMED

indicates that the CDRM is to be changed immediately, regardless of the presence of sessions.

TYPE=NORM

indicates that the MODIFY CDRM command waits until all sessions have ended before changing the CDRM. If no session exists for a CDRSC affected by the MODIFY CDRM command, the CDRM is changed immediately (as with TYPE=IMMED).

If sessions are active or queued for a specific CDRSC affected by a MODIFY CDRM command, the current owning CDRM remains in effect until all active and queued sessions with the resource have been terminated. At that time, the owning CDRM name is changed and the new CDRM name takes effect.



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## 2.1.52 MODIFY CHKPT Command

```
>> vm_prefix MODIFY procname,CHKPT 

|                                                                                                                                                                                     |            |            |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------------|
| <u>TYPE=ALL</u>                                                                                                                                                                     |            |            |             |
| <u>TYPE=</u> <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td><u>ALL</u></td></tr><tr><td><u>DIR</u></td></tr><tr><td><u>TOPO</u></td></tr></table> | <u>ALL</u> | <u>DIR</u> | <u>TOPO</u> |
| <u>ALL</u>                                                                                                                                                                          |            |            |             |
| <u>DIR</u>                                                                                                                                                                          |            |            |             |
| <u>TOPO</u>                                                                                                                                                                         |            |            |             |

 <<
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY CHKPT (checkpoint) command saves a copy of the directory database or the topology database (or both) to a checkpoint data set. During a VTAM recycle, you can restart VTAM with a current list of resources. (VTAM also takes checkpoints during HALT and HALT QUICK processing, but not during HALT CANCEL.) As the checkpoint for each affected data set is completed, a message is issued that indicates whether the checkpoint was successful. The message provides the name of the data set that was updated.

This command is valid only when it is issued at a network node or an interchange node.

When you issue this command for the directory database (TYPE=DIR or TYPE=ALL), VTAM first cleans up the database, then saves it. Cleanup means that dynamic resources that have not been used in some period of time (default 8 days) are deleted from the database. Only dynamic resources that have been the target of a search are then saved. You can change the period of time by using the MODIFY VTAMOPTS command to reset the DIRTIME start option. For more information about the MODIFY VTAMOPTS command, see the ["MODIFY VTAMOPTS Command."](#) For more information about the DIRTIME start option, see ["DIRTIME"](#) in the *VTAM Resource Definition Reference*.

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

`procname`

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

`TYPE`

identifies the APPN database to save via a checkpoint.

`TYPE=DIR`

Writes the directory database to a data set.

`TYPE=TOPO`

Writes the topology database to a data set.

`TYPE=ALL`

Writes both the directory database and the topology database to a data set.



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## 2.1.53 MODIFY CNOS Command

Set session limits to zero for one logon mode:

```
>> vm_prefix MODIFY procname,CNOS___,ID=appl_name___,LIMITS=(0,0,0)_____>

>___,LOGMODE=logon_mode_name___,LUNAME=lu_name___|___,DRAINL=NO_____>
|___,DRAINL=___NO_____|_____>
|___YES_____|_____>

>___,DRAINR=NO_____|___,NBRMODE=ONE_____|___,RESP=LOCAL_____>
|___,DRAINR=___NO_____|___,RESP=___LOCAL_____|_____>
|___YES_____|___REMOTE_____|_____>

>___,SNGSESLU=NO_____>
|___,SNGSESLU=___NO_____><
|___YES_____><
```

Set session limits to zero for all logon modes:

```
>> vm_prefix MODIFY procname,CNOS___,ID=appl_name___,LIMITS=(0,0,0)_____>

>___,LUNAME=lu_name___,NBRMODE=ALL|___,DRAINL=NO_____>
|___,DRAINL=___NO_____|_____>
|___YES_____|_____>

>___,DRAINR=NO_____|___,RESP=LOCAL_____>
|___,DRAINR=___NO_____|___,RESP=___LOCAL_____|_____>
|___YES_____|___REMOTE_____|_____>

>___,SNGSESLU=NO_____>
|___,SNGSESLU=___NO_____><
|___YES_____><
```

Set session limits to non-zero:

```
>> vm_prefix MODIFY procname,CNOS___,ID=appl_name_____>

>___,LIMITS=(sesslim,mirwinl,mirwinr)___,LOGMODE=logon_mode_name_____>

>___,LUNAME=lu_name___|___,CONVSECL=___NONE_____>
|___CONV_____>
|___(1)_____>
```

<u>ALREADYV</u>	(2)
<u>PERSISTV</u>	(3)
<u>AVPV</u>	

```
> _ , RESP=LOCAL _____ | _____ | _____ ><
  | _____ | _____ | _____
  | LOCAL | _____ | _____
  | REMOTE | _____ | _____
```

**Notes:**

- (1) ALREADYV applies to MVS and VM only.
- (2) PERSISTV applies to MVS only.
- (3) AVPV applies to MVS only.

**Use existing session limits:**

```
>> vm_prefix MODIFY procname, CNOS _____, ID=appl_name _____ >
```

```
> _____, LOGMODE=logon_mode_name _____, LUNAME=lu_name _____ >
```

```
> _____ | _____ | _____ >
  | _____ | _____ | _____
  | CONVSECL= _____ | _____ | _____
  | NONE | _____ | _____
  | CONV | _____ | _____
  | _____ | _____ | _____
  | _____ | _____ | _____
  | ALREADYV | _____ | _____
  | _____ | _____ | _____
  | _____ | _____ | _____
  | PERSISTV | _____ | _____
  | _____ | _____ | _____
  | _____ | _____ | _____
  | AVPV | _____ | _____
```

```
> _____ | _____ | _____ ><
  | _____ | _____ | _____
  | SNGSESLU=NO _____ | _____ | _____
  | _____ | _____ | _____
  | _____ | _____ | _____
  | NO | _____ | _____
  | _____ | _____ | _____
  | YES | _____ | _____
```

**Notes:**

- (1) ALREADYV applies to MVS and VM only.
- (2) PERSISTV applies to MVS only.
- (3) AVPV applies to MVS only.

**Abbreviations**

Operand	Abbreviation
MODIFY	F
CONVSECL=ALREADYV	CONVSECL=A or CSECL=ALREADYV or CSECL=A
CONVSECL=AVPV	CONVSECL=V or CSECL=AVPV or CSECL=V

CONVSECL=CONV	CONVSECL=C or CSECL=CONV or CSECL=C
CONVSECL=NONE	CONVSECL=N or CSECL=NONE or CSECL=N
CONVSECL=PERSISTV	CONVSECL=P or CSECL=PERSISTV or CSECL=P
DRAINL=NO	DRAINL=N or DRL=NO or DRL=N
DRAINL=YES	DRAINL=Y or DRL=YES or DRL=Y
DRAINR=NO	DRAINR=N or DRR=NO or DRR=N
DRAINR=YES	DRAINR=Y or DRR=YES or DRR=Y
LOGMODE	LOG
LUNAME	LU
NBRMODE=ALL	NBRMODE=A or NBM=ALL or NBM=A
NBRMODE=ONE	NBRMODE=O or NBM=ONE or NBM=O
RESP=LOCAL	RESP=L or RSP=LOCAL or RSP=L
RESP=REMOTE	RESP=R or RSP=REMOTE or RSP=R
SNGSESLU=NO	SNGSESLU=N or SNG=NO or SNG=N
SNGSESLU=YES	SNGSESLU=Y or SNG=YES or SNG=Y

## Purpose

The MODIFY CNOS (change number of sessions) command initiates a CNOS transaction with a partner LU for the specified application program.

Using this command, you can modify session limits, request a partner LU to drain its queue of allocation requests, or request a partner LU to be responsible for deactivating the session. The MODIFY CNOS command does the same thing as the APPCCMD CONTROL=OPRCNTL,QUALIFY=CNOS macroinstruction, which is described in ["APPCCMD CONTROL=OPRCNTL, QUALIFY=CNOS"](#) in *VTAM Programming for LU 6.2*.

**Note:** For operands that are optional and that do not have a default value, the default values used are obtained from a value already established for the specified LU-mode pair or from the APPL definition of the application specified.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as

*startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

#### CONVSECL

specifies the conversation security level that the local LU accepts.

The CONVSECL field is used only for a CNOS request that initializes session limits to a non-zero value for a partner LU. Subsequent CNOS requests for the same partner LU ignore this setting.

There are four sources for CONVSECL:

1. Security manager profile
2. CNOS
3. User BIND
4. SECACPT operand on APPL definition statement.

The order of this list indicates the selection hierarchy if no security manager profile is provided. If a security manager profile exists, the value in that profile sets the upper limit of conversation-level security that can be specified by the other three sources. If no security manager profile exists, the value in the CNOS takes precedence over any other sources of conversation security level. If no value was specified in the CNOS, and a user BIND is provided, then the value from the BIND is used.

If no conversation-level security value is available in either the CNOS or user BIND, then the default that is used is derived from the SECACPT parameter on the APPL statement.

#### CONVSECL=NONE

indicates that the LU does not accept conversation-level security (FMH-5s that include security subfields).

#### CONVSECL=CONV

indicates that the LU accepts conversation-level security (FMH-5s that include security subfields).

#### CONVSECL=ALREADYV **MVS,VM**

indicates that the LU accepts conversation-level security (FMH-5s that include security subfields) and that the application program accepts the "already verified" indicator on conversation requests it receives from the partner LU.

#### CONVSECL=PERSISTV **MVS**

indicates that the LU supports conversation-level security (FMH-5s that include security subfields) and accepts the "persistent verification" indicators on conversation requests it receives from the partner LU.

#### CONVSECL=AVPV **MVS**

indicates that the LU supports conversation-level security (FMH-5s that include security subfields) and accepts both the "persistent verification" indicators and the "already verified" indicator on conversation requests it receives from the partner LU.

DRAINL

specifies whether the source side can drain its allocation requests. This operand is valid only if the session limits are being reset to zero.

DRAINL=YES

specifies that the source side can drain its allocation requests.

DRAINL=NO

specifies that the source side cannot drain its allocation requests.

DRAINR

specifies whether the target side can drain its allocation requests. This operand is valid only if the session limits are being reset to zero.

DRAINR=YES

specifies that the target side can drain its allocation requests.

DRAINR=NO

specifies that the target side cannot drain its allocation requests.

ID=appl\_name

specifies the name of the LU 6.2 application program to which the change in the session limit and contention-winner polarity values apply. This value cannot be a network-qualified name.

LIMITS=(sesslim,minwinl,minwinr)

overrides all other sources of session limits. VTAM performs negotiation if necessary.

sesslim

specifies the maximum number of parallel sessions between the source side and the target side. It uses the logon mode name specified in the LOGMODE operand. The valid range is 0-32767.

minwinl

specifies the minimum number of parallel sessions for which the source side is guaranteed to be the contention winner. It uses the logon mode name specified in the LOGMODE operand. The valid range is 0-32767.

minwinr

specifies the minimum number of parallel sessions for which the partner LU is guaranteed to be the contention winner. It uses the logon mode name specified in the LOGMODE operand. The valid range is 0-32767.

LOGMODE=logon\_mode\_name

specifies the name of the logon mode entry for which session limit and polarity values are to be changed. When NBRMODE=ONE is specified or assumed by default, LOGMODE is required. When NBRMODE=ALL is specified, LOGMODE is not needed, and it is ignored if you specify it.

LUNAME=lu\_name

specifies the name of the partner LU to which the change in the session limit and contention-winner polarity values apply. The name can be a network-qualified name in the form of *netid.luname*.

If *lu\_name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

If PARM=(NQAMES=NO) is coded on the ACB macroinstruction, and a network-qualified name is specified, the network identifier is ignored.

If PARM=(NQAMES=YES) is coded on the ACB macroinstruction, *luname* **must be a network-qualified name**.

NBRMODE

specifies whether the setting of the session limit and the contention-winner polarity values applies only for the specified logon mode name or for all logon mode names that apply to the partner LU.

NBRMODE=ONE

specifies that the session limit and contention-winner polarity values for only the logon mode name specified in the LOGMODE operand are to be set.

NBRMODE=ALL

specifies that the session limit and contention-winner polarity values for all logon mode names that apply to the partner LU are to be reset to zero, except for SNASVCMG, which remains unchanged. NBRMODE=ALL is valid only when LIMITS=(0,0,0) is specified.

RESP

specifies which LU is responsible for deactivating the sessions as a result of resetting the session limit or for changing the contention-winner polarity values for parallel session connections.

RESP=LOCAL

specifies the local LU is responsible for deactivating the sessions as a result of resetting the session limit or changing the contention-winner polarity values for parallel session connections.

RESP=REMOTE

specifies the remote LU is responsible for deactivating the sessions as a result of resetting the session limit or changing the contention-winner polarity values for parallel session connections.

SNGSESLU

specifies whether the partner LU is a single-session LU, which does not support parallel sessions. VTAM uses the value specified on this operand to determine the indication of parallel-session support and CNOS support it specifies in the BIND requests. This operand is examined by VTAM only when the partner LU parallel-session capability has not been established.

SNGSESLU=YES

specifies that the partner LU is a single-session LU which does not support parallel sessions.

SNGSESLU=NO

specifies that the partner LU supports parallel sessions.



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## 2.1.54 MODIFY COMPRESS Command

Change the compression levels set by the APPL definition statement:

```
>> vm_prefix MODIFY procname, COMPRESS __, ID=appl_name _____ >
> _ CMPAPPLI=input_limit _____ ><
| CMPAPPLO=output_limit _____ |
| CMPAPPLI=input_limit, CMPAPPLO=output_limit _____ |
```

Change the compression level set by start option:

```
>> vm_prefix MODIFY procname, COMPRESS __, CMPVTAM=overall_limit _____ ><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY COMPRESS command allows you to change the value of the data compression levels originally set by the [CMPVTAM start option](#) or by an APPL definition statement.

The levels of compression available are in the range 0-4:

```
0          No compression
1          Run-length encoding (RLE)
2          MVS,VSE Small adaptive compression table
3          MVS,VSE Medium adaptive compression table
4          MVS,VSE Large adaptive compression table
```

See ["Data Compression"](#) in the *VTAM Network Implementation Guide* for additional information about compression.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) (CMPVTAM operand) to change the compression level set by the start option.

### Operands

vm\_prefix **VM**



is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

CMPAPPLI=input\_limit

specifies the input compression limit for the application. This operand allows compression-level limits for a specific application to be set lower than the overall limit specified by the [CMPVTAM start option](#).

**MVS,VSE** The valid range is 0-4. Zero specifies no compression.

**VM** The valid range is 0-1. Zero specifies no compression.

The limit specified by this operand is in effect only during sessions for which the application acts as the PLU and when the limit is lower than that specified by the CMPVTAM start option.

CMPAPPLO=output\_limit

specifies the output compression limit for the application. This operand allows compression-level limits for a specific application to be set lower than the overall limit specified by the [CMPVTAM start option](#).

**MVS,VSE** The valid range is 0-4. Zero specifies no compression.

**VM** The valid range is 0-1. Zero specifies no compression.

The limit specified by this operand is in effect only during sessions for which the application acts as the PLU and when the limit is lower than that specified by the CMPVTAM start option.

CMPVTAM=overall\_limit

specifies the overall compression limit for VTAM sessions. The new compression limit takes effect on new sessions that are started after you issue this command. Sessions that were started prior to this command are not changed.

**MVS,VSE** The valid range is 0-4. Zero specifies no compression.

**VM** The valid range is 0-1. Zero specifies no compression.

ID=appl\_name

specifies the name of the application to which compression applies.  
This allows modification of the compression limit for the session as  
set in the APPL definition statement. The ID operand is required when  
either CMPAPPLI or CMPAPPLO is specified.

---



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## 2.1.55 MODIFY CSALIMIT Command (MVS, VM)

```
>> vm_prefix MODIFY procname,CSALIMIT=value
|_(value)_(F)_|
> |_,OPTION=TOTAL_|
|_,OPTION=_,BELOW_|
|_,OPTION=_,TOTAL_|<<
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
OPTION=BELOW	OPT=BELOW
OPTION=TOTAL	OPT=TOTAL

### Purpose

The MODIFY CSALIMIT command allows you to dynamically change the amount of common service area (CSA) storage that VTAM is allowed to use.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) (CSALIMIT and CSA24 operands) to perform the same function as this command. Use CSALIMIT for OPTION=TOTAL and CSA24 for OPTION=BELOW.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS** Do not use a command prefix.

procname  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If procname in the START command was specified as

*startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

#### CSALIMIT

specifies the maximum amount of common service area (CSA) storage to be used by VTAM (value) and whether VTAM is to be forced to use that value (F). The actual amount of storage used by VTAM for the CSA can be less than or equal to the CSALIMIT. Use the ["DISPLAY BFRUSE Command"](#) to display the current CSALIMIT and VTAM's current storage usage for the CSA.

#### CSALIMIT=value

specifies the maximum amount of CSA storage to be used by VTAM. The value operand can be specified in any of the following forms:

0 specifies that no limit is enforced on the amount of CSA used by VTAM.

*n* or *nK*  
*n* is a decimal integer that specifies VTAM's CSA usage limit in units of K (1024 bytes). For example, if CSALIMIT=4 or CSALIMIT=4K is specified, a CSA limit of 4096 is assigned. The maximum value that can be specified is 2097152K bytes.

If the value specified for *n* is not a multiple of 4, it is rounded to the next page-size multiple (4K bytes).

**Note:** If the number specified is greater than the available CSA, no limit is enforced.

*qM*  
*q* is a decimal integer that specifies VTAM's CSA usage limit in units of M (1048576 bytes, or 1024K bytes). For example, if CSALIMIT=4M is specified, a CSA limit of 4194304 bytes is assigned. The maximum value that can be specified is 2048M.

**Note:** If the number specified is greater than the available CSA, no limit is enforced.

#### CSALIMIT=(value,F)

forces the specified value, *n*, *nK*, or *qM*, to be used as the CSA usage limit, regardless of how much CSA storage is currently allocated to VTAM. If VTAM's current CSA value is greater than a newly specified CSALIMIT value, all subsequent CSA requests by VTAM components are rejected until the current CSA value falls below the CSALIMIT value.

If F is not specified, and the operator has specified a limit smaller than the amount of CSA storage currently allocated to VTAM, a request to change the CSA limit is rejected. If F is specified, these restrictions do not apply, and the request to change the CSA will be successful.

**Note:** If a CSA limit is specified that is too low and the operator forces this limit to take effect (by using F), the operator is prevented from using VTAM commands until the CSA usage falls below the specified limit, because CSA storage is needed to process all VTAM operator commands except HALT CANCEL. If the CSA usage does not fall below the specified CSA limit, VTAM must be canceled and restarted with a more appropriate CSALIMIT value specified.

OPTION  
specifies the area to be limited.

OPTION=TOTAL  
designates the maximum amount of 24-bit or 31-bit addressable CSA storage VTAM can use.

OPTION=BELOW  
specifies that the MODIFY CSALIMIT command designates the maximum amount of 24-bit addressable storage VTAM can use. OPTION=BELOW corresponds to the CSA24 start option.

**Note:** OPTION=BELOW limits only the amount of explicitly requested 24-bit addressable storage (for example, GETMAIN LOC=BELOW). If VTAM is not specific about the location of the storage desired (for example, GETMAIN LOC=ANY), and the operating system returns 24-bit addressable storage, that storage is not subject to OPTION=BELOW limitations. Instead, it is treated as 31-bit addressable storage in DISPLAY command output.



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## 2.1.56 MODIFY DEFAULTS Command

Modify the DLOGMOD value for a resource:

```
>> vm_prefix MODIFY procname,DEFAULTS___,ID=resource_name_____>
>___,DLOGMOD=_____><
|_logon_mode_name_|_____><
```

Change the delay timer for disconnection of a switched PU:

```
>> vm_prefix MODIFY procname,DEFAULTS___,ID=resource_name_____>
>___,DISCNTIM=time_period_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
DLOGMOD	DLOG

### Purpose

The MODIFY DEFAULTS command allows you to change the current value of the DLOGMOD operand of a definition statement for an LU, application program, or cross-domain resource without deactivating the entire major node.

The MODIFY DEFAULTS command also allows you to change the delay timer for disconnection of a switched PU.

When VTAM receives the MODIFY DEFAULTS command, it overlays the existing value for the specified operand with the new value.

### Notes:

1. If you use the MODIFY DEFAULTS command to change the DLOGMOD specification, be aware that later use of a VARY ACT,UPDATE=ALL command for dynamic reconfiguration can undo the effects of the MODIFY DEFAULTS command. This is because the DLOGMOD value in the definition file overrides the value that was established with the MODIFY DEFAULTS command. Even if no DLOGMOD is coded in the definition file, VTAM assumes a null value for DLOGMOD and the null value overrides the MODIFY DEFAULTS value. To prevent the new DLOGMOD specification from being deleted unintentionally, code the DLOGMOD definition statement with the desired value.

2. You can use the [MODIFY\\_RESOURCE command](#) to perform the same function as this command.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

### DISCNTIM=time\_period

specifies the amount of time that VTAM delays deactivation of the SSCP-PU session when there are no outstanding LU-LU session requests.

You can specify the time in seconds (S). Specify the number of seconds as an integer in the range 1-255.

DISCNTIM is valid only for PU types 2 and 2.1 that have DISCNT=DELAY specified on the PU definition statement.

### DLOGMOD=logon\_mode\_name

specifies the new value for the logon mode. If DLOGMOD is specified with a null value (left blank), the predefined DLOGMOD value is deleted.

### ID=resource\_name

specifies the name of the resource to which the command applies. The name can be a network-qualified name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource.

**Note:** If the resource name is a cross-network CDRSC which is defined with NQNMODE=NQNAME (either by definition statement or start option), be sure to use its network-qualified name on this command.









## 2.1.57 MODIFY DEFINE Command

### Set session limits to zero:

```
>> vm_prefix MODIFY procname,DEFINE __, ID=appl_name __, DLIMITS=(0,0,0) ____>
> __, LOGMODE=logon_mode_name __, LUNAME=lu_name _____>
> _____|_____, DELETE=NALLOW _____|_____>
> |__, AUTOSES=number_of_winner_sessions_|_____|_____, DELETE=_ ALLOW _____|_____>
> |_____| NALLOW |_____|_____>
> _____><
> |__, DDRAINL=_ ALLOW _____|_____|_____, DRESPL=_ ALLOW _____|_____><
> |_____| NALLOW |_____|_____|_____| NALLOW |_____><
```

### Set session limits to non-zero:

```
>> vm_prefix MODIFY procname,DEFINE __, ID=appl_name _____>
> __, DLIMITS=(dsestim,dminwinl,dminwinr) __, LOGMODE=logon_mode_name _____>
> __, LUNAME=lu_name _____|_____, AUTOSES=number_of_winner_sessions_|_____>
> _____|_____, DELETE=NALLOW _____|_____><
> |_____, DELETE=_ ALLOW _____|_____|_____, DRESPL=_ ALLOW _____|_____><
> |_____| NALLOW |_____|_____| NALLOW |_____><
```

### Use existing session limits:

```
>> vm_prefix MODIFY procname,DEFINE __, ID=appl_name _____>
> __, LOGMODE=logon_mode_name __, LUNAME=lu_name _____>
> _____|_____, DELETE=NALLOW _____|_____>
> |__, AUTOSES=number_of_winner_sessions_|_____|_____, DELETE=_ ALLOW _____|_____>
> |_____| NALLOW |_____|_____>
> _____><
> |__, DRESPL=_ ALLOW _____|_____|_____><
> |_____| NALLOW |_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
AUTOSES	AUTO
DELETE=ALLOW	DELETE=A or DEL=ALLOW or DEL=A
DELETE=NALLOW	DELETE=N or DEL=NALLOW or DEL=N
DDRAINL=ALLOW	DDRAINL=A or DDRL=ALLOW or DDRL=A
DDRAINL=NALLOW	DDRAINL=N or DDRL=NALLOW or DDRL=N
DRESPL=ALLOW	DRESPL=A or DRSP=ALLOW or DRSP=A
DRESPL=NALLOW	DRESPL=N or DRSP=NALLOW or DRSP=N
LOGMODE	LOG
LUNAME	LU

## Purpose

The MODIFY DEFINE command establishes new entries or modifies existing entries in the LU-mode table for the specified application program. The DEFINE values stored in the LU-mode table are used when VTAM processes a CNOS transaction originated by the partner LU or when a CNOS request is issued from the application program (local LU) without a CNOS structure.

When VTAM receives the MODIFY DEFINE command, it overlays the existing entry with the values specified.

**Note:** For operands that are optional and that do not have a default value, the default values used are obtained from a value already established for the specified LU-mode pair or from the APPL definition statement of the application program specified.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**AUTOSES=number\_of\_winner\_sessions**  
specifies the number of contention-winner sessions to activate automatically, rather than by allocation requests from the application program. The valid range is 0-32767. If AUTOSES is not coded on the APPL statement, the default is zero.

**DDRAINL**  
specifies whether the source side can drain its allocation requests when the application program is a target of a CNOS request that resets the session limits to zero. This operand is valid only if the session limits are being reset to zero.

**DDRAINL=ALLOW**  
specifies that the application program is allowed to drain its allocation requests when the application program is the target of a CNOS request that resets the session limits to zero.

**DDRAINL=NALLOW**  
specifies that the application program is not allowed to drain its allocation requests.

**DELETE**  
specifies whether a mode name entry can be deleted from the LU-mode table.

**DELETE=ALLOW**  
specifies that a mode name entry can be deleted from the LU-mode table.

**DELETE=NALLOW**  
specifies that a mode name entry cannot be deleted from the LU-mode table.

**DLIMITS=(dseslim,dminwinl,dminwinr)**  
specifies the negotiation limits that are allowed between the source side and target side. If DLIMITS is not coded on the APPL statement, the default is (2,1,1).

**dseslim**  
specifies the maximum number of sessions between the source side and the target side. This number applies uniquely to each logon mode name for which sessions can be established with a partner LU. The valid range is 0-32767.

**dminwinl**  
specifies the minimum number of parallel sessions for which the source side is guaranteed to be the contention winner. This number applies uniquely to each logon mode name for which sessions can be established with a partner LU. The valid range is 0-32767.

dminwinr

specifies the minimum number of parallel sessions for which the partner LU is guaranteed to be the contention winner. This number applies uniquely to each logon mode name for which sessions might be established with a partner LU. The valid range is 0-32767.

DRESPL

specifies whether the LU is allowed to assume responsibility for deactivating sessions if a CNOS request is received identifying the LU as the responsible LU.

DRESPL=ALLOW

specifies that VTAM accepts a CNOS request specifying that the LU is responsible for deactivating sessions.

DRESPL=NALLOW

specifies that VTAM does not accept a CNOS request specifying that the LU is responsible for deactivating sessions.

ID=appl\_name

specifies the name of the LU 6.2 application program to which the command applies. *appl\_name* cannot be a network-qualified name.

LOGMODE=logon\_mode\_name

specifies the name of the logon mode entry for which session limit and contention-winner polarity values are to be changed. The SNASVCMG LOGMODE name is not allowed in the operand. The SNASVCMG LOGMODE is managed internally by VTAM.

LUNAME=lu\_name

specifies the name of the partner LU to which the change in the session limit and contention-winner polarity values apply. The name can be a network-qualified name in the form of *netid.luname*.

If *lu\_name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

If PARM=(NQAMES=NO) is coded on the ACB macroinstruction, and a network-qualified name is specified, the network identifier is ignored.

If PARM=(NQAMES=YES) is coded on the ACB macroinstruction, *luname* **must** be a network-qualified name.



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## 2.1.58 MODIFY DIRECTORY Command

Change the ownership of APPN resources in the directory database:

```
>> vm_prefix MODIFY procname, DIRECTORY __, FUNCTION=UPDATE _____ >

> __, ID= _ cdrsc_major_node_name _____ >
  | resource_name _____ |

> __, CPNAME= _ new_cp_name _____ ><
  | (new_cp_name, old_cp_name) _____ |
  | NETSRVR=server_name _____ |
  | CPNAME= _ new_cp_name _____, NETSRVR=server_name _____ |
  | (new_cp_name, old_cp_name) _____ |
```

Delete a resource from the directory database:

```
>> vm_prefix MODIFY procname, DIRECTORY __, FUNCTION=DELETE _____ >

> __, ID= _ cdrsc_major_node_name _____ ><
  | resource_name _____ |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
FUNCTION=DELETE	DELETE
FUNCTION=UPDATE	UPDATE

### Purpose

The MODIFY DIRECTORY (directory) command performs the following functions for the directory database:

- Changes the ownership of APPN resources in the directory database. Logical units are owned by control points. (Both end nodes and network nodes can be control points.) End nodes are owned or served by network nodes. You can specify a new end node or network node as the owner of a logical unit, or you can specify a new network node as the owner of an end node. You can even specify a new end node as the owner of an LU and a new network node as the owner of that end node on a single command, in which case all of the logical units under the end node also are associated with the new network node.

The information in the directory database is updated automatically

when VTAM receives new information about a resource. For example, if you specify a new end node as the owner of an LU, and then VTAM finds that the LU has moved to a different location, the database is updated with the LU's new location.

**Note:** If you change the network node server for an LU, all the other LUs under the same end node will also have their network node server changed.

You cannot change the resource type with this command. For example, you cannot turn a network node into an end node. If the resource specified by CPNAME or NETSRVR has a resource type that conflicts with the resource specified by ID, the update fails and an error message is issued.

The CPNAME and NETSRVR operands can specify the same resource name. For example, a logical unit can be owned by a network node, in which case the network node serves as both the control point and the network node server for the logical unit.

- Deletes resources from the directory database.

This command has no effect on corresponding CDRSC major nodes or minor nodes that have the same name as the resource specified by the ID operand. That is, the directory representation of the resource is changed, but the subarea representation of the resource is not changed.

This command is valid only when it is issued at a network node or an interchange node.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

CPNAME

specifies the new owning control point for the resource or resources named in the ID operand and the old owner that it replaces. The CPNAME operand is valid only when FUNCTION=UPDATE is specified. The

owning CP can be either a network node or an end node.

You can specify network-qualified names on the CPNAME operand. If you do not, the host's network ID will be used as the network qualifier.

CPNAME=new\_cp\_name  
specifies the name of the new control point that owns the resources.

CPNAME=(new\_cp\_name,old\_cp\_name)  
specifies the name of the control point that previously owned the resources, as well as the new owning control point. If *old\_cp\_name* is specified, only those resources whose owning control point matches *old\_cp\_name* are changed. If *old\_cp\_name* is not specified, the owning control point name for the specified resources is changed to *new\_cp\_name*, regardless of the previous value.

FUNCTION  
specifies the function to be performed by this command. The FUNCTION operand is required.

FUNCTION=UPDATE  
updates the database to reflect a new owning end node (CPNAME), or network node (NETSRVR), or both for the resource named in the ID operand.

FUNCTION=DELETE  
deletes the resource named in the ID operand from the directory database. If ID specifies the name of a CDRSC major node, this command deletes the directory representation of each minor node that was predefined with a CPNAME in the major node.

ID=resource\_name  
specifies the name of the resource (either an individual APPN resource or a CDRSC major node) that is to be updated or deleted.

If the resource is a CDRSC major node, this command affects the directory representation of each minor node that was predefined with a CPNAME in the major node. For example, you could enter:

```
F procname,DIRECTRY,UPDATE,ID=CDRSC2A,CPNAME=SSCP2A
```

where CDRSC2A is the name of a CDRSC major node which contains several resources that are now owned by control point SSCP2A.

The name specified on CPNAME or NETSRVR cannot match the name specified on ID, unless ID is a major node. If ID is a major node, then the name specified for ID can match the name specified for CPNAME or NETSRVR; however, if there is a minor node with the same name as the major node, the update will fail for that minor node.

If the resource specified on the ID operand is not found in the database, an error message is issued.

You can specify a network-qualified name on the ID operand. If you do not, the host's network ID is used as the network qualifier.

NETSRVR=server\_name

specifies the new network node server for the resource or resources named in the ID operand. The NETSRVR operand is valid only when FUNCTION=UPDATE is specified.

You can specify a network-qualified name on the NETSRVR operand. If you do not, the host's network ID is used as the network qualifier.

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## 2.1.59 MODIFY DR Command

Delete a logical unit from a physical unit, or a physical unit from a line:

```
>> vm_prefix MODIFY procname,DR_____,TYPE=DELETE_____>
> _____,ID=lu_name,FROM=pu_name_____><
| _____,ID=pu_name,FROM=line_name | _____><
```

Move a physical unit:

```
>> vm_prefix MODIFY procname,DR_____,TYPE=MOVE _____,ID=pu_name_____>
> _____,FROM=line_name _____,TO=line_name_____ | _____,ACTIVATE=NO_____>
| _____,ACTIVATE=NO_____ | _____>
| _____,ACTIVATE=YES_____ | _____>
> __________><
| _____,ADDR=link_station_address_____ | _____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
ACTIVATE=NO	ACT=NO
ACTIVATE=YES	ACT=YES

### Purpose

The MODIFY DR (dynamic reconfiguration) command dynamically reconfigures an NCP or a local peripheral node. You can use this command to delete or move type 1, 2, and 2.1 PUs along with their associated LUs, or to delete LUs.

See ["Dynamic Reconfiguration and Change of Operands"](#) in the *VTAM Network Implementation Guide* for information about dynamically reconfiguring VTAM peripheral nodes and for information about dynamic NCP reconfiguration.

The MODIFY DR command cannot dynamically add a physical unit or logical unit. To add a physical or logical unit, use the VARY DRDS command with a DR file or use the VARY ACT command with the UPDATE operand. Note that you can also use the VARY DRDS command or the VARY ACT command with the UPDATE operand to perform the same functions as the MODIFY DR command.

**Note:** See the ["MODIFY ALSLIST Command"](#) for information about how to update the list of PUs (adjacent link stations) associated with an independent LU.

#### Dynamic reconfiguration for an NCP:

For an NCP, this command performs the following functions without regenerating the NCP:

- Moves a nonswitched physical unit and its subordinate LUs from one line to another
- Changes a nonswitched physical unit link station address
- Deletes a nonswitched physical unit and its subordinate LUs from a line
- Deletes a logical unit from a nonswitched physical unit
- Deletes a type 2.1 PU on an NCP ESCON(\*) channel
- Deletes an independent LU on an NCP ESCON channel
- Deletes frame relay type 1 PUs.

An NCP must be active and must be capable of dynamic reconfiguration before it can be dynamically reconfigured. The active and inactive requirements for the reconfiguration operations are shown in [Table 3](#) and [Table 4](#).

Table 3. Active and Inactive Status Requirements for MODIFY DR for an NCP

Operation/ Resource	Major Node	LINE	PU	LU
Delete PU	Active	Either	Inactive	Inactive
Delete LU	Active	Either	Either	Inactive
Move PU	Active	Either	Inactive	Inactive

In order to modify a frame relay switching equipment set (FRSESET), you need to know whether the FRSESET was statically or dynamically defined. If you are not sure, you can issue a DISPLAY NET, ID=*frseset\_name* command to find out. Statically means that the FRSESET was included in the NCP generation. Dynamically means that the FRSESET was not included in the NCP generation. Statically and dynamically defined PUs cannot be specified in the same FRSESET; the PUs must be all static or all dynamic.

If the FRSESET was dynamically defined, you can dynamically add and delete PUs from the set. You can delete PUs with the MODIFY DR, VARY DRDS, or VARY ACT,UPDATE=ALL commands. You can add PUs only with the VARY ACT,UPDATE=ADD or VARY ACT,UPDATE=ALL command.

If the FRSESET was statically defined, you can delete PUs from the set, but you cannot add PUs. In practical terms, this means you need to delete the entire FRSESET and then add it back dynamically in order to make changes. For example, if you have a statically defined FRSESET containing

two primary PUs and you want to add two backup PUs, follow these steps:

1. Delete the two primary PUs, thereby deleting the FRSESET itself (because it is empty).
2. Edit the VTAMLST source file to add the PU definitions for the backup PUs and add the backup PUs to the FRSESET.
3. Use the VARY ACT command with UPDATE=ADD or UPDATE=ALL. The VARY ACT command causes the FRSESET to be dynamically defined.

If you delete one or more PUs (using MODIFY DR or VARY DRDS) from a statically defined FRSESET without deleting the whole FRSESET, VARY ACT will cause the deleted PUs to be added back, but they will not be part of the FRSESET.

The first PU under a frame relay line (the LMI) cannot be deleted and it cannot be part of a FRSESET.

For more information on how to define frame relay lines, frame relay PUs, and FRSESETs, see "[Network Control Program \(NCP\) Major Node](#)" in the *VTAM Resource Definition Reference*.

#### Dynamic reconfiguration for local peripheral nodes:

For a VTAM local peripheral node, this command performs the following functions:

- Deletes a logical unit from a VTAM nonswitched peripheral node. This is possible only for the following major nodes:
  - Local SNA
  - **VM,VSE** Packet
  - **VM,VSE** Channel-attachment SDLC.

The MODIFY DR command cannot move resources in a VTAM peripheral node, and it cannot delete physical units or lines in a VTAM peripheral node.

- Removes a PU from an independent LU's adjacent link station list.

**Note:** You cannot use MODIFY DR to move an independent LU.

Operation/ Resource	Major Node	LINE	PU	LU
Delete LU	N/A	Either	Either	Inactive

**Operands****vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**ACTIVATE**

applies only if TYPE=MOVE. It specifies whether the physical unit and its associated logical units are activated automatically after a successful move.

**ACTIVATE=YES**

VTAM activates the physical unit and its associated logical units after the move completes successfully. This is equivalent to entering VARY ACT,ID=*pu\_name*,SCOPE=ONLY after the MODIFY DR,ID=*pu\_name*,TYPE=MOVE command has successfully completed.

**Notes:**

1. If the line to which the PU is being moved is inactive before the move, ACTIVATE=YES does not activate the line.
2. If the system programmer has defined the initial status of a logical unit subordinate to the moved physical unit (ISTATUS) as inactive, ACTIVATE=YES does not activate the logical unit. The logical unit must be explicitly activated.
3. If the line to which the PU is being moved is active, and the PU's ISTATUS is active, the PU and associated LUs are activated even if ACTIVATE=YES is not specified.

**ACTIVATE=NO**

VTAM does not activate the physical unit and its associated logical units after the move completes.

ADDR=link\_station\_address

applies only if TYPE=MOVE. It specifies the physical unit's link station address. Using this operand, you can change the physical unit's link station address.

To change the address, use both the TO and FROM operands. The address value must be a 2-digit hexadecimal number that is unique for each physical unit on the same line.

You can use the ADDR operand to change a physical unit's SDLC link station address regardless of whether the physical unit is being moved to a new line. (It is acceptable to code the same line on the TO and FROM operands associated with a TYPE=MOVE command.)

If you use the ADDR operand to assign link station addresses, be careful when using an address that a resource previously used. NCP is not informed of dynamic moves or additions until the resource is activated; therefore, activate resources in the order in which the dynamic reconfiguration requests were made.

FROM

specifies the line name or physical unit in the dynamic reconfiguration.

FROM=line\_name

If TYPE=MOVE, identifies the line from which the physical unit and its subordinate LUs are to be moved.

If TYPE=DELETE, identifies the name of the line from which the physical unit and all associated logical units are to be deleted.

The line must be nonswitched. The line can be active or inactive.

FROM=pu\_name

identifies the physical unit from which the logical units identified in the ID operand are to be deleted. The physical unit must be nonswitched.

If ID specifies an independent logical unit, the logical unit must not have any session over the physical unit (adjacent link station) named in the FROM operand.

ID

specifies the physical unit or logical unit in the dynamic reconfiguration. When TYPE=DELETE is specified, the name can be a network-qualified name.

ID=pu\_name

identifies the physical unit to be deleted or moved (as specified in the TYPE operand) and its associated logical units. The physical unit must be inactive and nonswitched.

ID=lu\_name

applies only if TYPE=DELETE. It identifies the logical unit to be deleted. The logical unit must be inactive and under a nonswitched physical unit. If the specified logical unit is an independent LU, it must not have any session over the physical unit (adjacent link station) specified in the FROM operand.

TO=line\_name

applies only if TYPE=MOVE. It identifies the line to which the physical unit and its associated logical units are to be moved. The line must be attached to the same NCP as the physical unit and be nonswitched. The line can be active or inactive.

This operand is required with TYPE=MOVE.

TYPE

specifies the type of dynamic reconfiguration to be performed.

The MODIFY DR command is valid only for nonswitched PUs and LUs and type 2.1 PUs on ESCON channels. MODIFY DR is not supported for cross-domain resources. You cannot move or delete a PU that has PUDR=NO coded in its NCP definition, and you cannot delete a dependent LU that has LUDR=NO coded in its NCP definition.

The MODIFY DR command can be used to delete PUs from an independent LU's adjacent link station list if the independent LU has no active sessions over the PU; however, the MODIFY ALSLIST command is recommended for adding and deleting PUs from an adjacent link station list.

TYPE=MOVE

moves the physical unit identified in the ID operand, and all logical units associated with the physical unit, from the line identified in the FROM operand to the line identified in the TO operand. You can move a physical unit from one line to another only if both lines are attached to the same NCP.

TYPE=DELETE

deletes the physical unit identified in the ID operand and all logical units associated with the physical unit from the line identified in the FROM operand, or deletes the logical unit identified in the ID operand from its physical unit identified in the FROM operand.



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## 2.1.60 MODIFY DUMP Command

Static dump of remote NCP (via link station) to host:

```
>> vm_prefix MODIFY procname, DUMP __, ID=link_station_name _____ >
> __, DUMPDS=name _____ | _____ | _____ | _____ >
> _____ | _____, TYPE=NCP _____ ><
> _____ | _____, RMPO=NO _____ | _____ | _____ ><
> _____ | _____, RMPO= NO _____ | _____ | _____ ><
> _____ | _____, RMPO= YES _____ | _____ | _____ ><
```

Static dump of NCP to host:

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name _____ | _____, ACTION=COMP _____ >
> _____ | _____, DUMPDS=name _____ | _____, DUMPSTA= _____ | _____, link_station_name _____ >
> _____ | _____, OPTION=STATIC _____ | _____, RMPO=NO _____ | _____, TYPE=NCP _____ ><
> _____ | _____, RMPO= NO _____ | _____ | _____ ><
> _____ | _____, RMPO= YES _____ | _____ | _____ ><
```

Static dump of NCP to hard disk:

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name _____, ACTION=STORE _____ >
> _____ | _____, OPTION=STATIC _____ | _____ ><
```

Dynamic dump of NCP to host:

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name _____, OPTION=DYNA _____ >
> _____ | _____, ACTION=COMP _____ | _____, TYPE=NCP _____ ><
> _____ | _____, DUMPDS=name _____ ><
```

**Note:**

(1) If the NCP has been acquired before activation, DUMPDS is required.

**Transfer CSP or MOSS dump from hard disk to host:**

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name __, TYPE= CSP | MOSS | _____ >
> | _____ | _____ ><
| _____ (1) |
| _____, DUMPDS=name _____ |
```

**Note:**

(1) If the NCP has been acquired before activation, DUMPDS is required.

**Transfer NCP, CSP, or MOSS dump from hard disk to host:**

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name __, ACTION=TRANSFER _____ >
> | _____, TYPE=NCP _____ | _____ ><
| _____, TYPE= CSP | _____ (1) |
| _____, MOSS | _____, DUMPDS=name _____ |
| _____, NCP _____ |
```

**Note:**

(1) If the NCP has been acquired before activation, DUMPDS is required.

**Purge dump from hard disk:**

```
>> vm_prefix MODIFY procname, DUMP __, ID=ncp_name __, ACTION=PURGE _____ >
> | _____, TYPE=NCP _____ | _____ ><
| _____, TYPE= CSP | _____
| _____, MOSS | _____
| _____, NCP _____ |
```

**Abbreviations**

Operand	Abbreviation
MODIFY	F
ACTION=TRANSFER	ACTION=TRANS
DUMPDS	DS
DUMPSTA	DST
OPTION=DYNA	OPT=DYNA or DYNA
OPTION=STATIC	OPT=STATIC
RMPO=YES	RMPO

**Purpose**



The MODIFY DUMP (dump of an NCP) command is used to control NCP, communication scanner processor (CSP), and maintenance and operator subsystem (MOSS) dumps. Some functions use the IBM 3720 or 3745 Communication Controller's hard disk. The functions that can be performed are:

- Dump the NCP from the communications control unit (CCU) to the host
- Dump the NCP from the CCU and store the dump on the hard disk
- Transfer an NCP, CSP, or MOSS dump from the hard disk to the host
- Purge an NCP, CSP, or MOSS dump from the hard disk.

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**ACTION**

specifies what is to be done to the dump. ACTION=STORE requires NCP Version 5 Release 3 or later.

**ACTION=TRANSFER**

VTAM stores the dump in a host data set, using SSP as the interface to the dump data set.

If TYPE=CSP or TYPE=MOSS, VTAM transfers the CSP or MOSS dump (taken automatically when the CSP or MOSS fails) from the controller's hard disk or diskette to the host. When the transfer is complete, MOSS purges the dump from the controller's hard disk.

If TYPE=NCP, VTAM transfers the dump from the IBM 3720 or the 3745 Communication Controller hard disk to the host. The dump is not purged.

ACTION=TRANSFER and TYPE=NCP are valid only if an NCP dump is on the controller's hard disk from a previous VARY ACT DUMPLD=YES command or because DUMPLD=YES is coded on the PCCU definition statement.

**ACTION=PURGE**

VTAM purges the dump from the disk.

If TYPE=CSP or TYPE=MOSS, VTAM purges the CSP or MOSS dump (taken automatically when the CSP or MOSS fails) from the controller's hard disk.

If TYPE=NCP, VTAM purges an NCP dump previously stored on the IBM 3720 or 3745 Communication Controller hard disk. VTAM does not transfer the dump to the host.

ACTION=PURGE and TYPE=NCP are valid only if an NCP dump is on the controller's hard disk from a previous VARY ACT DUMpload=YES command or because DUMPLD=YES is coded on the PCCU definition statement.

**ACTION=COMP**

specifies the compatibility mode of operations for this command with previous releases of VTAM.

If TYPE=CSP or TYPE=MOSS, VTAM transfers the CSP or MOSS dump (taken automatically when the CSP or MOSS fails) from the controller's hard disk to the host.

If TYPE=NCP, VTAM dumps the NCP and stores the results at the host. The type of NCP dump (static or dynamic) to be taken is specified on the OPTION operand.

**ACTION=STORE**

VTAM causes the NCP to be dumped to the controller's hard disk only if DUMpload=YES is specified on the VARY ACT command or DUMPLD=YES is specified on the PCCU definition statement and the dump slot for this CCU on the controller's hard disk is empty. Use the DISPLAY DISK command to see that these conditions are met. If either one of these conditions is not met, a dump to disk will not take place and the NCP will be deactivated.

Only OPTION=STATIC and ID=*ncp\_name* are allowed if ACTION=STORE is specified. No other operands are allowed.

ACTION=STORE requires NCP Version 5 Release 3 or later.

**DUMPDS=name**

identifies the file that is to contain this dump. The specified file should be large enough to contain the dump. The contents of the file are overwritten by the dump.

**MVS** *name* must be the data definition name on the DD statement that defines the file to receive the dump.

**VM** *name* must be the filename of the CMS file that is to receive the dump. A FILEDEF command should be issued before the MODIFY command to identify the CMS file to VTAM.

**VSE** *name* must be the six character logical unit name in the form of SYSxxx found on the EXTENT or ASSIGN statement following the DLBL for the NCP dump file definition.

If ID=*link\_station\_name*, this operand must be specified.

If `ID=ncp_name`, the DUMPDS operand (if specified) overrides any file specification in the PCCU definition statement. If this operand is omitted, VTAM uses the file specified in the PCCU definition statement. If the dump file is not specified on either the MODIFY DUMP command or the PCCU definition statement, the command fails.

If the NCP has been acquired before activation, the DUMPDS operand is required for all non-static dump types including CSP, MOSS, and NCP dump transfers and an NCP dynamic dump. VTAM does not allow static dumps of NCPs that have been acquired before activation.

DUMPSTA=link\_station\_name

specifies the name of a link station (channel or SDLC link station within another NCP) in a node adjacent to the NCP to be dumped, through which a static dump operation is to be performed. The link station must be active at the time of the dump. The VTAM-generated link station name (a 3-digit or 4-digit hexadecimal channel unit address followed by -S) can be specified.

DUMPSTA applies only when all of the following conditions are met:

- `ID=ncp_name` is specified.
- `OPTION=STATIC` is specified (or assumed by default).
- `TYPE=NCP` is specified (or assumed by default).

If the DUMPSTA operand is specified, any previous DUMPSTA specifications (from the VARY ACT command or from the NCP definition) are overridden for this one dump operation. If a null value is specified (that is, if DUMPSTA= is specified), VTAM selects an available link station, giving preference to a channel link station over any SDLC link stations.

If the DUMPSTA operand is omitted, the current dump station name from the VARY ACT command or from the NCP definition (in that order) is used. If the current dump station name is null, VTAM selects an available link station as described above.

ID

specifies the NCP to be dumped or the link station through which a remote NCP is to be dumped.

`ID=ncp_name`  
specifies an active NCP

`ID=link_station_name`  
specifies an SDLC link station within an NCP that is adjacent to the communication controller containing the NCP to be dumped. The associated SDLC link must be active. If `ID=link_station_name` is specified, the DUMPDS operand is required, and the DUMPSTA and `OPTION=DYNA` operands are not allowed.

**Note:** CSP and MOSS dumps cannot be taken by specifying a link station name. Specify the NCP name to take CSP and MOSS dumps.

OPTION

provides additional specifications for an NCP dump. The OPTION operand applies if `TYPE=NCP` is specified or assumed by default, and if `ACTION=COMP` or `ACTION=STORE`.

`OPTION=DYNA`  
applies only when the ID operand specifies the name of an active

NCP. OPTION=DYNA specifies that the NCP is to be dumped dynamically. That is, NCP processing continues while the NCP's contents are dumped. The NCP is not deactivated. VTAM requests multiple storage images from the NCP, and the resulting output reflects the storage contents of the communication controller over the period required to complete the dump.

Note that the following two commands produce identical results:

```
F NET,DUMP,ID=ncp_name,DYNA
```

```
F NET,DUMP,ID=ncp_name,OPTION=DYNA
```

#### OPTION=STATIC

specifies that the NCP is to be dumped statically. That is, NCP processing stops and the NCP is deactivated. The resulting output reflects the storage contents of the communication controller at the time the dump was started.

When TYPE=NCP and OPTION=STATIC, VTAM checks for the availability of the NCP dump data set. If this data set is not available, the command fails and the NCP remains active.

When ACTION=STORE, issue the DISPLAY DISK command to determine that the automatic dump switch in the controller is set on (DUMpload=YES on VARY ACT command or DUMPLD=YES on the PCCU definition) and that the dump slot for this CCU on the controller's hard disk is empty. If either one of these conditions is not met, no dump to disk will take place, and the NCP will be deactivated.

#### RMPO

specifies whether the communication controller containing the NCP is to be powered off after a static dump and deactivation of the NCP.

#### RMPO=YES

specifies that the communication controller is to be powered off. RMPO=YES is valid only for a static NCP dump (OPTION=STATIC is specified or assumed by default). Also, RMPO=YES should be entered only for an NCP that is in a communication controller with the remote power-off facility.

Note that RMPO can be entered instead of RMPO=YES.

#### RMPO=NO

specifies that the communication controller is not to be powered off.

#### TYPE

specifies the type of dump.

If ACTION=TRANSFER and either TYPE=CSP or TYPE=MOSS, the box event record (BER) log, configuration data file (CDF), token-ring interface coupler (TIC) dump, and channel adapter (CA) dump are transferred automatically from the hard disk with the CSP or MOSS dump. If the

CSP or MOSS dump is not present, the BER log, CDF, TIC dump, and CA dump are transferred; however, after they are transferred, the MODIFY DUMP command will fail because the specified dump is not present.

TYPE=CSP

if ACTION=TRANSFER or COMP, transfers a dump of the NCP's communication scanner processor (taken automatically when the CSP fails) from the controller's hard disk to the host data set using SSP as the interface to the dump data set. From the host data set, it can be formatted and printed.

The file to contain this dump can be specified by the operator with the DUMPDS operand of the MODIFY DUMP command, or it can be specified by the system programmer on the CDUMPDS operand of the PCCU definition statement. If neither the DUMPDS operand nor the CDUMPDS operand are specified, VTAM uses the dump file specified by the DUMPDS operand of the PCCU definition statement.

If ACTION=PURGE, purges the CSP dump from the hard disk or diskette in the controller.

TYPE=MOSS

if ACTION=TRANSFER or COMP, transfers a dump of the maintenance operator subsystem (taken automatically when the MOSS fails) from hard disk or diskette in the controller to the host data set using SSP as the interface to the dump data set.

The file to contain this dump can be specified by the operator with the DUMPDS operand of the MODIFY DUMP command, or it can be specified by the system programmer on the MDUMPDS operand of the PCCU definition statement. If neither the DUMPDS operand nor the MDUMPDS operand are specified, VTAM uses the dump file specified by the DUMPDS operand of the PCCU definition statement.

If ACTION=PURGE, purges the MOSS dump from the hard disk or diskette in the controller.

TYPE=NCP

if ACTION=COMP, TYPE=NCP specifies a normal dump of the NCP. If ACTION=TRANSFER, the resulting dump is sent to the host from the IBM 3720 or 3745 Communication Controller hard disk. If ACTION=PURGE, the dump is purged from the IBM 3720 or 3745 Communication Controller hard disk.

If ACTION=TRANSFER or PURGE, the OPTION operand does not apply. If ACTION=TRANSFER, the host file to contain the transferred dump can be specified by the operator with the DUMPDS operand of the MODIFY DUMP command, or it can be specified by the system programmer on the DUMPDS operand of the PCCU definition statement.

If TYPE=NCP and ACTION=COMP, the OPTION operand can be used to specify whether this is to be a dynamic or static dump.



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## 2.1.61 MODIFY ENCR Command (MVS)

```
>> __MODIFY procname, ENCR=COND | OPT | REOD | _____, ID=lu_name _____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY ENCR (encryption) command allows you to change the cryptography specifications for logical units. Logical units (application programs, independent LUs, and device type logical units) can be defined as having one of several cryptography specifications. These specifications define the cryptographic capabilities or user session requirements involving the logical units and are described in "[Encryption Facility](#)" in the *VTAM Network Implementation Guide*.

### Operands

**procname**  
is the procedure name for the command. If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**ENCR**  
specifies the new cryptography specifications of the logical unit. The level of the cryptography specification can only be raised. Any attempt to lower the level is rejected. The new level is effective for all future sessions involving the logical unit; existing active or pending sessions are not affected.

**ENCR=OPT**  
raises the level of the logical unit's cryptography specification from no cryptography to optional (capable of cryptography).

ENCR=COND

raises the level of the logical unit's cryptography specification from no cryptography or optional to required (that is, all user sessions must be encrypted) if both sides support encryption. If the session partner does not support encryption, the session does not fail; instead, a session is established with no encryption of data.

ENCR=REQD

raises the level of the logical unit's cryptography specification from no cryptography or optional (or selective or conditional for application programs) to required (that is, all user sessions must be encrypted).

ID=lu\_name

specifies the name of the logical unit whose cryptography specification is to be changed. The logical unit can be either an application program, a device-type logical unit, or an independent LU.

The name can be a network-qualified name. It cannot be a USERVAR or LUALIAS name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource. The name can be an ACB name or an alias name, so long as it is not network-qualified.

Following is an example of an APPL major node definition to show how application names can be network-qualified:

```
x      APPL ACBNAME=y,...
```

In the above example, x (the application name) can always be network-qualified. The value y (the ACB name) can be network-qualified only if y is the same as x.

**Note:** If ID specifies the name of an LU 6.2 application program, you should use the MODIFY ENCR command only when no sessions exist for logon modes other than SNASVCMG. If sessions are active on logon modes other than SNASVCMG, and you use the MODIFY ENCR command to change the encryption level, any attempt to establish a new session with these logon modes is rejected until all existing sessions on that mode that use the previous encryption level have ended.



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## 2.1.62 MODIFY EXIT Command

**Activate or replace an exit routine:**

```
>> vm_prefix MODIFY procname,EXIT __, OPTION= ACT _____ >
                                     | REPL |
> __, ID= _____ >
      | ISTEMCAA |
      | ISTEMCCS |
      | ISTEMCDM |
      | ISTEMCSD |
      | ISTEMCVR |
      | ISTEMMND |
      | _____ |
      | | PARMS=character_string |
      | ISTEMCGR |
      | | PARMS=character_string |
      | ISTEMCUV |
      | | PARMS=character_string |
      | ELMCLUSP |
      | | PARMS=character_string |
      | _____ |
> _____ ><
| MODULE=module_name | _____ ><
```

**Deactivate an exit routine:**

```
>> vm_prefix MODIFY procname,EXIT __, OPTION=INACT _____ >
> __, ID= _____ ><
      | ISTEMCAA |
      | ISTEMCCS |
      | ISTEMCDM |
      | ISTEMCSD |
      | ISTEMCVR |
      | ISTEMMND |
      | _____ |
      | | PARMS=character_string |
      | ISTEMCGR |
      | | PARMS=character_string |
      | ISTEMCUV |
      | | PARMS=character_string |
      | ELMCLUSP |
      | | PARMS=character_string |
      | _____ |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
MODULE	MOD
OPTION=ACT	OPT=ACT
OPTION=INACT	OPT=INACT
OPTION=REPL	OPT=REPL



---

## Purpose

The MODIFY EXIT command enables you to activate, deactivate, or replace a specified installation-wide exit routine. Using this command, you can modify the state of an installation-wide exit routine that was loaded during initialization or activated, replaced, or deactivated with an earlier MODIFY EXIT command.

**Note:** **MVS** To modify the ELMCLUSP exit routine, the MODIFY EXIT command must be issued from a program operator application (POA) program.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ID=exit\_name

specifies the name of the installation-wide exit routine to be activated, deactivated, or replaced. The installation-wide exit routine must be one that is valid. For further information about valid installation-wide exit routines, see [Chapter 1, "Writing VTAM Installation-Wide Exit Routines"](#) in *VTAM Customization*. The following is a list of valid installation-wide exit routines:

ISTEXCAA Session management exit routine

ISTEXCCS Configuration services XID exit routine

ISTEXCDM Directory management exit routine

ISTEXCSD Selection of definitions for dependent logical units (SDDL) exit routine

ISTEXCVR Virtual route selection exit routine

ISTCMMND Command verification exit routine

ISTEXCGR **MVS** Generic resource resolution exit routine

ISTEXCUV USERVAR exit routine

ELMCLUSP **MVS** Logon manager exit routine

**Note:** Only a program operation application (POA) program can issue the MODIFY EXIT command for ELMCLUSP.

MODULE=module\_name  
specifies the name of an alternate module containing the exit routine to be activated or replaced. Use of an alternate module is optional. The MODULE operand is valid only with OPTION=ACT and OPTION=REPL.

OPTION  
specifies whether the installation-wide exit routine is to be activated, deactivated, or replaced.

OPTION=ACT  
specifies that the installation-wide exit routine is to be invoked where the installation-wide exit routine is indicated within VTAM. The invocation points cannot be modified.

OPTION=INACT  
specifies that the installation-wide exit routine should not be invoked during VTAM processing.

OPTION=REPL  
specifies that the installation-wide exit routine should be replaced by the installation-wide exit routine contained in the module named on the MODULE operand during VTAM processing.

PARMS=character\_string  
specifies a character string, 1-70 characters in length, that can be passed to an installation-wide exit routine. You can use the PARMS operand to pass user-specified data or control information to the following exit routines:

- ISTCMMND
- **MVS** ISTEEXCGR
- ISTEEXCUV
- **MVS** ELMCLUSP.

The PARMS operand is ignored for other exit routines. See [Chapter 1, "Writing VTAM Installation-Wide Exit Routines"](#) in *VTAM Customization* for more information on how this data is passed to the exit routine.



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## 2.1.63 MODIFY IMR Command

### Start intensive mode recording:

```
>> vm_prefix MODIFY procname,IMR_,ID=link station name_____>
| pu name | _____ >
> _,OPTION=ACT | _____ ><
| _,RECLIM=10 | _____ ><
| _,RECLIM=number_of_errors | _____ ><
```

### Stop intensive mode recording:

```
>> vm_prefix MODIFY procname,IMR_,ID=link station name_____>
| pu name | _____ >
> _,OPTION=INACT _____ ><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
OPTION=ACT	OPT=ACT
OPTION=INACT	OPT=INACT

### Purpose

The MODIFY IMR (intensive mode recording) command enables you to request that an NCP provide detailed information concerning temporary line errors or other hardware error conditions for a station on an SDLC link. IMR can be specified for a peripheral physical unit of an NCP or for a cross-subarea link station within an NCP. For more information on intensive mode recording, such as the reason for using it and information on where the output is recorded, see ["Modify NCP Intensive Mode Recording"](#) in *VTAM Diagnosis*.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**ID**

specifies the name of the resource for which IMR data is to be recorded.

ID=link\_station\_name  
records IMR data for a link station.

ID=pu\_name  
records IMR data for a physical unit.

**OPTION**

specifies whether IMR should be started or stopped for the named link station or physical unit.

OPTION=ACT  
specifies that IMR should be started for the named link station or physical unit.

OPTION=INACT  
specifies that ongoing intensive mode recording should be stopped, and that the NCP is not to generate any more IMR records for the named link station or physical unit.

**RECLIM=number\_of\_errors**

specifies the maximum number of temporary errors that are recorded for the named link station or physical unit. When this limit is reached (or IMR is canceled with OPTION=INACT), the NCP reverts to sending only permanent error records to VTAM. Any decimal integer 1-65535 can be specified. The default is 10. RECLIM is not applicable if OPT=INACT is specified.







## 2.1.64 MODIFY IOPD Command

```
>> vm_prefix MODIFY procname, IOPD___, IOINT=number_of_seconds_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

This command allows you to change the I/O problem determination (IOPD) time-out interval. This interval determines how long certain VTAM I/O operations or internal procedures can remain pending before VTAM reports them to the operator. You can then decide whether a problem exists and what action, if any, is warranted.

See "[Modify Input/Output Problem Determination](#)" in *VTAM Diagnosis* for guidance on setting the I/O problem determination time-out interval.

**Note:** You can use the "[MODIFY VTAMOPTS Command](#)" (IOINT operand) to perform the same function as this command.

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If procname in the START command was specified as startname.ident, where startname is the VTAM start procedure and ident is the optional identifier, then either startname.ident or ident can be specified for procname.

If procname in the START command was startname, then startname must be

specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

IOINT=number\_of\_seconds

specifies the time-out interval (in seconds) for the I/O problem determination function. The value must be a decimal integer 0-5366000. IOINT=0 specifies that the I/O problem determination function is to be deactivated, meaning that VTAM will not notify the operator of pending I/O operations or internal procedures. IOINT is rounded up to the nearest 60-second multiple.

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## 2.1.65 MODIFY IOPURGE Command

```
>> vm_prefix MODIFY procname, IOPURGE=timeout_value_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY IOPURGE (input/output purge) command allows you to set a time interval after which outstanding I/O is assumed to be lost and recovery steps are taken. The types of outstanding I/O that are examined are CDINIT requests, direct search list (DSRLST) requests, and APPN search requests.

Prior to the availability of this function (or when IOPURGE is set to zero), outstanding session requests could remain indefinitely. For example, when an intermediate host that is used in session routing goes down, no response is received to a session establishment request and the LU remains hung indefinitely. By setting an IOPURGE value, you can, in effect, cancel session requests that fail to complete in a certain amount of time. This frees the LU so you can request a session using an alternate path.

It is recommended that you set an IOPURGE value of 3 minutes or more. In some circumstances, for example logging on a remote LU via a slow modem, session setup might take longer and the IOPURGE should be adjusted upward accordingly. A good rule of thumb is to set the IOPURGE value for twice as long as session setup usually takes. If you set IOPURGE too low, the session request is canceled before a response can be received, and you will have to repeat the session request.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) to perform the same function as this command.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**IOPURGE=timeout\_value**

specifies the time interval allowed to elapse before outstanding I/O is assumed to be lost. When this time interval expires, recovery steps are taken. VTAM supports this feature only for CDINIT requests.

The time interval can be specified in seconds, minutes, hours, or days. The minimum value is 30 seconds. The maximum value is 7 days, or the equivalent value in seconds, minutes, or hours. A value of 0 deactivates the IOPURGE function. If you code a value from 1 to 30, VTAM sets IOPURGE to 30 seconds.

**Note:** To reduce potential performance strain, set IOPURGE greater than 2 minutes.

**IOPURGE=n or IOPURGE=nS**

specifies the number of seconds that can pass before a response is assumed to be lost. By default, the time is assumed to be seconds, unless M, H, or D is specified.

**IOPURGE=nM**

specifies the number of minutes that can pass before a response is assumed to be lost.

**IOPURGE=nH**

specifies the number of hours that can pass before a response is assumed to be lost.

**IOPURGE=nD**

specifies the number of days that can pass before a response is assumed to be lost.



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## 2.1.66 MODIFY LINEDEF Command

```
>> vm_prefix MODIFY procname,LINEDEF id=line_name _____ >
> USE= DEFINED _____ ><
| SPARE |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
USE=DEFINED	DEFINED
USE=SPARE	SPARE

### Purpose

The MODIFY LINEDEF command allows you to dynamically change the definition of a redefinable line. A redefinable line is an SDLC line that has been defined in an NCP major node with USE=REDEF or USE=SPARE. A redefinable line must be the only line defined in the line group.

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

ID=*name*  
specifies the name of an SDLC line defined in an NCP major node with the USE=REDEF or USE=SPARE.

USE  
specifies that the line identified on the ID operand is to be dynamically redefined.

USE=DEFINED  
specifies that the line identified on the ID operand is to become usable.

USE=SPARE  
specifies that the line identified on the ID operand is to become a spare line.



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## 2.1.67 MODIFY LL2 Command

Start a continuous link level 2 test:

```
>> vm_prefix MODIFY procname,LL2___, ID=name___, OPTION=CONT_____>
>_|_|, DATA=data_|_|_|, NFRAMES=1_____><
>_|_|, DATA=data_|_|_|, NFRAMES=number_of_test_messages_|_____><
```

Start a brief link level 2 test:

```
>> vm_prefix MODIFY procname,LL2___, ID=name___ | DATA=data_ | _____>
>_|_|, NFRAMES=1_____>
>_|_|, NFRAMES=number_of_test_messages_|_____>
>_|_|, NTRANS=10_____><
>_|_|, NTRANS=number_of_test_messages_|_____><
```

Stop a link level 2 test:

```
>> vm_prefix MODIFY procname,LL2___, ID=name___, OPTION=CANCEL_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
OPTION=CANCEL	OPT=CANCEL or CANCEL
OPTION=CONT	OPT=CONT or CONT

### Purpose

The MODIFY LL2 command is used to request a link level 2 test for a nonswitched SDLC link. This tests communication lines between the following:

- An NCP and a peripheral PU attached to it.
- Two NCPs (PU type 4).

- VTAM and a peripheral PU attached to it.
- An NCP and another VTAM (PU type 5). The command must be initiated from the NCP's domain, and the link station identified by the ID operand must be inactive or inoperative.
- VTAM and another VTAM (PU type 5). The command must be initiated from the VTAM with the highest subarea, and the link station identified by the ID operand must be inactive or inoperative.

The test is performed by sending test data over the link from the primary end of the line to the remote station; the data is then echoed back to the sender. The data received is compared with the data sent. VTAM collects the results and displays these results in a message. For more information on when and how to run an LL2 test, see ["Modify SDLC Link Level 2 Test"](#) in *VTAM Diagnosis*.

### Operands

#### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

#### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

#### DATA=data

specifies optional user data to be used as part of the test message. Any EBCDIC alphabetic, numeric, or special characters (such as @ # \$) can be specified. The maximum number of characters permitted depends on the characteristics of the device at the receiving end of the test. If the DATA operand is omitted, VTAM sends test messages without user data.

If DATA is specified and the physical unit returns the correct number of echoes but does not return any data, the physical unit probably does not support echo check with data. To determine whether a physical unit supports data, see the component description for that physical unit.

#### ID=name

specifies:

- For a test of an SDLC link:
  - Between two NCPs or
  - Between an NCP and a host processor or
  - Between two host processors

the name of a link station on the link that is to be tested. The specified link station must be in the NCP or the host that is to initiate the test. The link station at the originating end must be inactive.

- For a link to an SDLC peripheral node:

the name of a physical unit on the link that is to be tested. The SDLC link must be active and the specified physical unit must be inactive, but, for a multipoint link, the other physical units on the link can be active during the test.

If there is a conflict between VTAM and the NCP about whether a resource has been dynamically reconfigured, an informational message is displayed. This could happen when an NCP is shared among VTAMs.

See ["Modify SDLC Link Level 2 Test"](#) in *VTAM Diagnosis* for additional information on testing a nonswitched SDLC communication line.

NFRAMES=number\_of\_test\_messages

specifies (for a multipoint line) the number of test messages to send to the physical unit each time its station is selected. This option allows the test messages to be interleaved with other data going to other stations on the line. Specify any decimal integer 1-65535. The default is 1.

NTRANS=number\_of\_test\_messages

specifies the number of test messages to send. This number can be any decimal integer 1-65535. (Specifying NTRANS=65535 gives the same result as specifying OPTION=CONT.)

NTRANS must not be specified on the same command as the OPTION operand. If neither NTRANS nor OPTION is specified, the default, NTRANS=10, is used.

OPTION

specifies a test option to use instead of the NTRANS value. If OPTION is not specified, the value in effect for NTRANS is used. OPTION must not be specified on the same command with the NTRANS operand.

OPTION=CANCEL

specifies that the test running currently should be stopped.

OPTION=CONT

specifies that the test being started should run continuously until canceled by the VTAM operator.



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## 2.1.68 MODIFY LOAD Command

Store a load module on the hard disk, and optionally for a 3745, schedule an IPL:

```
>> vm_prefix MODIFY procname,LOAD___,ID=ncp_name | ACTION=ADD | _____ >
> _____ >
| IPLTIME=(date,time) | NOTIFY=60 | _____ | _____ >
| _____ | NOTIFY= | _____ | _____ >
| _____ | NO | _____ >
| _____ | time period | _____ >
> _____ ><
| LOADMOD=load_module_name | _____ ><
```

Replace a load module on the hard disk, and optionally for a 3745, schedule an IPL:

```
>> vm_prefix MODIFY procname,LOAD___,ID=ncp_name | ACTION=REPLACE | _____ >
> _____ >
| IPLTIME=(date,time) | NOTIFY=60 | _____ | _____ >
| _____ | NOTIFY= | _____ | _____ >
| _____ | NO | _____ >
| _____ | time period | _____ >
> _____ ><
| LOADMOD=load_module_name | _____ ><
```

Purge a load module from the hard disk:

```
>> vm_prefix MODIFY procname,LOAD___,ID=ncp_name | ACTION=PURGE | _____ >
> _____ ><
| LOADMOD=load_module_name | _____ ><
```

Cancel an ADD or REPLACE operation in progress:

```
>> vm_prefix MODIFY procname,LOAD___,ID=ncp_name | ACTION=CANCEL | _____ >
> _____ ><
| LOADMOD=load_module_name | _____ ><
```

Schedule or cancel an automatic IPL for an NCP load module in a 3745:



```
>> vm_prefix MODIFY procname,LOAD___, ID=ncp_name___, ACTION=SETTIME_____>
>___, IPLTIME=___( date, time)_ |___, NOTIFY=60_____ |_____>
|_____ |___, NOTIFY=___ |___ |_____>
|_____ |___ NO _____ |_____>
|_____ |___ time period _____ |_____>
|_____ |___ CANCEL _____ |_____>
>_____><
|___, LOADMOD=load_module_name_ |_____><
```

#### Rename a load module on the 3745 hard disk for MOSS:

```
>> vm_prefix MODIFY procname,LOAD___, ID=ncp_name___, ACTION=RENAME_____>
>___, LOADMOD=load_module_name___, NEWNAME=new_load_module_name_____><
```

#### Abbreviations

Operand	Abbreviation
MODIFY	F
ACTION=ADD	ACTION=A
ACTION=CANCEL	ACTION=C
ACTION=PURGE	ACTION=P
ACTION=RENAME	ACTION=N
ACTION=REPLACE	ACTION=R
ACTION=SETTIME	ACTION=S
IPLTIME=CANCEL	IPLT=C
IPLTIME=time	IPLT=time
LOADMOD	LM
NEWNAME	NEWN
NOTIFY=NO	NT=NO
NOTIFY=time	NT=time

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for IPLTIME=CANCEL, code only IPLT=C. Do not code IPLTIME=C.

#### Purpose

The MODIFY LOAD command is used to control NCP load module contents on IBM 3720 or 3745 Communication Controller hard disks. The actions that can be performed are:

- Move a load module from the NCP library to the communication controller hard disk.
- Replace a load module already on the communication controller hard disk.

- Purge a load module on the communication controller hard disk.
- Schedule a load module already on the IBM 3745 Communication Controller hard disk for an automatic IPL, or cancel a scheduled IPL.
- Rename a load module already on the IBM 3745 Communication Controller hard disk.

For additional information about using the timed IPL and automatic reloading functions, see ["Scheduled Automatic Reloading of a Communication Controller"](#) in the *VTAM Network Implementation Guide*.

Use the ["DISPLAY DISK Command"](#) to examine the contents of the communication controller hard disk.

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**ACTION**

specifies the action to take on the load module specified by LOADMOD. See [Table 5](#) for additional information about scheduling or cancelling IPL, or adding, purging, moving or replacing a load module.

**ACTION=ADD**

requests that the load module specified by LOADMOD be stored on the communication controller's hard disk. The name specified by LOADMOD cannot be the same name as a load module already on the disk. If the load module to be added is already on the controller hard disk, the command is rejected. (If you do not specify LOADMOD, it defaults to the NCP name specified on the ID operand.)

The 3720 disk holds a maximum of two load modules. The IBM 3745 Communication Controller's hard disk holds a maximum of two load modules per CCU. If you request an ADD of a load module and the

maximum number of load modules are on the disk, the request will be rejected. You then have two options:

- Replace one or both of the load modules already on the disk using the ACTION=REPLACE option.
- Purge one or all of the load modules already on the disk using the ACTION=PURGE option, and then add the module or modules desired with the ACTION=ADD option.

Table 5. Relationship between ACTION and IPLTIME Operands

	<b>IPLTIME=time</b>	<b>IPLTIME=CANCEL</b>	<b>IPLTIME not specified</b>
<p><b>ACTION=ADD</b></p> <p>Requests that the load module specified by LOADMOD be placed on the hard disk. If the load module to be added is already on the hard disk or if the load module slots are already full, the request is rejected.</p>	<p>Requests that the load module be scheduled for IPL at the specified time on the IPLTIME operand.</p>	<p>This is an incorrect specification.</p>	<p>V NET,ACT, LOADFROM=EXT can be used to load the load module into the CCU.</p>
<p><b>ACTION=REPLACE</b></p> <p>Requests that the load module specified by LOADMOD replace a load module of the same name already on the hard disk. If a load module with the name specified is not on the hard disk, VTAM attempts an ADD of the load module. The rules for a successful ADD then apply to the REPLACE option.</p>	<p>Requests that the load module be scheduled for IPL at the specified time on the IPLTIME operand.</p>	<p>This is an incorrect specification.</p>	<p>V NET,ACT, LOADFROM=EXT can be used to load the load module into the CCU.</p> <p>If a scheduled IPL is outstanding for the load module to be replaced, the scheduled IPL is canceled.</p>
<p><b>ACTION=SETTIME</b></p> <p>Requests that the load module specified by LOADMOD, already existing on the hard disk, be scheduled for an automatic IPL or have a scheduled IPL canceled. The IPLTIME operand is required.</p>	<p>Requests that the load module be scheduled for IPL (or changes a scheduled IPL) at the specified time on the IPLTIME operand.</p>	<p>Requests the scheduled IPL for the load module be canceled. The load module is not purged from the hard disk.</p>	<p>This is an incorrect specification.</p>
<p><b>ACTION=PURGE</b></p> <p>Requests that the load module specified by LOADMOD be purged from the hard disk. If no load module with the name specified by LOADMOD is on the hard disk, no action is taken and the request is rejected.</p>	<p>This is an incorrect specification.</p>	<p>This is an incorrect specification.</p>	<p>If a scheduled IPL is outstanding for the load module to be purged, the scheduled IPL is canceled.</p>

**ACTION=REPLACE**

requests that the load module specified by LOADMOD be replaced on the communication controller's hard disk. The name specified by LOADMOD should have the same name as a load module already on the disk, but this is not required. If a load module with the name specified is not on the disk, VTAM attempts an ADD of the load module. The rules for a successful ADD then apply to the REPLACE option.

You should be aware that the REPLACE option affects the automatic reload of a load module if an NCP abends. If the load module being replaced is the one tagged for automatic IPL by use of the DUMpload operand on the VARY ACT command or the DUMPLD operand on the PCCU definition statement (that is, the load module to be reloaded if an NCP abend occurs), it is no longer tagged for automatic IPL after the replace operation begins, nor is the load module re-tagged for automatic IPL after the replace operation completes.

If the load module being replaced is not the load module tagged for automatic IPL, the automatic IPL tag is not affected during or after the replace of the other load module.

**ACTION=PURGE**

requests that the load module and scheduled IPL (if applicable) specified by LOADMOD be purged from the hard disk. Only one load module is purged by this command. Issue a separate PURGE command for each load module to be purged. If no load module with the name specified by LOADMOD is on the disk, no action is taken and an error message is issued.

Prior to issuing a subsequent MODIFY LOAD command of any type, wait for the completion message of the purge request.

**Note:** ACTION=PURGE is not valid with the IPLTIME or NOTIFY operands.

**ACTION=CANCEL**

requests that a nondisruptive MODIFY LOAD ACTION=ADD or REPLACE option be canceled. The command cannot be disruptive, and must still be executing in order to be canceled. This command does not reverse the process if the process is finished executing. The load module name specified for the CANCEL option must match the load module name specified in the ADD or REPLACE option that is to be canceled.

Regardless of whether the specified load module was originally tagged for automatic IPL, canceling an ADD or REPLACE option results in a PURGE of the partial load module on the disk.

**Note:** ACTION=CANCEL is not valid with the IPLTIME or NOTIFY operands.

A nondisruptive PURGE cannot be canceled with this command.

**ACTION=SETTIME**

requests that the load module specified by LOADMOD, which already exists on the IBM 3745 Communication Controller hard disk, either be scheduled for automatic IPL or have its scheduled IPL canceled. If you use SETTIME, the IPLTIME operand is required.

See [Table 5](#) for additional information about scheduling IPL.

You can use the ["DISPLAY DISK Command"](#) to display the scheduled IPL time.

#### ACTION=RENAME

requests that the load module on the IBM 3745 Communication Controller hard disk be renamed. This command changes the name MOSS associates with a specified load module on the disk. The internal NCP names (specified in the NCP generation definition) are not affected by this command. If you use RENAME, both the LOADMOD and NEWNAME operands are required.

Renaming a load module that already has a timed IPL set does not cancel the scheduled IPL.

#### ID=ncp\_name

specifies the name of an active NCP (as specified in the PUNAME operand of the BUILD statement during NCP generation) that resides in the communication controller whose associated hard disk is to be modified.

#### IPLTIME

specifies the scheduled IPL time or cancels an already existing scheduled IPL from the hard disk into the CCU. This operand is valid with ACTION=SETTIME, ADD, or REPLACE.

IPLTIME can be specified only when an IBM 3745 Communication Controller is being used.

Each load module can have only one IPL time selected for it. Two load modules on the same CCU cannot have estimated IPL times within 5 minutes of each other.

If the time you specify as the IPL time is the same as the current system time, MOSS does not IPL. See the ["VARY ACT Command"](#) for information about how to cause an immediate IPL.

#### IPLTIME=(date,time)

specifies the time of the scheduled IPL. The format of the date entered is determined by the value specified on the [DATEFORM start option](#). The valid possible values for this operand are:

- DATEFORM=MDY (default); date format is mm/dd/yy. The delimiters can be either slash (/) or dash (-).
- DATEFORM=DMY; date format is dd/mm/yy. The delimiters can be either slash (/) or period (.)
- DATEFORM=YMD; date format is yy/mm/dd. The delimiters can be slash (/), period (.), or dash (-).

For example, if DATEFORM=MDY is in effect, specify the IPL time in the form IPLTIME=(mm/dd/yy,hh:mm).

If the year is omitted, the current year is used. The command is rejected if the value entered for the date or time conflicts with any of the following restrictions:

- Date or time is not valid
- Date or time is greater than 90 days from the current date or time. (If you specify a time interval greater than 15 days, minor MOSS clock deviation might occur.)
- Date or time is prior to current date or time.

The time *hh:mm* must be specified in military format (24-hour day) and is time zone independent. See [Table 6](#) for examples of time specifications.

Location of operator	Location of 3745 for the scheduled IPL	Difference in time zones between the operator and 3745	Time specified in IPLTIME	Time of scheduled IPL at 3745
Los Angeles	New York	+ 3 hours	14:00	17:00
Paris	London	- 1 hour	13:00	12:00
Tokyo	Tokyo	0 hours	23:00	23:00

IPLTIME=CANCEL

indicates that a scheduled IPL for the specified load module be canceled. ACTION=SETTIME is required.

LOADMOD=load\_module\_name

specifies the name of the NCP load module. For ACTION=REPLACE or PURGE, the load module on the disk does not have to be the load module currently active in the communication controller.

For ACTION=ADD, ACTION=REPLACE, ACTION=PURGE, or ACTION=SETTIME, the LOADMOD operand, when not coded, defaults to the name specified for the ID operand. For ACTION=CANCEL, LOADMOD defaults to the name of the load module currently being loaded, if a load is in progress.

For ACTION=RENAME, the LOADMOD operand is required.

For ACTION=ADD, ACTION=REPLACE, or ACTION=PURGE, the load module specified must be one of the load modules in the load library specified by the NEWNAME operand of the BUILD definition statement for the NCP.

NEWNAME=new\_load\_module\_name

specifies the new name to be given to the load module specified by the LOADMOD operand. If the new name is the same as the value already specified in LOADMOD, the command is rejected.

NEWNAME can only be specified when an IBM 3745 Communication Controller is being used. NEWNAME is valid and is required when ACTION=RENAME is specified.

NOTIFY

specifies if and when an alert is to be sent prior to the expiration of the scheduled IPL. NOTIFY is valid only when a time is specified in the IPLTIME operand. NOTIFY can only be specified when an IBM 3745 Communication Controller is being used.

An IPLTIME cannot be sooner than the NOTIFY time or the command fails. For example, if NOTIFY is allowed to take the default time (60 minutes) an IPLTIME of less than one hour away is not accepted.

**Note:** The alert is not displayed by VTAM; it is forwarded to the NetView(\*) program, where it can be displayed using the hardware monitor.

NOTIFY=mmm

indicates that an alert will be sent *mmm* minutes prior to expiration of the scheduled IPL. The default time is 60 minutes. The maximum value is 999 minutes.

NOTIFY=(hh,mm)

indicates that an alert will be sent at time *hh,mm* prior to expiration of the scheduled IPL. The maximum value is 99,99 (99 hours and 99 minutes).

NOTIFY=NO

indicates that no alert will be sent prior to the scheduled IPL.



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## 2.1.69 MODIFY MSG Command (VSE)

```
>>_MODIFY NET,MSG_,ID=subtask_name_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

After an IBM-supplied subsystem is attached as a VTAM subtask (see the "[MODIFY SUBTASK Command \(VM, VSE\)](#)"), the operator communication facility of the subtask can be invoked, if the subtask has one. You can use this command to request that an attached subtask issue a prompting message so that the VTAM operator can submit a command to the subtask.

### Operands

NET  
is the procedure name for the command.

The procedure name is always NET and is required.

ID=subtask\_name  
specifies the phase name of the active subtask.



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## 2.1.70 MODIFY MSGMOD Command

```
>> vm_prefix MODIFY procname,MSGMOD=NO _____><
      | YES |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY MSGMOD (message module) command enables you to specify whether VTAM messages contain an identifier that indicates the VTAM module that originated the message. MSGMOD=YES puts the last five characters of the name of the issuing module immediately after the message identifier. This command overrides the value that was used on the MSGMOD start option.

If the addition of this identifier causes the message text to exceed the maximum allowable message length, the message is truncated on the right, with the possible loss of information. The truncation of messages can be significant (for example, when a display of buffer usage is requested). In this case, the truncated information contains the expansion increment for each buffer pool.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) to perform the same function as this command.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If procname in the START command was specified as startname.ident, where startname is the VTAM start procedure and ident

is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

#### MSGMOD

specifies whether VTAM messages are to contain an issuing-module identifier.

MSGMOD=YES

causes VTAM messages to contain an issuing-module identifier.

MSGMOD=NO

causes VTAM messages to not contain an issuing-module identifier.



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## 2.1.71 MODIFY NEGPOLL Command

```
>> vm_prefix __MODIFY procname,NEGPOLL=number_of_responses_____>
```

```
> __, ID=line_name_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

Use this command to request that an NCP change the negative polling limit (the maximum number of consecutive negative polling responses accepted before polling another terminal on the line) for a nonswitched, multipoint line to one or more attached start/stop or BSC terminals.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If procname in the START command was specified as startname.ident, where startname is the VTAM start procedure and ident is the optional identifier, then either startname.ident or ident can be specified for procname.

If procname in the START command was startname, then startname must be specified for procname.

**VM** procname is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ID=*line\_name*

specifies the name of a nonswitched multipoint line to one or more attached start/stop or BSC terminals.

NEGPOLL=*number\_of\_responses*

specifies the negative polling limit as a decimal integer 1-255. This is the maximum number of consecutive negative polling responses accepted before polling another terminal on the line specified by the ID operand.

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## 2.1.72 MODIFY NOTNSTAT Command

```
>> vm_prefix MODIFY procname,NOTNSTAT_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY NOTNSTAT (no tuning statistics) command enables you to stop the recording of tuning statistics. Also see the ["MODIFY TNSTAT Command"](#) for more ways to control the recording of tuning statistics.

**Note:** VM MODIFY NOTNSTAT closes the tuning statistics file.

### Operands

`vm_prefix` **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

`procname`

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.



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## 2.1.73 MODIFY NOTRACE Command

### Stop a buffer contents trace:

```
>> vm_prefix MODIFY procname,NOTRACE___,TYPE=BUF___,ID=node_name_____>
```

```
> |_, IDTYPE=RESOURCE_____| |_, SCOPE=ONLY_____|_____><
|_, IDTYPE= CP_____| |_, SCOPE= ONLY_____|
| SSCP_____| | ALL_____|
| RESOURCE_____| |_____|
```

### MVS Stop a communication network management trace:

```
>> __MODIFY procname,NOTRACE___,TYPE=CNM___,ID= PDPIUBUF_____><
|_SAWBUF_____|_____><
```

### Stop a generalized PIU trace:

```
>> vm_prefix MODIFY procname,NOTRACE___,TYPE=GPT___,ID=node_name_____>
```

```
> |_, IDTYPE=RESOURCE_____|_____>
|_, IDTYPE= CP_____|
| SSCP_____|
| RESOURCE_____|
```

```
> |_, ALSNAME=adjacent_link_station_name_| |_, SCOPE=ONLY_____|_____><
|_, SCOPE= ONLY_____|
| ALL_____|
```

### Stop an input/output trace:

```
>> vm_prefix MODIFY procname,NOTRACE___,TYPE=IO___,ID=node_name_____>
```

```
> |_, IDTYPE=RESOURCE_____| |_, SCOPE=ONLY_____|_____><
|_, IDTYPE= CP_____| |_, SCOPE= ONLY_____|
| SSCP_____| | ALL_____|
| RESOURCE_____| |_____|
```

### Stop an NCP line trace:

```
>> vm_prefix MODIFY procname,NOTRACE___,TYPE=LINE___,ID=line_name_____><
```

### Stop a 3710 Network Controller line trace:

```
>> vm_prefix MODIFY procname,NOTRACE___,TYPE=NETCTLR___,ID=pu name_____>
```

> LINE=line\_name PU=3710 pu\_name \_\_\_\_\_><

**Stop a scanner interface trace:**

>> vm\_prefix MODIFY procname,NOTRACE TYPE=SIT ID=line\_name \_\_\_\_\_><

**Stop an SMS (buffer use) trace:**

>> vm\_prefix MODIFY procname,NOTRACE TYPE=SMS | ID=VTAMBUF \_\_\_\_\_><

**Stop a transmission group trace:**

>> vm\_prefix MODIFY procname,NOTRACE TYPE=TG ID=line\_name \_\_\_\_\_><

**MVS Stop a TSO user ID trace:**

>> \_\_\_\_\_MODIFY procname,NOTRACE TYPE=TSO ID=tso\_user\_id \_\_\_\_\_><

**Stop a VTAM internal trace:**

>> vm\_prefix MODIFY procname,NOTRACE TYPE=VTAM | \_\_\_\_\_  
 | \_\_\_\_\_,MODE=EXT (1,2)  
 | \_\_\_\_\_,MODE=INT \_\_\_\_\_  
 | \_\_\_\_\_,MODE=INT \_\_\_\_\_  
 | \_\_\_\_\_,MODE=EXT \_\_\_\_\_>

> \_\_\_\_\_  
 | \_\_\_\_\_,OPTION=ALL \_\_\_\_\_><

END	(3)
FORCE	(4)
option	
_(option)	
<_	
_(API	
APPC	
CFS	(5)
CIO	
ESC	
LCS	
LOCK	
MSG	
NRM	
PIU	
PSS	
SMS	
SSCP	
TCP	(6)
VCNS	(7)

**Notes:**

- (1) **MVS,VM** If you do not specify the mode, both internal and external recording are stopped. However, any default options that you have stopped are immediately restarted by VTAM and recorded on the internal trace table.
- (2) **VSE** If you do not specify the mode, recording is stopped for the mode that was in effect. However, any default options that you have



stopped are immediately restarted by VTAM and recorded on the internal trace table.

- (3) OPTION=END is not valid when MODE=EXT is specified.
- (4) OPTION=FORCE is not valid when MODE=EXT is specified.
- (5) The CFS trace option applies to MVS only.
- (6) The TCP trace option applies to MVS only.
- (7) The VCNS trace option applies to MVS and VM only.

## Abbreviations

Operand	Abbreviation
MODIFY	F
ALSNAME	ALS
OPTION	OPT
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

## Purpose

The MODIFY NOTRACE command stops a specified trace or deletes a trace command that was saved previously with MODIFY TRACE,SAVE=YES. See [Chapter 8, "Using Traces"](#) in *VTAM Diagnosis* for a more detailed description of the VTAM trace facilities. See also ["TRACE for Buffer, I/O, NCP Line, SIT, or SMS Traces"](#) and ["TRACE for VTAM Internal Trace"](#) in the *VTAM Resource Definition Reference* and the ["MODIFY TRACE Command."](#)

## Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ALSNAME=adjacent\_link\_station\_name  
applies only when TYPE=GPT. It specifies the name of the adjacent link station through which you want to turn off traces. The adjacent link station name must be a PU in an NCP major node or a switched PU connected by an NCP link.

The LU can be traced over multiple connections. To turn off tracing for multiple connections, enter a separate command for each connection.

You do not need to specify the ALSNAME operand if either of the following is true:

- The ALS list has only one entry (and it is not ISTAPNPU). That entry is selected.
- The ALS list has two entries, one of which is ISTAPNPU. The entry other than ISTAPNPU is selected.

The command fails if ISTAPNPU is specified, or if ISTAPNPU is used by default because it is the only entry in the ALS list.

If no ALS list exists for the resource, specify the adjacent link station on the ALSNAME operand.

Use the DISPLAY ID=*lu\_name*,SCOPE=ALL command to display all sessions for an independent LU and which adjacent link station list is used for each session.

ID=name  
specifies one of the following:

- When TYPE is **BUF, IO, GPT, LINE, SIT, or TG**, the ID operand specifies the name of a node for which there is an active trace of the type specified by the TYPE operand.

For TYPE=BUF, TYPE=IO, or TYPE=GPT, the name can be a network-qualified name. If *name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

**Note:** For TYPE=BUF or TYPE=IO for a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.

- **MVS** When TYPE is **CNM**, the ID operand specifies one of the following:

- PDPIUBUF, to stop the problem determination PIU buffer trace
  - SAWBUF, to stop the session awareness buffer trace.
- When TYPE is **NETCTLR**, the ID operand specifies the physical unit for which the trace is to be stopped. (VTAM is not required to own or know about the IBM 3710 Network Controller). VTAM sends the name of the resource specified on the ID operand to the IBM 3710 Network Controller specified on the PU operand.
  - **MVS** When TYPE is **TSO**, the ID operand specifies the name of a TSO user ID for which there is an active trace.
  - When TYPE is **SMS**, the ID operand is optional and, if specified, is always VTAMBUF.
  - When TYPE is **VTAM**, the ID operand does not apply.

**IDTYPE**

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE identifies which resource the command should act on. IDTYPE applies only when TYPE=BUF, TYPE=IO, or TYPE=GPT.

**IDTYPE=CP**

stops tracing for the CP with the name specified on the ID operand. The control point can be the host CP or a CDRSC representing an adjacent CP.

**IDTYPE=SSCP**

stops tracing for the SSCP with the name specified on the ID operand.

**IDTYPE=RESOURCE**

stops tracing for a CP, an SSCP, or another resource with the name specified on the ID operand. If both an SSCP and a CP are found, VTAM stops tracing for both of them.

**LINE=line\_name**

applies only when TYPE=NETCTLR. It specifies the name of a link whose trace is to be stopped. This link is attached to the IBM 3710 Network Controller specified on the PU operand. VTAM has no knowledge of this link. VTAM sends the name of the link specified on the LINE operand to the IBM 3710 Network Controller specified on the PU operand.

**MODE**

applies only when TYPE=VTAM. It specifies whether to stop internal or external trace recording.

**MVS,VM** If you do not specify MODE, the requested options are stopped both internally and externally.

**VSE** If you do not specify the mode, recording is stopped for the mode currently in effect. However, any default options that you have stopped are immediately restarted by VTAM and recorded on the internal trace table.

If you turn off tracing for the default trace options, they will be immediately restarted and recorded internally.

**MVS,VM** The default options are for internal tracing only. In effect, you cannot stop the default options from running internally.

**VSE** The default options are traced internally or externally, depending on how the trace was started. If you turn off external tracing, the default trace options will be restarted immediately and recorded internally.

MODE=INT  
stops internal trace recording for the specified options.

MODE=EXT  
stops external trace recording for the specified options.

MODE=EXT is not valid when OPTION=END or OPTION=FORCE is specified.

#### OPTION

applies only when TYPE=VTAM. It indicates the types of VTAM internal traces to be stopped. For additional information on the OPTION operand, see the ["MODIFY TRACE Command"](#) and ["TRACE for VTAM Internal Trace"](#) in the *VTAM Resource Definition Reference*. For more information about VTAM internal trace options, see ["Selecting Trace Options"](#) in *VTAM Diagnosis*.

If TYPE=VTAM is specified and OPTION is omitted, VTAM issues messages identifying the components for which the internal trace is active, without stopping any active traces.

If more than one option is selected, separate them with commas and enclose the list in parentheses; for example, OPTION=(API,LOCK,SSCP).

The default VIT options are API, MSG, NRM, PIU, and SSCP. If you turn them off, VTAM will restart them immediately.

**MVS,VM** The VTAM internal trace always runs with these options recorded internally. For external recording, there are no default options.

**VSE** The VTAM internal trace always runs with these options recorded internally or externally, depending on how the trace was started.

**Note:** Although the default options are always active, these options do not appear in DISPLAY TRACES output unless you have specified them on the MODIFY TRACE command or the TRACE,TYPE=VTAM start option.

OPTION=API  
stops tracing the application program interface.

OPTION=APPC  
stops tracing LU 6.2 communication.

OPTION=CFS **MVS**  
stops tracing coupling facility services.

OPTION=CIO  
stops tracing channel I/O for channel-attached devices and for lines attached to a communication adapter.

OPTION=ESC  
stops tracing the execution sequence control.

OPTION=LCS  
stops tracing LAN channel stations.

OPTION=LOCK  
stops tracing locks.

OPTION=MSG  
stops tracing messages.

OPTION=NRM  
stops tracing network resource management.

OPTION=PIU  
stops tracing path information units.

OPTION=PSS  
stops tracing process scheduling services.

OPTION=SMS  
stops tracing storage management services.

OPTION=SSCP  
stops tracing the system services control point.

OPTION=TCP **MVS**  
stops tracing the VTAM to TCP/IP interface events. This option is used only with the VTAM AnyNet(\*) Feature for V4R2.

OPTION=VCNS **MVS, VM**  
stops tracing VTAM common network services.

OPTION=ALL  
stops all of the internal trace options. Exception trace entries continue to be recorded in the internal trace table. For MODE=INT, OPTION=ALL stops internal recording for all options; however, the default options are restarted immediately. For MODE=EXT, OPTION=ALL stops external trace recording for all options. If you do not specify the MODE, tracing is stopped both internally and externally, but the default options are restarted immediately for MODE=INT.

OPTION=END  
stops internal trace recording and frees the internal trace table (with consequent loss of existing trace data if external recording is not being used). VTAM immediately restarts the default trace options with MODE=INT and the default trace table size.

OPTION=END is not valid when MODE=EXT is specified.

OPTION=FORCE  
stops internal trace recording if VTAM appears to be in a hung condition. Use OPTION=FORCE only if your attempt to use OPTION=END appears to have failed. VTAM immediately restarts the

default trace options with MODE=INT and the default trace table size.

OPTION=FORCE is not valid when MODE=EXT is specified.

PU=3710\_pu\_name

applies only when TYPE=NETCTLR. It specifies the 3710 physical unit performing the trace to be stopped. VTAM rejects the command if the physical unit is not active to this VTAM (SSCP).

SCOPE

specifies the scope of the trace. It applies only when TYPE=BUF or TYPE=IO. You can also specify the SCOPE operand for TYPE=GPT, but it is meaningful only for the NCP node. SCOPE=ALL is assumed for a GPT trace of all other node types.

SCOPE=ALL

stops traces for any nodes subordinate to the node specified. SCOPE=ALL is not valid for the host PU trace or for the host intermediate routing node trace (ID=ISTIRN). If SCOPE=ALL is specified, VTAM issues a message and uses SCOPE=ONLY instead.

SCOPE=ONLY

stops a trace only for the specified node.

TYPE

specifies the kind of trace that is to be stopped. Each trace must be stopped with a separate MODIFY NOTRACE command.

TYPE=BUF

stops the tracing of text that passes through VTAM buffers on the way to or from the node indicated by the ID operand. The SCOPE=ALL operand can be used to extend the scope of the trace to all nodes subordinate to the specified node.

TYPE=CNM **MVS**

stops a communication network management trace.

TYPE=GPT

stops an NCP generalized PIU trace for the resources specified by the ID operand.

**Note:** The ID operand of MODIFY NOTRACE cannot specify:

- An NCP switched line that is a switched subarea connection
- A dynamic CDRSC.

TYPE=IO

stops a trace of I/O activity associated with the node specified on the ID operand. The SCOPE=ALL operand can be used to extend the scope of the trace to all nodes subordinate to the specified node. Also, for an NCP major node with an active channel attachment, the SCOPE=ALL operand terminates any active channel

I/O trace.

**TYPE=LINE**

stops an NCP line trace for the line specified by the ID operand.  
Note that specifying TYPE=LINE stops any transmission group trace that was started using the same line name.

**TYPE=NETCTLR**

stops the IBM 3710 Network Controller line trace for the physical unit named on the PU operand.

**TYPE=SIT**

stops a scanner interface trace (SIT) of the communication scanner processor in the IBM 3720 or 3745 Communication Controller.

**TYPE=SMS**

stops a storage management services (SMS) trace that is recording VTAM buffer pool usage data.

**TYPE=TG**

stops an NCP transmission group trace for the transmission group containing the line specified by the ID operand.

**TYPE=TSO MVS**

stops a TSO component trace for the user ID specified by the ID operand.

**TYPE=VTAM**

stops the VTAM internal trace (VIT) for the components specified by the OPTION operand. If OPTION is omitted, no internal traces are stopped; rather, VTAM issues messages identifying the components for which the internal trace is currently active.



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## 2.1.74 MODIFY POLL Command

```
>> vm_prefix MODIFY procname, POLL=number_of_seconds__, ID=line_name____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

You can use this command to request that an NCP change the polling delay (the time delay between polling sequences) for a nonswitched, polled line to one or more attached BSC IBM 3270 terminals.

### Operands

**vm\_prefix VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS, VSE** Do not use a command prefix.

**procname**  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ID=line\_name



specifies the name of a nonswitched, polled line to one or more attached BSC IBM 3270 terminals.

POLL=number\_of\_seconds

specifies the polling delay in seconds. This is the time delay between polling sequences on the line specified by the ID operand. Specify the number of seconds as an integer in the range 0-255.

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## 2.1.75 MODIFY PPOLOG Command

```
>> vm_prefix MODIFY procname, PPOLOG= YES ><
| NO |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

Use the MODIFY PPOLOG command to request that VTAM start or stop sending copies of VTAM operator commands and VTAM messages to the primary program operator (PPO).

If the PPOLOG option is in effect, messages that were suppressed by the [MODIFY SUPP command](#) or the [SUPP start option](#) are still sent to the primary program operator, even though those messages do not appear on the system console.

PPOLOG is supported by the NetView program. Use of this command requires the system to have a primary program operator such as the NetView program, and requires that the primary program operator can support the option.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) to perform the same function as this command.

### Operands

`vm_prefix` **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

`procname`  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If `procname` in the START command was specified as

*startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

#### PPOLOG

specifies whether to send copies of VTAM operator commands and messages to the PPO for logging.

#### PPOLOG=YES

sends copies of all VTAM operator commands received from the system console, and copies of all VTAM messages that have been written to the system console.

#### PPOLOG=NO

stops sending copies of all VTAM operator commands received from the system console, and copies of all VTAM messages that have been written to the system console.



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## 2.1.76 MODIFY PROFILES Command (MVS, VM)

```
>> vm_prefix MODIFY procname, PROFILES __, ID=appl_name _____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY PROFILES command refreshes an active application's set of RACF(\*) profiles. This command updates the profiles in storage to reflect changes made by the security administrator to the RACF profiles.

**Note:** The profile changes affect only those sessions that are started after the command is executed. Active sessions are not affected. Pending sessions might be terminated if the profile or the LU-LU password is deleted or changed for a partner LU. To prevent such an error, it is recommended that this command not be invoked if any active or pending sessions between the application program and its partner LUs would be affected by a profile change. See [Chapter 12, "VTAM's LU 6.2 Security Options"](#) in *VTAM Programming for LU 6.2* for more information on LU 6.2 application program security.

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

ID=appl\_name

specifies the name of an active application that has VERIFY=OPTIONAL or VERIFY=REQUIRED specified on its APPL statement. This operand is required.

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## 2.1.77 MODIFY QUERY Command

The **MODIFY QUERY** command can be issued only from a program operator application.

The **MODIFY QUERY** command allows a program operator application to communicate with a tuning facility such as the **NTune(\*)** program. For more information about this command, refer to *VTAM Programming*.

---



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## 2.1.78 MODIFY RESOURCE Command

Modify the DLOGMOD value for a resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, DLOGMOD= logon_mode_name _____ <<
```

Add or change the ADJLIST value for a cross-domain resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, ADJLIST=list_name __, ACTION=UPDATE _____ <<
```

Delete the ADJLIST value for a cross-domain resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, ADJLIST=list_name __, ACTION=DELETE _____ <<
```

Change the delay timer for disconnection of a switched PU:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, DISCNTIM=time_period _____ <<
```

Change the number of search requests for a resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, SRCOUNT=number_of_search_requests _____ <<
```

Change the value of the search reduction timer for a resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
> __, SRTIMER=number_of_seconds _____ <<
```

Reset the search reduction entry for a resource:

```
>> vm_prefix MODIFY procname, RESOURCE __, ID=resource_name _____ >
```

> \_\_, SRCLEAR=YES \_\_\_\_\_><

## Abbreviations

Operand	Abbreviation
MODIFY	F
DLOGMOD	DLOG

## Purpose

The MODIFY RESOURCE command allows you to change the current value of the DLOGMOD operand of a definition statement for an LU, application program, or cross-domain resource without deactivating the entire major node.

The MODIFY RESOURCE command also allows you to add, replace, or delete the current value of the ADJLIST operand of a definition statement for a cross-domain resource, change the delay timer for disconnection of a switched PU, or to modify search reduction information for existing CDRSCs and APPN directory entries.

When VTAM receives the MODIFY RESOURCE command, it overlays the existing value for the specified operand with the new value.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ACTION

specifies whether VTAM is to add, update, or delete the name of the adjacent SSCP list for a cross-domain resource.

ACTION is only valid with the ADJLIST and ID operands.



**ACTION=DELETE**

deletes the name of the current adjacent CDRM list for the cross-domain resource specified on the ID operand. Routing after the successful completion of this command will not use ADJLISTs. Existing sessions are not affected by this command.

**ACTION=UPDATE**

adds a name of an adjacent CDRM list or replaces the name of the current adjacent CDRM list for the cross-domain resource specified on the ID operand. Routing after the successful completion of this command will use the specified list.

**ADJLIST=list\_name**

specifies the value of the adjacent CDRM list for the cross-domain resource specified on the ID operand. If ACTION=UPDATE, the list\_name must match the name on an ADJLIST definition statement for subsequent routing to be successful.

ADJLIST is only valid with the ACTION and ID operands.

**DISCNTIM=time\_period**

specifies the amount of time that VTAM delays deactivation of the SSCP-PU session when there are no outstanding LU-LU session requests.

You can specify the time in seconds (S). Specify the number of seconds as an integer in the range 1-255.

DISCNTIM is valid only for PU types 2 and 2.1 that have DISCNT=DELAY specified on the PU definition statement.

DISCNT is only valid with the ID operand.

**DLOGMOD=logon\_mode\_name**

specifies the new value for the logon mode. If DLOGMOD is specified with a null value (left blank), the predefined DLOGMOD value is deleted.

DLOGMOD is only valid with the ID operand.

**ID=resource\_name**

specifies the name of the resource to which the command applies. If you specify ADJLIST, the resource name must specify a cross-domain resource.

The name can be a network-qualified name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource.

**Note:** If the resource name is a cross-network CDRSC which is defined with NQNMODE=NQNAME (either by definition statement or start option), be sure to use its network-qualified name on this command.

**SRCLEAR=YES**

specifies that the search reduction entry should be reset for this resource. This operand does not affect the SRTIMER or SRCOUNT values for subsequent entries. The resource is verified when the next request is received. If the resource cannot be reached, a new search reduction entry is created.

SRCLEAR is only valid with the ID, SRCOUNT, and SRTIMER operands.

SRCOUNT=number\_of\_search\_requests  
specifies the new number of search requests that are limited due to a search reduction entry before another search is attempted. The value for this operand is 0-65535.

**Note:** This operand only applies to existing CDRSCs and APPN directory entries.

SRCOUNT is only valid with the ID, SRCLEAR, and SRTIMER operands.

SRTIMER=number\_of\_seconds  
specifies the new number of seconds that a search reduction entry limits incoming search requests or session requests. The value for this operand is 0-65535.

**Note:** This operand only applies to existing CDRSCs and APPN directory entries.

SRTIMER is only valid with the ID, SRCLEAR, and SRCOUNT operands.



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## 2.1.79 MODIFY SESSION Command

```
>> vm_prefix MODIFY procname, SESSION=number_of_sessions_____>
```

```
> ID=line_name_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

You can use the MODIFY SESSION command to request that an NCP change the session limit (the maximum number of concurrent line scheduling sessions allowed) for a nonswitched multipoint line to one or more attached start/stop or BSC terminals. This limit does not become effective until the number of sessions now in operation falls below the new limit.

### Notes:

1. The session limit should not exceed the number of devices on the line. If the line has IBM 3270 terminals attached, the session limit should be the total number of cluster controllers and terminals on the line.
2. This command does not activate resources. To do this, the appropriate resource must be activated (for example, by using the VARY ACT command).

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname  
is the procedure name for the command. The procedure name is

different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ID=*line\_name*  
specifies the name of a nonswitched multipoint line to one or more attached start/stop or BSC terminals.

SESSION=*number\_of\_sessions*  
specifies the session limit as a decimal integer 1-255. This is the maximum number of concurrent line scheduling sessions allowed on the line specified by the ID operand.



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## 2.1.80 MODIFY SGALIMIT Command (VSE)

```
>>__MODIFY NET,SGALIMIT= value | OPTION=TOTAL | OPTION=BELOW | OPTION=TOTAL | <
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY SGALIMIT command allows you to dynamically change the amount of system GETVIS area (SGA) storage that VTAM is allowed to use.

**Note:** You can use the ["MODIFY VTAMOPTS Command"](#) (SGALIMIT and SGA24 operands) to perform the same function as this command. Use SGALIMIT for OPTION=TOTAL and SGA24 for OPTION=BELOW.

### Operands

NET  
is the procedure name for the command.

The procedure name is always NET and is required.

SGALIMIT  
specifies the maximum amount of system GETVIS area (SGA) to be used by VTAM (value) and whether VTAM is to be forced to use that value (F). The actual amount of SGA used for storage by VTAM can be less than or equal to SGALIMIT. Use the ["DISPLAY BFRUSE Command"](#) to display the current SGALIMIT and VTAM's current storage usage of the SGA.

SGALIMIT=value  
specifies the maximum amount of SGA storage to be used by VTAM.  
value can be specified in any of the following forms:

0  
specifies that no limit is enforced on the amount of SGA used by VTAM.

*n* or *nK*

*n* is a decimal integer that specifies VTAM's SGA use limit in units of 1024 bytes (kilobytes). For example, if SGALIMIT=4 or SGALIMIT=4K is specified, an SGA limit of 4096 bytes is assigned.

The maximum value is 16384K.

If the value specified for *n* is not a multiple of 4 (4 being the page size multiple), it is rounded to the next multiple of 4.

**Note:** If the number specified is greater than the available SGA, no limit is enforced.

*qM*

*q* is a decimal integer that specifies VTAM's SGA use limit in units of 1048576 bytes (megabytes).

For example, if SGALIMIT=4M is specified, an SGA limit of 4194304 bytes is assigned.

The maximum value that can be specified is 16M.

**Note:** If the number specified is greater than the available SGA, no limit is enforced.

SGALIMIT=(value,F)

forces the specified value, *n*, *nK*, or *qM*, to be used as the SGA use limit, regardless of how much SGA storage is currently allocated to VTAM. If VTAM's current SGA value is greater than a newly specified SGALIMIT value, all subsequent SGA requests by VTAM components are rejected until the current SGA value falls below the SGALIMIT value.

If the F operand is not specified, and the operator has specified a limit smaller than the amount of SGA storage currently allocated to VTAM, a request to change the SGA limit is rejected. If the F operand is specified, these restrictions do not apply, and the request to change the SGA will be successful.

**Note:** If an SGA limit is specified that is too low and the operator forces this limit to take effect (by using the F operand), the operator is prevented from using VTAM commands until the SGA usage falls below the specified limit, because SGA storage is needed to process all VTAM operator commands except HALT CANCEL. If the SGA usage does not fall below the specified SGA limit, the operator must cancel VTAM and then restart it and specify a more appropriate SGALIMIT value.

OPTION

specifies the area to be limited.

OPTION=TOTAL

designates the maximum amount of 24-bit or 31-bit addressable SGA

storage VTAM can use.

OPTION=BELOW

specifies that the MODIFY SGALIMIT command designates the maximum amount of 24-bit addressable storage VTAM can use. OPTION=BELOW corresponds to the SGA24 start option.

**Note:** OPTION=BELOW limits only the amount of explicitly requested 24-bit addressable storage (for example, GETVIS LOC=BELOW). If VTAM is not specific about the location of the storage desired (for example, GETVIS LOC=ANY), and the operating system returns 24-bit addressable storage, that storage is not subject to OPTION=BELOW limitations. Instead, it is treated as 31-bit addressable storage in DISPLAY command output.

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## 2.1.81 MODIFY SUBTASK Command (VM, VSE)

**VM Attach a program as a VTAM subtask:**

```
>> vm_prefix MODIFY NET, SUBTASK___, ID=name___ | FUNCTION=ATTACH | _____ >
> | _____ | | SUPVR=NO | _____ ><
| PARM=parameter_ | | SUPVR= NO | _____ ><
| _____ | | YES | _____ ><
```

**VM Detach a program as a VTAM subtask:**

```
>> vm_prefix MODIFY NET, SUBTASK___, ID=name___, FUNCTION=DETACH _____ ><
```

**VSE Attach a program as a VTAM subtask:**

```
>> __MODIFY NET, SUBTASK___, ID= name _____ | FUNCTION=ATTACH | _____ ><
| TPRINT | _____ ><
```

**VSE Detach a program as a VTAM subtask:**

```
>> __MODIFY NET, SUBTASK___, ID= name _____, FUNCTION=DETACH _____ ><
| TPRINT | _____ ><
```

**VSE Request a subtask to issue a prompting message:**

```
>> __MODIFY NET, SUBTASK___, ID= name _____, FUNCTION=MSG _____ ><
| TPRINT | _____ ><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

You can use the MODIFY SUBTASK command to attach or detach a program as a VTAM subtask or to invoke the operator communication facility of an IBM-supplied subsystem.



**Operands**vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**VSE** Do not use a command prefix.

NET

is the procedure name for the command.

**VM** The procedure name is always NET and is an optional operand.

**VSE** The procedure name is always NET and is required.

FUNCTION

specifies what VTAM function is to be performed.

FUNCTION=ATTACH

specifies that a program is to be attached as a VTAM subtask. As many as eight subtasks can be attached concurrently. However, each subtask must be specified in a separate MODIFY SUBTASK command. To determine whether a program can be attached as a VTAM subtask, see the documentation for that program.

**Note:** If you allow FUNCTION to default to ATTACH, but the subtask specified is already attached, you will receive a message indicating that the command failed. Processing will continue, however.

FUNCTION=DETACH

specifies that a program is to be detached as a VTAM subtask. This command can be entered during normal operation or while VTAM is being halted.

**VSE** When ID=TPRINT, this operand on a MODIFY SUBTASK command is changed by VTAM into a FUNCTION=MSG operand. The operator is prompted to respond with the CANCEL option to terminate TPRINT printing and detach TPRINT from VTAM.

FUNCTION=MSG **VSE**

specifies that the operator communication facility of an attached subtask is to prompt the operator. This operand can be used to request that an attached subtask issue a prompting message so that the VTAM operator can submit a command to the subtask.

ID=name

specifies the name of the program to which the FUNCTION operand applies.

**VSE** ID=TPRINT specifies the VTAM trace printing program. For more information about TPRINT (the effects of the FUNCTION values and the TPRINT options), see ["Trace Print Options \(VSE\)."](#)

PARM=parameter **VM**

is a 1-8 character parameter to be passed to a subtask being attached.

If additional data needs to be passed to the subtask, the subtask must prompt the operator for it. PARM is valid only when FUNCTION=ATTACH is specified.

**SUPVR VM**

tells VTAM whether to give the subtask control in supervisor or problem state. SUPVR is valid only when FUNCTION=ATTACH is specified.

**SUPVR=YES**

gives the subtask control in supervisor state. In this state, it shares VTAM's storage protection key and can use all VTAM storage and VTAM's internal interface.

**SUPVR=NO**

gives the subtask control in problem state with a unique storage protection key (not VTAM's). In this state, the subtask can use only VTAM non-protected storage and must use external VTAM interfaces.

Subtopics:

- [2.1.81.1 Attaching the Trace Print Program as a VTAM Subtask \(VSE\)](#)
- [2.1.81.2 Trace Print Options \(VSE\)](#)



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## 2.1.81.1 Attaching the Trace Print Program as a VTAM Subtask (VSE)

The `MODIFY NET,SUBTASK,ID=TPRINT,FUNCTION=ATTACH` command attaches the trace print utility as a subtask of VTAM. When this command is entered to print specified trace records on the VTAM external trace file, all externally recorded tracing is suspended and does not resume until the appropriate records have been printed, but tracing continues internally with possible wrap-around and overlaying of trace data.

The VTAM trace facility stores trace entries in wraparound fashion either in main storage or in a trace file assigned to a disk or tape. If the trace file is on a disk or tape, the operator is notified when the end of the trace file is reached. When a trace file is full, or the main storage buffer (when no file is used) is full, the oldest records are overlaid by new trace records. Therefore, if trace data is being produced faster than TPRINT can print it, trace data is lost because of wraparound.

The handling of VTAM internal trace records is different from the handling of other trace records in that the trace print utility does not automatically print any internal trace records that are now in its internal trace table. To guarantee that the VTAM internal trace records are complete (if they are being externally recorded), enter:

```
MODIFY NET,NOTRACE,TYPE=VTAM,OPTION=END
```

to terminate the trace or

```
MODIFY NET,TRACE,TYPE=VTAM,MODE=INT,SIZE=n
```

to change the recording to the internal table (see the ["MODIFY TRACE Command"](#) for a full description of the SIZE operand).

After the `MODIFY NET,SUBTASK,FUNCTION=ATTACH` command has been entered, VTAM prompts the operator to request a snapshot print or to select print options as described in ["Trace Print Options \(VSE\)."](#) The snapshot print does not apply to VTAM internal trace records.

A snapshot print of the contents of VTAM's main storage trace buffers containing the most recently recorded trace records can be selected without suspending trace recording. If SYS001 is assigned to a file, the operator is prompted to select either a snapshot print of VTAM's trace buffers or the full edit and print process. If VTAM is tracing with no external recording (SYS001 is unassigned), a buffer snapshot is automatically performed. A snapshot print of VTAM's internal trace buffer is not available.

Records can be printed only in the order they appear in the trace file. For a trace printout, SYSLST must be assigned to a printer, tape, or disk with the name IJSYSL5. If SYS001 is assigned to a tape device, ensure that an unlabeled scratch tape is mounted and ready before entering the `MODIFY TRACE` command.

The operator can cancel the trace print that was started by the `MODIFY TRACE` command by entering `CANCEL` when VTAM issues prompting messages. The command `MODIFY NET,SUBTASK,FUNCTION=MSG,ID=TPRINT` can be entered to cause

a prompting message to be issued.

The operator replies to this prompting message with one or more of the options described under ["Trace Print Options \(VSE\)."](#)

**Note:** TPRINT must be started in the static partition. If TPRINT is started in the dynamic partition, the results are unpredictable.

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## 2.1.81.2 Trace Print Options (VSE)

Cancel the trace print utility:

```
>> CANCEL _____><
```

Print the trace records:

```
>> PRINT _____>
```

```
> _BUF=ALL,CLEAR=NO,IO=ALL,LINE=ALL,TNST=ALL,VIT,FORMAT=YES_
|_____|_____><
|_| PRINT Options |(1)|_____><
```

PRINT Options:

```
|_____>
|_BUF=ALL|_|_CLEAR=YES|_____>
|_<_>_|_|_CLEAR=NO|_____>
|_BUF= name|_|_____>

>|_INTERVAL= begin time|_|_IO=ALL|_____>
|_(<_>)_|_|_<_>_|_____>
|_(<_>)_|_|_IO= name|_|_____>

>|_LINE=ALL|_|_TNST=ALL|_____>
|_<_>_|_|_<_>_|_____>
|_LINE= name|_|_TNST= name|_|_____>

>|_VIT|_|_FORMAT=YES|_____>
|_|_FORMAT= YES|_|_____>
|_|_NO|_|_____>
```

**Note:**

(1) Commas are required between the option specifications and between the names specified for each option.

When VTAM prompts the operator to enter the TPRINT options, the operator responds with CANCEL or PRINT.

CANCEL  
specifies that the trace print utility is to be canceled.

PRINT

specifies that trace records are to be printed. If only PRINT is entered, all trace records are printed.

If the PRINT options are used, the total number of names specified on the BUF, IO, LINE, and TNST options for each MODIFY TPRINT command or job step must not exceed 50. (The BUF=ALL, IO=ALL, LINE=ALL, TNST=ALL options are not counted in this limit.) If additional lines of options are to be entered, end the current line with a comma, and, when prompted, continue entering options.

BUF specifies which buffer contents trace records are to be printed.

BUF=ALL specifies that all buffer contents trace records are to be printed.

BUF=name specifies the name of the resource for which the buffer contents trace records are to be printed. This name must match the name specified on the ID operand of a MODIFY TRACE command.

CLEAR specifies where VTAM is to resume recording information after the printing of the trace is completed. This option applies only for an online trace, which suspends tracing until the appropriate trace records have been printed.

CLEAR=YES causes the tracing to start at the beginning of the file. This causes the trace records to be overlaid by new trace records only if additional trace records are recorded.

CLEAR=NO causes the tracing to continue after the last record recorded.

FORMAT applies only to the VIT option and specifies whether the trace records are to be formatted before printing.

FORMAT=YES specifies that the VTAM internal trace records are to be formatted before printing.

FORMAT=NO specifies that the VTAM internal trace records are not to be formatted before printing.

INTERVAL specifies that only the trace records produced during a specific

interval are to be printed. All trace recording and selection uses Coordinated Universal Time (formerly known as Greenwich Mean Time).

Specify the time in one if the following formats:

*yy.ddd/hh:mm:ss*

*yy.ddd*

*hh:mm:ss*

where *yy* is the year, *ddd* is the day, *hh* is the hour, *mm* is the minute, and *ss* is the second.

INTERVAL=begin\_time  
specifies that only the trace records produced from the time tracing began should be printed.

INTERVAL=(,end\_time)  
specifies that only the trace records produced until the time at which tracing ended should be printed.

INTERVAL=(begin\_time,end\_time)  
specifies that only the trace records produced from the time tracing began until the time tracing ended should be printed.

IO  
specifies which I/O trace records are to be printed.

IO=ALL  
specifies that all I/O trace records are to be printed.

IO=name  
specifies the name of the resource for which I/O trace records are to be printed. This name must match the name specified on the ID operand of a MODIFY TRACE command.

LINE  
specifies which NCP line trace records are to be printed.

LINE=ALL  
specifies that all the NCP line trace records generated while the lines were operating in network control mode are to be printed.

LINE=name  
specifies the name of an NCP line for which the NCP line trace records are to be printed. This name must match the name specified on the ID operand of a MODIFY TRACE command.

TNST  
specifies which tuning statistic records are to be printed.

TNST=ALL  
specifies that all tuning statistic records are to be printed.

TNST=name  
specifies the name of the NCP major node for which the tuning  
statistic records are to be printed.

VIT  
specifies that all VTAM internal trace records are to be printed.

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the same function as this command.

## Operands

### vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

### SUPP

specifies the suppression level for VTAM messages. The following list shows suppression level in the order of severity from least to most.

#### SUPP=NOSUP

specifies that no VTAM messages are to be suppressed.

#### SUPP=INFO

specifies that only those VTAM messages classified as informational messages are to be suppressed.

#### SUPP=WARN

specifies that those VTAM messages classified as warning messages, as well as informational messages, are to be suppressed.

#### SUPP=NORM

specifies that those VTAM messages classified as normal messages, as well as warning and informational messages, are to be suppressed.

#### SUPP=SER

specifies that those VTAM messages classified as serious error messages, as well as normal, warning, and informational messages, are to be suppressed.







```
>> vm_prefix MODIFY procname,TABLE___,OPTION=LOAD___,TYPE=FILTER_____>
```

```
>___,NEWTAB=new_table_name_____><
```

## Abbreviations

Operand	Abbreviation
MODIFY	F
NETID=name	NET=name
NEWTAB=name	NEW=name
OLDTAB=name	OLD=name
OPTION	OPT
OPTION=ASSOCIATE	OPT=ASSOC
OPTION=DELETE	OPT=DEL
TYPE=ASLTAB	TYPE=ASL
TYPE=COSTAB	TYPE=COS
TYPE=CPSTAB	TYPE=CPS
TYPE=FLDTAB	TYPE=FLD
TYPE=LOGTAB	TYPE=LOG
TYPE=MDLTAB	TYPE=MDL
TYPE=MODETAB	TYPE=MODE
TYPE=USSTAB	TYPE=USS

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for OPTION=DELETE, code only OPT=DEL. Do not code OPTION=DEL.

## Purpose

The MODIFY TABLE command dynamically loads VTAM tables, changes VTAM table associations, or both. This command also disassociates resources from tables. MODIFY TABLE does **not** affect existing sessions with the resource named on the ID operand or its subordinate nodes. Only new sessions established after this command is issued are affected. The MODIFY TABLE command supports the following types of tables:

- Associated LU
- Class-of-service
- Interpret
- Logon mode
- Message-flooding prevention
- Model name
- Session awareness data filter
- USS.
- **VSE** X.21 call progress signal (CPS).

**Note:** Do not use the MODIFY TABLE command for the APPN class-of-service definitions. Use the VARY ACT command to activate the file containing the updated definitions.

The MODIFY TABLE command does not change the value of the DLOGMOD operand. To change the value of the DLOGMOD operand, see the ["MODIFY DEFAULTS Command"](#) or the ["MODIFY RESOURCE Command."](#)

**MVS** The MODIFY TABLE command can end unsuccessfully if the table being loaded is partially or entirely contained in new extents (data spaces where information is stored) within VTAMLIB. Because VTAMLIB is opened once during VTAM initialization, the table is not accessible until VTAM is halted, restarted, and VTAMLIB is opened again.

The MODIFY TABLE command performs several functions, depending on the values you specify on the OPTION and TYPE operands.

◦ F TABLE,OPT=ASSOC

Allows you to change all references to *old\_table\_name* to refer to *new\_table\_name* for resource name and its subordinate nodes. If necessary, *new\_table\_name* is loaded. Values for *old\_table\_name* include:

- Logmode table (TYPE=MODETAB)
- USS table (TYPE=USSTAB)
- Interpret table (TYPE=LOGTAB)
- Associated LU table (TYPE=ASLTAB)
- Message-flooding prevention table (TYPE=FLDTAB)
- Model name table (TYPE=MDLTAB),
- Call progress signal table (TYPE=CPSTAB).

◦ F TABLE,OPT=ASSOC,TYPE=COS

Allows you to associate a new class-of-service table with the network *netid* for the gateway NCP or PU type 5 identified by *name*.

◦ F TABLE,OPT=DEL

Allows you to delete the association between *name*, its subordinate nodes, and *old\_table\_name*. If applicable, default tables are used with subsequent session initiation requests.

◦ F TABLE,OPT=DEL,TYPE=COS

Allows you to terminate the association between a COS table and network *netid* for gateway NCP *name*. A COS table is no longer defined for the specified network.

◦ F TABLE,OPT=DEL,TYPE=FILTER

Allows you to delete the current session awareness (SAW) data filter. When you delete the filter, SAW data and trace data for all sessions are sent over the CNM interface.

◦ F TABLE,OPT=LOAD

Allows you to replace *old\_table\_name*, which is in use, with *new\_table\_name*, which is currently not in use, or to reload a table that is in use. All resources currently associated with the old table are re-associated with the new table. If OLDTAB is omitted, it is assumed to be the same as NEWTAB.

◦ F TABLE,OPT=LOAD,TYPE=FILTER

Allows you to replace the current session awareness data filter, which

is in use, with a new filter, which is currently not in use, or to reload a filter that is in use.

**Note:** If you use the MODIFY TABLE command to change or delete a table association, be aware that later use of a VARY ACT,UPDATE=ALL command for dynamic reconfiguration can undo the effects of the MODIFY TABLE command. This is because the table name in the definition file overrides the value that was changed or deleted with the MODIFY TABLE command. Even if no table name is coded in the definition file, VTAM assumes a null value for the table name and the null value overrides the MODIFY TABLE value. To prevent the new table name specification from being overridden unintentionally, code the definition statement with the desired value.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

### ID=name

identifies the resource. All resources at or below this resource in the hierarchy are considered eligible resources.

The name can be a network-qualified name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource. If a cross-network CDRSC is to be specified on the ID operand, it must be specified as a network-qualified name if the CDRSC is defined using NQNMODE=NQNAME (either by definition or start option). For a message-flooding prevention table (TYPE=FLDTAB), this value must always be specified as ISTNOP.

### NETID=netid

identifies the network attached to a gateway NCP with which the class-of-service table association is to be changed.

**Note:** If a model network is defined by using COPIES as part of the network definition, then \*NETWORK is used to change the class-of-service table for the model network.

### NEWTAB=new\_table\_name

identifies the table to be used. When the new table is of TYPE=USSTAB, then FORMAT=DYNAMIC must have been coded on the USSTAB macroinstruction for the referenced table.

For TYPE=USSTAB and TYPE=LOGTAB, *new\_table\_name* must be assembled using the VTAM V3R2 or later macro libraries.

VTAM validates the table type.

#### OLDTAB

specifies a specific old table or all old tables. If *old\_table\_name* refers to a table that was not assembled using the VTAM V3R2 or later macro library, MODIFY TABLE,OPTION=LOAD can still be used to replace the old table, as long as the new table has been reassembled and *new\_table\_name* is the same as *old\_table\_name*. If both tables are assembled using the VTAM V3R2 or later macro libraries, the names can be different because table type verification will take place. There is no type verification between the old table and the new table if the old table was not assembled against the VTAM V3R2 or later macro libraries.

#### OLDTAB=*old\_table\_name*

For OPTION=ASSOCIATE, changes associations for the resource specified by the ID operand (and its subordinate resources) and currently associated with the named table.

For OPTION=DELETE, terminates associations for the resource specified by the ID operand (and its subordinate resources) and currently associated with the named table.

For OPTION=LOAD, replaces the old table with the table identified by the NEWTAB operand. Resources associated with the old table are re-associated with the new table.

#### OLDTAB=\*

For OPTION=ASSOCIATE, indicates that the specified table associations should be changed to *new\_table\_name*, regardless of the current table associations.

For OPTION=DELETE, changes the associations of all eligible resources specified by the ID operand regardless of any current table associations.

#### OPTION

specifies whether a table is to have its resource associations changed or deleted, or whether the table is to be loaded.

#### OPTION=ASSOCIATE

specifies the table is to have its resource associations changed. It changes the associations of the specified resources. If the table to be associated is not in use, VTAM loads it. Current table associations for a specific resource can be determined by issuing one of the following commands:

- The DISPLAY COS command for the resource named on the ID operand
- The DISPLAY ID command for the resource named on the ID operand or its subordinate nodes.



If the `MODETAB`, `LOGTAB`, or `USSTAB` value is omitted from the original resource definition, the default table can be used. However, the name of the default table is not stored with the resource definition. Therefore, `MODIFY TABLE,OLDTAB=default_name,NEWTAB=new_table_name` does not change the table association; however, `OLDTAB=*,NEWTAB=new_table_name` does provide that function.

If `COSTAB` was not specified on either the `BUILD` or `NETWORK` definition statement, `OPTION=ASSOCIATE` adds the appropriate class-of-service specification.

A non-gateway SSCP (`GWSSCP=NO`) can associate a class-of-service table only for the native network of a gateway NCP.

Specifying `MODIFY TABLE,OPTION=ASSOC,TYPE=COS,ORIGIN=host_pu_name,NEWTAB=ISTSDCOS,NETID=host_netid` requests that VTAM attempt to load `ISTSDCOS` if it is not currently loaded. This enables the user to create and load a copy of `ISTSDCOS`, even though one might not have been available during VTAM initialization. `host_pu_name` can be either `ISTPUS` or the name specified in the `HOSTPU` start option.

Use `MODIFY TABLE,OPTION=LOAD,NEWTAB=ISTSDCOS` to request VTAM to reload `ISTSDCOS` if it is currently loaded.

#### OPTION=DELETE

specifies the table is to have its resource associations deleted. It terminates the association between the specific resources and the table.

If `USSTAB`, `MODETAB`, `LOGTAB`, `ASLTAB`, or `MDLTAB` is not specified when the resource is defined, there is no association to terminate. Where applicable, the default table is still used.

If `old_table_name` is an IBM-supplied default table (for example `OLDTAB=ISTINCDT` or `OLDTAB=ISTSDCOS`), all explicit table associations are terminated, but the table is not deleted from memory. If `old_table_name` is not an IBM-supplied default table, it is deleted from memory as a result of this command.

#### OPTION=LOAD

specifies the table is to be loaded. It loads the table named in the `NEWTAB` operand. All resources associated with the old table are re-associated with the new table. If the `OLDTAB` and `NEWTAB` operand values are identical or `OLDTAB` is omitted, the indicated table is reloaded into memory.

**Note:** All tables must be associated with resources. `OPTION=LOAD` replaces a table only if it is already being used by a resource. `OPTION=ASSOCIATE` can be used to load a new table (which is not in use) and associate it with a resource.

The IBM-supplied tables can be reloaded (`old_table_name` is equal to `new_table_name`), but cannot be deleted (`old_table_name` is not equal to `new_table_name`).

#### ORIGIN=ncp\_name

identifies the NCP major node of a gateway NCP for which the class-of-service table association is to be changed.

#### TYPE

specifies the type of table the command will process. This value must be one of the following:

TYPE=ASLTAB

specifies the associated LU table.

TYPE=COSTAB

specifies the class-of-service table.

TYPE=CPSTAB **VSE**

specifies the X.21 call progress signal table.

TYPE=FILTER

specifies the session awareness data filter.

TYPE=FLDTAB

specifies the message-flooding prevention table. For TYPE=FLDTAB, ID must be specified as ISTNOP.

TYPE=LOGTAB

specifies the interpret table.

TYPE=MDLTAB

specifies the model name table.

TYPE=MODETAB

specifies the logon mode table.

**Note:** The MODIFY TABLE command does not change the value of the DLOGMOD operand. To change the value of the DLOGMOD operand, see the "[MODIFY DEFAULTS Command](#)" or the "[MODIFY RESOURCE Command](#)."

TYPE=USSTAB

specifies the USS table. If message IST116I is received because the USSTAB start option is incorrect, MODIFY TABLE,OPTION=ASSOCIATE,ID=ISTNOP,OLDTAB=\*, NEWTAB=new\_table\_name can be issued to supply a new USS table, represented by ISTNOP, for the network operator.

When OPTION=ASSOCIATE or OPTION=DELETE is specified, VTAM does not change the value of USS LANGTAB tables. When OPTION=LOAD is specified, VTAM changes the USS LANGTAB table if *old\_table\_name* or *new\_table\_name* is currently being used as a LANGTAB table. For more information about LANGTAB processing using USS commands, see "[Unformatted System Services \(USS\) Tables](#)" in the *VTAM Resource Definition Reference*.



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## 2.1.84 MODIFY TGP Command

```
>> vm_prefix MODIFY procname,TGP___,TGPNAME=tg_profile_name_____>
> ___,ID=adjacent_link_station_name_____><
| ___,ID=cp_name,TGN=tg_number_____|
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY TGP (transmission group profile) command allows you to change the TG profile associated with a type 2.1 connection. A specific connection is identified by the combination of a control point (CP) name and TG number, or by the adjacent link station (PU) name.

If this command is issued while the connection is active and the new TG profile can be located, the topology database is updated and the new characteristics are used immediately. If the connection is not active, the new TG profile name is saved and is reported the next time the connection is activated.

This command is valid only when it is issued at an APPN node (network node, end node, interchange node, or migration data host).

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname  
is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If procname in the START command was specified as

*startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

ID=name

specifies an adjacent control point (CP) name or an adjacent link station (PU) name. If a CP name is specified, then the TGN operand must also be specified.

A CP name can be network-qualified. If the network ID is not specified, VTAM uses the network ID of the host from which the command is issued. You can specify \* (or \*NETWORK) as the network ID portion of a network-qualified adjacent CP name in order to modify the TG profile for adjacent CPs that do not currently have a network identifier assigned to them. For example, the following command is valid if A01N currently does not have a network ID associated with it:

```
F procname,TGP,TGPNAME=BATCH,ID=*.a01n,TGN=3
```

TGN=tg\_number

specifies the transmission group number associated with the CP. For virtual-route-based TG connections, TGN must be specified as 255.

TGPNAME=tg\_profile\_name

specifies the name of a transmission group profile definition.



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## 2.1.85 MODIFY TNSTAT Command

```
>> vm_prefix MODIFY procname,TNSTAT | CNSL=NO | _____ >
      | CNSL= NO | _____ >
      | YES | _____ >
> | TIME=number_of_minutes | _____ ><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
CNSL=NO	NOCNSL
CNSL=YES	CNSL

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for CNSL=YES, code only CNSL.

### Purpose

VTAM can record tuning statistics about some of its activities. You can use these statistics to adjust VTAM and NCP variables to improve performance. You can use tuning statistics to gather information on communications between VTAM and any of the following channel-attached nodes:

- Communication controller
- Adjacent host processor
- SNA cluster controller.

For more information on using tuning statistics, see ["Gathering Tuning Statistics"](#) in the *VTAM Network Implementation Guide*.

If you choose to record tuning statistics, you must specify the TNSTAT start option when you start VTAM. **MVS** Additionally, you must include You can record external trace data using the system management facility (SMF) in the system during system generation.

**VM** MODIFY TNSTAT reopens the tuning statistics file if it was closed by a previous MODIFY NOTNSTAT command.

**Operands**vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

CNSL

specifies whether tuning statistics are to be sent to the system console.

CNSL=YES

specifies that tuning statistics records are to be sent to the system console and to the:

**MVS** SMF data set

**VM** "FILE TUNSTATS A" CMS file.

**VSE** Trace file (an external file to which SYS001 has been assigned).

**VM** An alternate file can receive the tuning statistics by allocating it to TUNSTATS DD-name with the GCS FILEDEF command.

CNSL=NO

specifies that tuning statistics records are to be sent only to the:

**MVS** SMF data set

**VM** "FILE TUNSTATS A" CMS file

**VSE** Trace file (an external file to which SYS001 has been assigned).

**VM** An alternate file can receive the tuning statistics by allocating it to TUNSTATS DD-name with the GCS FILEDEF command.

TIME=number\_of\_minutes

specifies the number of minutes between tuning statistic recording

events. Specify this number as a decimal integer in the range 1-1440.  
If the TIME operand is not specified, the time value in effect before  
MODIFY NOTNSTAT was issued remains in effect.

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## 2.1.86 MODIFY TOPO Command

### Delete a node:

```
>> vm_prefix MODIFY procname, TOPO __, ID=cp_name__ | __, TYPE=FORCE_ | _____><
```

### Delete a transmission group:

```
>> vm_prefix MODIFY procname, TOPO __, ORIG=cp_name __, DEST=cp_name _____>
> __, TGN=tg_number__ | __, TYPE=FORCE_ | _____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F
TYPE=FORCE	FORCE or F

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for TYPE=FORCE, code only F or FORCE. Do not code TYPE=F.

### Purpose

The MODIFY TOPO (topology) command deletes entries from the topology database. The entries can be for either nodes or transmission groups (TGs). Normally you should not need to delete entries from the database; however, if for some reason you need to do so, you can use this command. For example, if another node (over which you have no control) has broadcast erroneous or unnecessary topology data into the network, the topology database at this node could choose incorrect or inefficient routes.

Existing sessions are not affected when you delete an entry for a node or TG that is currently in use. However, new session requests might fail if no other route is available.

This command is valid only when it is issued at a network node or an interchange node.

### Notes:

1. You cannot delete the entry for your own host node.



2. You cannot delete an active local transmission group.
3. You cannot delete an adjacent node unless the link to the adjacent node is inactive.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

### DEST=cp\_name

specifies the destination node (a control point) for a transmission group. The name can be network-qualified.

### ID=cp\_name

specifies the name of a node (control point) whose entry is to be deleted. The name can be network-qualified. You cannot delete the entry for your own host node.

### ORIG=cp\_name

specifies the origin node (a control point) for a transmission group. The name can be network-qualified.

### TGN=tg\_number

specifies the transmission group number for the entry that is to be deleted. The valid range for TG numbers is 1-255. The transmission group is deleted in both directions between the origin and destination nodes.

### TYPE=FORCE

is required to delete an adjacent node. The link to the adjacent node must be inactive. If you are deleting a node that is not adjacent, this operand is not required.

TYPE=FORCE is also required to delete a local transmission group. A TG is considered to be local if the origin or destination is the host from which you are entering this command. The TG must be inactive. If the TG is not local, this operand is not required.



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## 2.1.87 MODIFY TRACE Command

**Start or modify a buffer contents trace:**

```
>> vm_prefix MODIFY procname,TRACE___,TYPE=BUF___,ID=node_name_____>
> |_,AMOUNT=PARTIAL_____|| |_,IDTYPE=RESOURCE_____||_____>
> |_,AMOUNT= FULL _____|| |_,IDTYPE= CP _____||_____>
> |_,AMOUNT= PARTIAL _____|| |_,IDTYPE= SSCP _____||_____>
> |_,AMOUNT= PARTIAL _____|| |_,IDTYPE= RESOURCE _____||_____>
> |_,SAVE=NO_____|| |_,SCOPE=ONLY_____||_____><
> |_,SAVE= NO _____|| |_,SCOPE= ONLY _____||_____><
> |_,SAVE= YES _____|| |_,SCOPE= ALL _____||_____><
```

**MVS Start or modify a communication network management trace:**

```
>> __MODIFY procname,TRACE___,TYPE=CNM___,ID= PDPIUBUF _____><
|_SAWBUF_____||_____><
```

**Start or modify a generalized PIU trace:**

```
>> vm_prefix MODIFY procname,TRACE___,TYPE=GPT___,ID=node_name_____>
> |_,ALSNAME=adjacent_link_station_name_____||_____>
> |_,IDTYPE=RESOURCE_____|| |_,SCOPE=ONLY_____||_____><
> |_,IDTYPE= CP _____|| |_,SCOPE= ONLY _____||_____><
> |_,IDTYPE= SSCP _____|| |_,SCOPE= ALL _____||_____><
> |_,IDTYPE= RESOURCE _____|| |_,SCOPE= ALL _____||_____><
```

**Start or modify an input/output trace:**

```
>> vm_prefix MODIFY procname,TRACE___,TYPE=IO___,ID=node_name_____>
> |_,IDTYPE=RESOURCE_____|| |_,SAVE=NO_____||_____>
> |_,IDTYPE= CP _____|| |_,SAVE= NO _____||_____>
> |_,IDTYPE= SSCP _____|| |_,SAVE= YES _____||_____>
> |_,IDTYPE= RESOURCE _____|| |_,SAVE= YES _____||_____>
> |_,SCOPE=ONLY_____||_____><
> |_,SCOPE= ONLY _____||_____><
> |_,SCOPE= ALL _____||_____><
```

**Start or modify an NCP line trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=LINE __, ID=line_name _____>
> |_____,COUNT=ALL_____|_____><
> |_____,COUNT= ALL_____|_____><
> |_____,number of bytes_____|_____><
```

**Start or modify a 3710 Network Controller line trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=NETCTLR __, ID=pu_name _____>
> |_____,LINE=line_name __, PU=3710_pu_name _____|_____><
> |_____,FRAMES= ALL_____|_____><
> |_____,DATA_____|_____><
```

**Start or modify a scanner interface trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=SIT __, ID=line_name _____>
> |_____,COUNT=ALL_____|_____><
> |_____,COUNT= ALL_____|_____><
> |_____,number of bytes_____|_____><
> |_____,TRACEPT=trace_point_id_____|_____><
```

**Start or modify an SMS (buffer use) trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=SMS __ |_____, ID=VTAMBUF _____|_____><
```

**Start or modify a transmission group trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=TG __, ID=line_name _____><
```

**MVS Start or modify a TSO user ID trace:**

```
>> __MODIFY procname,TRACE __, TYPE=TSO __, ID=tso_user_id _____><
```

**Start or modify the VTAM internal trace:**

```
>> vm_prefix MODIFY procname,TRACE __, TYPE=VTAM _____>
> |_____,MODE=INT, SIZE=50_____|_____>
> |_____,MODE= EXT_____|_____><
> |_____,INT_____|_____><
> |_____,SIZE=size_____|_____><
> |_____,OPTION=(API,MSG,NRM,PIU,SSCP) _____|_____><
> |_____,OPTION= ALL_____|_____><
> |_____,option_____|_____><
> |_____,(option)_____|_____><
> |_____,<_____|_____><
> |_____,API_____|_____><
> |_____,APPC_____|_____><
> |_____,(4)_____|_____><
> |_____,CFS_____|_____><
```

CIO
ESC
LCS
LOCK
MSG
NRM
PIU
PSS
SMS
SSCP
(5)
TCP
(1)
VCNS

**Notes:**

- (1) The VCNS trace option applies to MVS and VM only.
- (2) **MVS, VM** These five options are defaults for MODE=INT. There are no default options for MODE=EXT.
- (3) **VSE** These five options are defaults for either MODE=INT or MODE=EXT.
- (4) The CFS trace option applies to MVS only.
- (5) The TCP trace option applies to MVS only.

**Abbreviations**

Operand	Abbreviation
MODIFY	F
ALSNAME	ALS
AMOUNT=FULL	AMT=F
AMOUNT=PARTIAL	AMT=P
OPTION	OPT
SAVE=YES	SAVE
SCOPE=ALL	EVERY or E
SCOPE=ONLY	NONE
TRACES	TRACE

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for SCOPE=ALL, code only EVERY or E. Do not code SCOPE=E.

**Purpose**

The MODIFY TRACE command starts traces or modifies the parameters for currently running traces. VTAM traces are also started with the TRACE start option, as described in ["TRACE for Buffer, I/O, NCP Line, SIT, or SMS Traces"](#) and in ["TRACE for VTAM Internal Trace"](#) in the *VTAM Resource Definition Reference*.

Activation and use of VTAM traces have dependencies on the options used to start the system trace facility in each operating system environment. See [Chapter 8, "Using Traces"](#) and [Chapter 9, "Using the VTAM Internal Trace \(VIT\)"](#) in *VTAM Diagnosis* for a complete description of the system trace facility requirements, when to use these traces, and how to interpret the results.

General PIU trace (GPT) records are printed by the trace analysis program (TAP) utility of SSP. For more information about TAP, see the [NCP, SSP, and EP Diagnosis Guide](#).

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

**ALSNAME=adjacent link station name**

applies only when TYPE=GPT and specifies the name of the adjacent link station through which you want tracing to occur. The adjacent link station name must be a PU in an NCP major node or a switched PU connected by an NCP link.

The LU can be traced over multiple connections; however, to do so, you must enter a separate command for each connection.

You do not need to specify the ALSNAME operand if either of the following is true:

- The ALS list has only one entry (and it is not ISTAPNPU). That entry is selected.
- The ALS list has two entries, one of which is ISTAPNPU. The entry other than ISTAPNPU is selected.

The command fails if ISTAPNPU is specified, or if ISTAPNPU is used by default because it is the only entry in the ALS list.

If no ALS list exists for the resource, specify the adjacent link station on the ALSNAME operand.

Use the DISPLAY ID=*lu\_name*,SCOPE=ALL command to display all sessions for an independent LU and which adjacent link station list is used for each session.

#### AMOUNT

applies only when TYPE=BUF. It determines whether VTAM starts a partial buffer contents trace or a full buffer contents trace for the specified node name.

You can run a partial buffer contents trace and a full buffer contents trace at the same time for different resources. (Issue a separate MODIFY TRACE command for each resource.) For example, you can start a partial buffer contents trace for an application program, with partial buffer contents tracing for some resources in session with the application program and full buffer contents tracing for other resources in session with the application program. When the level of tracing differs between two resources on opposite ends of a session (one is partial and the other is full), full buffer tracing is used.

You can switch between partial and full buffer tracing for the same resource by issuing additional MODIFY TRACE commands, without having to deactivate the trace.

#### AMOUNT=PARTIAL

tells VTAM to record the data in trace records with a maximum size of 256 bytes. Each trace record contains a trace record header and data. Data that does not fit in a 256-byte trace record is lost.

#### AMOUNT=FULL

tells VTAM to record all of the data transmitted in message buffers. Multiple trace records might be needed to record all of the data.

#### COUNT

applies only when TYPE=LINE or TYPE=SIT. It specifies the number of bytes that are traced by either the NCP for a line trace (without the TG operand), or the communication scanner processor for the scanner interface trace. This operand applies to IBM 3720 and 3745 Communication Controllers. The COUNT operand has no effect on NTRI lines prior to NCP V5R2.1. NTRI always traces the same amount of data.

#### COUNT=number\_of\_bytes

specifies the number of bytes of data to be traced. The value must be a decimal integer 0-254. COUNT=0 specifies that only the NCP control characters and none of the data is to be traced.

#### COUNT=ALL

specifies that all of the data is to be traced.

#### FRAMES

applies only when TYPE=NETCTLR. For a start/stop line, ALL is the only option. If DATA is specified on a start/stop line, it is ignored

and the command proceeds as if ALL were specified. For SDLC and BSC lines, either DATA or ALL can be specified, with DATA being the default.

FRAMES=ALL

specifies that all frames (meaning control and data frames) are to be traced by the cluster control unit.

FRAMES=DATA

specifies that only data frames are to be traced by the cluster control unit.

ID=name

specifies the name of the resource for which tracing is to be done. Only active resources can be traced. This operand does not apply when TYPE=VTAM.

Names of various types of resources can be specified, depending on the value of the TYPE operand. The different resources and the traces that can be specified for them (with the TYPE operand) are shown in [Figure 5](#) and are described in the following section.

For TYPE=BUF, TYPE=IO, or TYPE=GPT, the name can be a network-qualified name. If *name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

For TYPE=BUF or TYPE=IO for a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.



MODIFY TRACE

BUF, SCOPE = ALL	BUF	CNM	GPT, SCOPE = ALL	GPT	IO, SCOPE = ALL	IO	LINE	NETCTLR	SIT	SMS	TG	TSO	VTAM	ID=
•						•								Adjacent CP major node
														Application program major node
•	•					•						•		Application program minor node
				•										Channel-attachment major node
						•								Channel link
														Channel link station
			•											CDRSC major node
•	•		•			•								CRDSC minor node
														Dynamic CDRSC major node
•	•					•								Dynamic CDRSC minor node
														CDRM major node
•	•					•	•							CDRM minor node
				•										XCA major node
						•								Nonswitched line
														Link station
						•								Switched line
•														Local non-SNA major node
•	•					•								Local non-SNA logical unit
														Local SNA major node
•	•				•	•								Local SNA physical unit
				•		•								Local SNA logical unit
•	•	•	•	•	•	•								NCP major node
•			•	•	•	•		•		•				Nonswitched line
•			•	•	•	•		•						Switched line
														Link station
•	•		•	•	•	•								Physical unit
•	•		•	•	•	•								Logical unit
														Switched major node
•	•		•	•	•	•								Switched physical unit
														Switched link station
•	•		•	•	•	•								Switched logical unit
														Dynamic switched major node
•	•		•	•	•	•								Dynamic switched physical unit
•	•		•	•	•	•								Dynamic switched logical unit
•					•									TCP/IP major node
•	•				•	•								Nonswitched line
•	•				•	•								Physical unit
							•							IBM 3710-attached resource
	•					•								Host physical unit
						•								ISTIRN
		•												PDPIUBUF
		•												SAWBUF
•	•				•	•								VTAM
										•				VTAMBUF

MODIFY TRACE											ID=					
BUF	SCOPE=ALL	BUF	CNM	GPT	SCOPE=ALL	GPT	IO	SCOPE=ALL	IO	LINE	NETCTLR	SIT	SMS	TG	VTAM	
																Channel-attachment major node (VM/VSE)
																BSC line
																BSC cluster
																BSC terminal
																SDLC nonswitched line
																SDLC switcheded line
																SDLC link station
																SDLC physical unit
																SDLC logical unit
																Packet major node (VM/VSE)
																Nonswitched line
																Link station
																Physical unit
																Logical unit
																Switched line
																Lan major node (VM/VSE)
																Nonswitched line
																Link station
																Switched line

Figure 5. Resource and Trace Reference

- For **TYPE=BUF** or **TYPE=IO**, any of the following names can be specified along with the **SCOPE=ALL** operand to trace message activity with the named resource and, if applicable, all of the resource's subordinate nodes:
  - The name of an NCP major node
  - The name of the following major nodes (only **TYPE=IO,SCOPE=ALL** can be specified):
    - Channel-attachment major node
    - **VM,VSE** LAN major node
    - **VM,VSE** Packet major node
    - **MVS** TCP/IP major node
    - XCA major node.
  - The name of a line attached to a communication adapter (only **TYPE=IO,SCOPE=ONLY** can be specified)
  - **MVS** The name of a line attached to a TCP/IP major node
  - The name of one of following types of physical units:
    - Channel-attached SNA physical unit
    - **MVS** An active physical unit defined in a TCP/IP major node
    - Switched physical unit

- The name of a logical unit
- The name of the host CDRM.

**Note:** If you do a trace for a host CDRM, any subordinate minor nodes also have trace turned on.

Any of the following names can be specified to trace message activity with the named resource:

- Host physical unit (for a trace of all PIUs between this host and another PU type 4 or PU type 5)
- ISTIRN (with TYPE=IO only, for an IO trace of all PIUs passing through this host that are received from a channel-attached PU type 4 or type 5 and are being sent to another channel-attached PU type 4 or type 5)
- VTAM (for a trace of all SSCP sessions)
- The name of an NCP
- The name of a logical unit (including application programs)
- The name of a local non-SNA minor node
- The name of a CDRM (only in a multiple-domain or multiple-network environment)
- The name of a CDRSC.

The host CP can be traced as an application program minor node, and adjacent CPs can be traced as CDRSC minor nodes.

◦ **MVS** For **TYPE=CNM**, the ID operand specifies one of the following:

- PDPIUBUF, to start the problem determination PIU buffer trace
- SAWBUF, to start the session awareness buffer trace

◦ For **TYPE=GPT**, the ID operand specifies the name of the NCP resource for which tracing is to be done:

- An NCP major node (and all of its resources) that is active or pending active
- An NCP switched or nonswitched line

**Note:** The ID operand of MODIFY TRACE cannot specify an NCP switched line that is a switched subarea connection.

- An active LU that has been dynamically reconfigured within the NCP

- An active PU on an NCP switched line
- An active or inactive PU on an NCP nonswitched line
- An active PU that is dynamically reconfigured within the NCP
- An active or inactive LU associated with an active PU on a switched line
- An active or inactive LU associated with a PU (active or inactive) on a nonswitched line
- An active or inactive independent LU associated with a PU (ALS) in an NCP major node or a switched PU connected by an NCP link. The state (active or inactive) of the PU with which the independent LU is associated must be as follows:
  - If it has been dynamically reconfigured within the NCP, the PU must be active.
  - If it is on an NCP switched line, the PU must be active.
  - If it is on an NCP nonswitched line, the PU can be either active or inactive.

The SSCP and host CP are not valid resources for a GPT trace, but the adjacent CP can be traced as a CDRSC minor node.

- o For **TYPE=NETCTLR**, the ID operand specifies the name of the physical unit representing the device for which the trace is to be started. (VTAM is not required to own or have knowledge of the 3710.) VTAM sends the name of the PU specified on the ID operand to the 3710 specified on the PU operand.

If a 3710 is to be simultaneously traced over more than one line, use a separate MODIFY TRACE command to start each trace.

**Note:** It is not necessary that the resource specified by the ID operand be another 3710.

- o For **TYPE=LINE** or **TYPE=SIT**, the ID operand specifies the name of the line for which tracing is to be done.

ID cannot specify a line attached to a communication adapter or the name of a transmission group through a communication adapter.

- o For **TYPE=SMS** the ID operand is optional. If it is omitted, ID=VTAMBUF will be used for an SMS trace. **VSE** Ensure that SDAIDS is active and TRACE ID=VTAMBUF is specified.
- o For **TYPE=TG**, the ID operand specifies the name of a nonswitched line currently within the transmission group to be traced. All the lines in the transmission group are traced as if they were a single logical line.
- o **MVS** For **TYPE=TSO**, the ID operand specifies the TSO user ID for which tracing is to be done.

**IDTYPE**

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE identifies which resources the command should act on. IDTYPE applies only to TYPE=BUF, TYPE=IO, and TYPE=GPT.

**IDTYPE=CP**

starts tracing for the control point (CP) with the name specified on the ID operand. The CP that is traced can be the host CP or a CDRSC representing an adjacent CP.

**IDTYPE=SSCP**

starts tracing for the system services control point (SSCP) with the name specified on the ID operand.

**IDTYPE=RESOURCE**

starts tracing for a CP, an SSCP, or another resource with the name specified on the ID operand. If both an SSCP and a CP are found, VTAM starts tracing for both of them.

**LINE=line\_name**

applies only to TYPE=NETCTLR. It specifies the name of a link that is attached to the 3710 that is to be traced. The 3710 performing the trace (named on the PU operand) copies the SDLC, BSC, and S/S data link control frames that are transmitted or received on that link for the physical unit named by the ID operand. VTAM has no knowledge of this link. VTAM sends the name of the link specified on the LINE operand to the 3710 specified on the PU operand.

**MODE**

applies only to TYPE=VTAM. It specifies that the VTAM internal trace is to record its data on an internal, wraparound table (MODE=INT) or an external trace file (MODE=EXT).

**MVS,VM** You can record trace data internally and externally at the same time. If desired, you can have different sets of trace options active for internal and external recording. VTAM always runs with MODE=INT and the default trace options, regardless of whether you request tracing.

**VSE** You can record trace data internally or externally, but not at the same time. VTAM always runs with the default trace options recorded, regardless of whether you request tracing. The default options are recorded internally or externally, depending on how the trace is started.

**VSE** If trace options are being recorded in either mode, and you issue a MODIFY TRACE command with a different mode, the current options continue to be recorded in the new mode.

You must run specific operating system utilities to trap, format, and view external trace output. See [Chapter 9, "Using the VTAM Internal Trace \(VIT\)"](#) in *VTAM Diagnosis* for more information about use of these operating system utilities.

**MVS,VM** Do not specify MODE=EXT and SIZE on the same command.

**MODE=INT**

specifies that the VTAM internal trace is to record its data on an internal, wraparound table.

**MODE=EXT**

**MVS,VM** specifies that the VTAM internal trace is to record its data on an external trace file as well as on an internal, wraparound table.

**VSE** **MODE=EXT** specifies that the VTAM internal trace is to record its data on an external trace file instead of an internal, wraparound table. The external file is the TRFILE to which SYS001 has been assigned.

**VSE** **MODE=EXT** significantly increases the amount of storage needed for TRFILE. It might be necessary to increase the file's disk storage or to use tape. Loss of data due to overrun conditions also can be avoided by increasing the SIZE value specified and by selecting a device that is not slowed by channel or disk contention with other high priority functions such as paging. If there is no TRFILE (SYS001 is unassigned), the **MODE=EXT** operand is not allowed.

**VSE** Before starting the TPRINT utility program to print trace records, issue a **MODIFY TRACE,MODE=INT** command to guarantee that the TPRINT output will be complete.

**OPTION**

applies only to **TYPE=VTAM**. It specifies the VTAM internal functions for which trace data is to be recorded.

**MVS,VM** You can specify different options for internal and external recording. The default options for internal recording (**MODE=INT**) are API, MSG, NRM, PIU, and SSCP. These options are always active for internal recording. If you stop them, VTAM immediately restarts them. For external recording (**MODE=EXT**), there are no default options. You can start or stop any options.

**VSE** The default options are API, MSG, NRM, PIU, and SSCP. These options are recorded internally or externally, depending on how the trace is started. If you stop tracing, the default trace options will be restarted immediately and recorded internally.

**VSE** If trace options are being recorded and you issue a **MODIFY TRACE** command, the current options continue to be recorded, and the specified options are added to the trace. To turn off tracing for certain options, issue a **MODIFY NOTRACE** command for the options you want to stop recording.

**Note:** Although the default options are always active, these options do not appear in **DISPLAY TRACES** output unless you have specified them on the **MODIFY TRACE** command or the **TRACE,TYPE=VTAM** start option.

If more than one option is selected, separate them with commas and enclose the list in parentheses; for example **OPTION=(API,NRM,SSCP)**. For information on what is traced for each internal function, see ["Selecting Trace Options"](#) in *VTAM Diagnosis*.

**OPTION=ALL**

starts the VTAM internal trace for all of the VTAM internal

functions for which the VTAM internal trace is available.  
Exception trace entries continue to be recorded.

**Note:** Turning on all traces slows performance.

OPTION=API  
starts tracing the application program interface.

OPTION=APPC  
starts tracing LU 6.2 communication.

OPTION=CFS **MVS**  
starts tracing coupling facility services.

OPTION=CIO  
starts tracing channel I/O for channel-attached devices and for  
lines attached to a communication adapter.

OPTION=ESC  
starts tracing execution sequence control.

OPTION=LCS  
starts tracing LAN channel stations.

OPTION=LOCK  
starts tracing locking.

OPTION=MSG  
starts tracing messages.

OPTION=NRM  
starts tracing network resource management.

OPTION=PIU  
starts tracing path information units.

OPTION=PSS  
starts tracing process scheduling services.

OPTION=SMS  
starts tracing storage management services.

OPTION=SSCP  
starts tracing the system services control point.

OPTION=TCP **MVS**  
starts tracing the VTAM to TCP/IP interface events. This option  
is used only with the VTAM AnyNet Feature for V4R2.

OPTION=VCNS **MVS, VM**  
starts tracing VTAM common network services.

PU=3710\_pu\_name  
applies only when TYPE=NETCTLR. It specifies the name of the IBM 3710  
Network Controller that is to perform the trace. VTAM rejects the  
command if the physical unit is not known to VTAM.

SAVE

applies only to TYPE=BUF and TYPE=IO, and specifies whether the trace command should be saved for the resource named on the ID operand.

SAVE=YES

VTAM saves the trace command for the resource named on the ID operand. If the resource exists when this command is issued, the trace starts immediately. If the resource does not exist when this command is issued, VTAM saves the trace command and starts the trace when the resource is defined.

**Note:** If you start a trace with IDTYPE=RESOURCE, and a CP or an SSCP (but not both) exists when the command is issued, VTAM starts the trace for the existing resource and saves the trace commands for both resources. If both a CP and an SSCP exist when the command is issued, VTAM starts tracing for them immediately.

You can also issue this command to update a previously saved trace command.

Use the [MODIFY NOTRACE command](#) to delete a saved trace command. VTAM will not delete a saved trace command until you issue a MODIFY NOTRACE command for it, even though the resource might be created and freed or activated and deactivated several times. Saved trace commands are lost when VTAM is halted and restarted.

SAVE=NO

does not save the MODIFY TRACE command. If the resource does not exist when you issue MODIFY TRACE, the command fails.

SCOPE

applies only when TYPE=BUF, TYPE=IO, or TYPE=GPT. It specifies the scope of the trace.

You can specify the SCOPE operand for TYPE=GPT, but it is meaningful only for the NCP node. SCOPE=ALL is assumed for a GPT trace of all other node types.

SCOPE=ALL

starts traces for all nodes subordinate to the specified node. If an LU that is subordinate to a node is an independent LU, it is not considered to be subordinate to the node for the purpose of tracing.

SCOPE=ALL is not valid for the host PU trace or for the host intermediate routing node trace (ID=ISTIRN). If SCOPE=ALL is specified, VTAM issues a message and uses SCOPE=ONLY.

For an I/O trace of a channel-attached NCP, SCOPE=ALL provides a trace of all channel I/O, including network message traffic routed through the channel-attached NCP.

SCOPE=ONLY

starts a trace only for the specified node.

SCOPE=ONLY on a GPT trace command for the NCP PU limits the trace to RUs that flow on the SSCP-PU session for the NCP.



**SIZE=size**

applies only to TYPE=VTAM. It specifies the number of pages to be allocated for the internal trace table. (**VSE** SIZE has another meaning for external tracing. See the following special considerations for VSE.) Page size is 4K. Integers 1-999 can be specified. If you omit this option, the default size is 50.

If you specify a value less than 50, 50 will be used instead.

After the VTAM internal trace is started, the SIZE operand does not have a default. If successive MODIFY commands change other options, the SIZE specification remains the same until re-specified on a MODIFY command.

If the SIZE value is too small, trace information might be lost because of wraparound in the internal trace table. Also, if the SIZE operand specifies a size different from the current table size, information is lost because the trace table is freed when another table with a new size is obtained. When an attempt to increase the SIZE value fails because of insufficient storage, the internal trace table size is set to the default size, not the size you requested.

**VSE** The following considerations apply:

The size operand has different meanings for MODE=INT and MODE=EXT.

When MODE=INT is in effect, the SIZE operand specifies the number of pages to be allocated for the internal trace table.

When MODE=EXT is in effect, the SIZE operand specifies the number of 4K-fixed internal buffers for use in writing records on the trace file.

When the page size is 4K, the size value is used in a formula to determine the number of buffers that can be placed in the area allocated for the trace tables. The formula is as follows:

$$((\text{SIZE} \times \text{ATCPG\text{SIZE}}) - 16) / 2\text{K}$$

The 16 bytes subtracted represent the buffer header, where no data can be placed.

If the size of the trace table is changed while MODE=EXT is in effect, the current table contents are written to the trace file before the old table is freed.

**Note:** If the requested size is not available, VTAM returns to the default value of SIZE=50.

**TRACEPT=trace\_point\_id**

applies to TYPE=SIT and is valid only if you are tracing CSS resources on an IBM 3745 Communication Controller. This operand specifies the point in the microcode at which tracing should be activated. If you omit this operand, tracing is done for all valid trace points. The TRACEPT operand allows you to limit the tracing to a single trace point if too much output is being produced.

VTAM accepts any integer in the range 1-255; however, only a few values are defined by the NCP. For information on which values are defined and what they mean, see the [NCP, SSP, and EP Diagnosis Guide](#).

TYPE

specifies the kind of trace that is to be affected. More than one kind of trace can be active at the same time, but you must start or change each trace with a separate MODIFY TRACE command.

TYPE=BUF

starts the tracing of text that passes through VTAM buffers on the way to or from the node identified by the ID operand. The SCOPE operand can be used to extend the scope of the trace to all nodes subordinate to the specified node. This trace is useful when one of the logical units in the session is an application program in this domain.

**Note:** For LU 6.2 sessions, the buffer trace status that is in effect when a conversation is started remains in effect for the duration of the conversation. If a buffer trace is started, stopped, or changed, the LU 6.2 session will not reflect the new status until the current conversation ends and another conversation is started.

TYPE=CNM MVS

starts a communication network management trace.

**Note:** When this option is specified, the generalized trace facility (GTF) must be active with the TRACE=USR option specified.

TYPE=GPT

starts an NCP generalized PIU trace (GPT) for the resources identified by the ID operand.

**Note:** The ID operand of MODIFY TRACE cannot specify:

- An NCP switched line that is a switched subarea connection
- A dynamic CDRSC.

TYPE=IO

starts a trace of I/O activity associated with the node identified by the ID operand. The SCOPE operand can be used to extend the scope of the trace to all nodes subordinate to the specified node. In addition, for an NCP major node with an active channel attachment, the SCOPE=ALL operand provides a trace of all I/O going across the channel, including cross-domain session I/O.

TYPE=LINE

starts an NCP line trace for the line identified by the ID operand.

TYPE=NETCTLR

sends a trace request to the 3710 named on the PU operand.

TYPE=SIT

starts a scanner interface trace (SIT) through the communication scanner processor located in the IBM 3720 or 3745 Communication Controller containing the NCP identified by the line specified by the ID operand.

The scanner interface trace and the NCP line trace can be started separately, and can be active at the same time.

**TYPE=SMS**

starts a storage management services (SMS) trace to record VTAM buffer pool usage data.

**TYPE=TG**

starts an NCP transmission group trace for the transmission group (TG) containing the NCP line identified by the ID operand. A line is part of a transmission group only when both the line and its subordinate link station are active. A transmission group trace can be started by naming any line within the transmission group. Once a transmission group trace is started, another trace of the same transmission group cannot be requested by naming the same or another line within the transmission group in another MODIFY TRACE command.

If the line or its link station subsequently fails or is deactivated (that is, if the line is removed from the transmission group), the transmission group trace is ended, even though the transmission group continues to operate if there are any remaining lines in the transmission group. The trace can be restarted, naming another line in the transmission group.

The NCP line trace and the transmission group trace are mutually exclusive for a particular line. Therefore, when starting a transmission group trace, select a line that is not being used, and is not likely to be used, for a line trace.

**TYPE=TSO MVS**

starts a TSO component trace for the user ID identified by the ID operand. GTF must be active when this trace option is specified.

**TYPE=VTAM**

starts the VTAM internal trace (VIT) for the components specified by the OPTION operand. If OPTION is omitted, no new component internal traces are initiated; rather, VTAM issues messages identifying the components for which the internal trace is currently active.



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## 2.1.88 MODIFY USERVAR Command

### Create a new USERVAR:

```
>> vm_prefix MODIFY procname,USERVAR___,ID=userid_name_____>

>_|_____|_|,OPTION=UPDATE_____||_____|_|,VALUE=appl_name_____||_____|_|,TYPE=DYNAMIC_____||_____|_|,TYPE=DYNAMIC_____||_____|_|,TYPE=STATIC_____||_____|_|,TYPE=VOLATILE_____||_____|_|>

>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=YES,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=YES_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
```

### Update an existing USERVAR and change the TYPE:

```
>> vm_prefix MODIFY procname,USERVAR___,ID=userid_name_____>

>_|_____|_|,OPTION=UPDATE_____||_____|_|,VALUE=appl_name_____||_____|_|,TYPE=DYNAMIC_____||_____|_|,TYPE=STATIC_____||_____|_|,TYPE=VOLATILE_____||_____|_|>

>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=YES,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=YES_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
```

### Update an existing USERVAR, leaving the TYPE unchanged:

```
>> vm_prefix MODIFY procname,USERVAR___,ID=userid_name_____>

>_|_____|_|,OPTION=UPDATE_____||_____|_|,VALUE=appl_name_____||_____|_|>

>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=YES,UVEXIT=NO_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=YES_____||_____|_|><
>_|_____|_|,APPC=NO,UVEXIT=NO_____||_____|_|><
```

### Delete a USERVAR:

```
>> vm_prefix MODIFY procname,USERVAR___,ID=userid_name_____>
```

```
> __, OPTION=DELETE _____ ><
| __, VALUE=appl_name |
```

## Abbreviations

Operand	Abbreviation
MODIFY	F
OPTION	OPT
OPTION=DELETE	OPT=DEL
OPTION=UPDATE	OPT=UP
TYPE=DYNAMIC	TYPE=DYN
TYPE=STATIC	TYPE=STA
TYPE=VOLATILE	TYPE=VOL
VALUE=value	VAL=value

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for OPTION=DELETE, code only OPT=DEL. Do not code OPTION=DEL.

## Purpose

The MODIFY USERVAR command is issued by a network operator or application subsystem to define, change, or delete the name of an application associated with a USERVAR.

You cannot create or modify automatic (VTAM-managed) USERVARs using the MODIFY command; they are created and maintained by VTAM. If you issue a MODIFY command that specifies the name of an automatic USERVAR as its target, VTAM assumes that you are taking over control of the USERVAR (by changing its class from automatic to user) and that you are responsible for any future updates to that USERVAR. Whenever an automatic USERVAR is changed to a user-managed USERVAR, the operator should delete the USERVAR for VTAM to take control of it once again.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

procname

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be

specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.

#### APPC

specifies how the USERVAR ID affects LU 6.2 sessions that were established with APPC/VTAM application programs.

This operand is valid only when the application program specified on the VALUE operand executes on the same host that is processing this operator command. This operand is valid only when OPTION=UPDATE and UVEXIT=NO are specified or assumed by default.

If you specify OPTION=DELETE, APPC=NO is assumed by default. If you specify APPC=YES and UVEXIT=YES, both APPC=NO and UVEXIT=NO are assumed by default.

If you are updating an existing USERVAR and you do not specify a value for APPC, the previously defined value will be replaced with the default value found in the operation-level USS table (ISTINCNO). The IBM-supplied default value is APPC=NO.

#### APPC=NO

specifies that the USERVAR ID is not used to replace the application program's name when establishing LU 6.2 sessions for any application programs identified in the VALUE operand.

#### APPC=YES

specifies that the USERVAR ID is used to replace the application program's name when establishing LU 6.2 sessions only for APPC/VTAM application programs identified in the VALUE operand.

If an LU 6.2 application uses a USERVAR ID with the operand APPC=YES, you cannot define another USERVAR ID with APPC=YES for that application.

#### ID=*uservar\_name*

specifies the USERVAR. It can be used to specify any valid USERVAR (1-8 alphanumeric characters, the first of which must be alphabetic). VTAM uses this USERVAR during the logon process to send the session request to the currently active application subsystem. The USERVAR is also specified in the LOGCHAR operand used to add an entry to the interpret table.

**Note:** If ID is specified using a reserved name (for example, ID=VTAM), inconsistent results will occur.

#### OPTION

specifies whether the USERVAR identified by the ID operand is to be assigned a value, have its current value changed, or be deleted.

#### OPTION=UPDATE

specifies that the USERVAR identified by the ID operand is to be assigned a value, or that the current value of an existing USERVAR is to be changed.

OPTION=DELETE

specifies that the USERVAR identified by the ID operand is to be deleted. If used with the VALUE operand, the USERVAR is deleted only if the specified value matches that of the USERVAR. If you specify OPTION=DELETE, do not use the TYPE operand.

TYPE

specifies the type (or attributes) of a USERVAR.

TYPE=DYNAMIC

specifies that, in event of failure, the value of the USERVAR identified by the ID operand is to be queried again by those SSCPs having automatic USERVARs with the same name. The default value for the TYPE operand is used only when a USERVAR table entry is being created. It is not used on each execution of the MODIFY USERVAR command.

TYPE=STATIC

specifies that the value of the USERVAR will not change. Those SSCPs having automatic USERVARs with the same name only need to query the USERVAR if the value is unknown.

TYPE=VOLATILE

specifies that the value of the USERVAR identified by the ID operand is to be queried again before any session setup is attempted because the value is likely to change.

UVEXIT

specifies whether an installation-wide exit routine is to be used for the USERVAR. For more information about installation-wide exit routines identified by the UVEXIT operand, see ["USERVAR Exit Routine"](#) in *VTAM Customization*. This operand is valid only when APPC=NO and OPTION=UPDATE are specified or assumed by default.

If you specify OPTION=DELETE, UVEXIT=NO is assumed by default. If you specify APPC=YES and UVEXIT=YES, both APPC=NO and UVEXIT=NO are assumed by default.

If you are updating an existing USERVAR and you do not specify a value for UVEXIT, the previously defined value will be replaced with the default value found in the operation-level USS table (ISTINCNO). The IBM-supplied default value is UVEXIT=NO.

UVEXIT=NO

specifies that the USERVAR installation exit is not used for this USERVAR.

UVEXIT=YES

specifies that the USERVAR installation exit is used for this USERVAR.

VALUE=appl\_name

specifies the name of an application program. Any session initiated with the USERVAR name specified in the ID operand is initiated with the application program named by *appl\_name*.

**Note:** If VALUE is specified using a reserved name (for example VALUE=VTAM), inconsistent results will occur. The name can be a network-qualified name. If *appl\_name* is a network-qualified name, the name (both the network identifier and the resource name) is considered to be a real name and cannot change.

If *appl\_name* is not a network-qualified name, the name uses the network identifier that was specified on the session request if one is specified. If a network identifier is not specified on the session request, and if the USERVAR is in the OLU domain, the name can represent any resource with that name in any network and the network identifier is filled in when a resource is found with that name. If the USERVAR is **not** in the OLU domain, the value must be predefined in the VTAM that contains the USERVAR. In addition, if the USERVAR is represented by a CDRSC, the CDRSC must be predefined **with a network identifier**.

**Notes:**

1. When a VTAM in an APPN network receives a request containing a USERVAR name, the user-managed USERVAR must be defined on the same node as the real resource. Therefore, when the real resource is on an end node, define the USERVAR at the end node and not at its network node server.
2. When an interchange node receives a request containing a USERVAR name from the APPN network, the real resource must be located on the interchange node or through an adjacent SSCP attached to the interchange node (that is, not in the APPN network attached to the interchange node).

The output from the DISPLAY USERVAR command for this USERVAR includes network-qualified names only if *appl\_name* is a network-qualified name on the MODIFY USERVAR command.

If *appl\_name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.



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## 2.1.89 MODIFY VTAMOPTS Command

```

>> vm_prefix MODIFY procname,VTAMOPTS_____>
                                     (1)
> |_,APPNCOS=class-of-service_name_|_____>
> |_,ASIRFMSG=| ALLSSCP | |_,AUTHLEN=| NO |_____>
| | OLUSSCP | | | YES |_____>
| | NONE | |_____>
> |_,AUTORTRY=| AUTOCAP | |_,AUTOTI=time_period_|_____>
| | CDRM |_____>
| | ALL |_____>
| | NONE |_____>
                                     (2) (3)
> |_,BNDYN=| NONE | |_,BNORD=| DEFINED |_____>
| | LIMITED | | | PRIORITY |_____>
| | FULL | |_____>
> |_,BSCMDRS=| STATS |_____>
| | NOSTATS |_____>
| | (,INOPS) |_____>
| | (,NOINOPS) |_____>
| | (STATS,INOPS) |_____>
| | (,NOINOPS) |_____>
| | NOSTATS,INOPS |_____>
| | (,NOINOPS) |_____>
                                     (4)
> |_,CDRDYN=| YES | |_,CMPMIPS=compression_ratio_|_____>
| | NO | |_____>
                                     (5)
> |_,CMPVTAM=compression_level_| |_,CONNTYPE=| APPN |_____>
| | LEN |_____>
                                     (6)
> |_,CPCP=| YES |_____>
| | NO |_____>
| | LEASED |_____>
| | SWITCHED |_____>
                                     (7)
> _____>

```

```
|_, CSALIMIT=_ value _|
|_(value_ _)_|
|_,F_|
```

(8)

```
>|_, CSA24=_ value _|
|_(value_ _)_|
|_,F_|
```

(9)

```
>|_, DIRSIZE=number_of_resources_|
```

(10)

```
>|_, DIRTIME=time_period_| |_, DISCNTIM=time_period_|
```

```
>|_, DSPLYMAX=number_of_messages_| |_, DSPLYWLD=_
|_ FULLWILD _|
|_ NOWILD _|
|_ OPERONLY _|
|_ POAONLY _|
```

```
>|_, ESIRFMSG=_ ALLSSCP _| |_, FSIRFMSG=_ ALLSSCP _|
|_ OLUSSCP _| |_ OLUSSCP _|
|_ NONE _| |_ NONE _|
```

```
>|_, HOTIOTRM=percentage_of_buffer_pool_| |_, INOPDUMP=_ ON _|
|_ OFF _|
```

```
>|_, JOINT=number_of_seconds_|
```

```
>|_, IOMSGLIM=number_of_message_pairs_| |_, IOPURGE=timeout_value_|
```

```
>|_, ISTCOSDF=_ ALL _| |_, MAXSSCPS=number_of_sscps_|
|_ APPL _|
|_ DEPLU _|
|_ INDLU _|
|_ NONE _|
|_ <_ _|
|_ ( _ APPL _ ) _|
|_ DEPLU _|
|_ INDLU _|
```

```
>|_, MIHTMOUT=units_of_time_| |_, MSGLEVEL=_ BASE _|
|_ V4R1 _|
|_ V4R2 _|
```

```
>|_, MSGMOD=_ YES _| |_, NONMODE=_ NAME _|
|_ NO _| |_ NQNAME _|
```

(11)

```
>|_, NUMTREES=number_of_routing_trees_|
```

```
>|_, PDTRCBUF=number_of_buffers_|
```

(12)

> |\_, PIUMAXDS=calculation\_factor\_| \_\_\_\_\_>

> |\_, PLUALMSG=\_ SUPPRESS\_ \_| |\_, PPOLOG=\_ YES\_ \_|  
 |\_ NOSUPP\_ \_| |\_ NO\_ \_|

(13)

> |\_, RESUSAGE=usage\_limit\_| \_\_\_\_\_>

(14)

> |\_, ROUTERES=resistance\_value\_| \_\_\_\_\_>

(15)

> |\_, SAWMXOPK=calculation\_factor\_| \_\_\_\_\_>

> |\_, SDLCMDRS=\_ YES\_ \_| \_\_\_\_\_>  
 |\_ NO\_ \_|  
 |\_ STATS\_ \_|  
 |\_ NOSTATS\_ \_|  
 |\_ ( , INOPS)\_ \_|  
 |\_ ( , NOINOPS)\_ \_|  
 |\_ ( \_ STATS\_ \_ , INOPS\_ \_ )\_ \_|  
 |\_ NOSTATS\_ \_ , NOINOPS\_ \_|  
 |\_ NOSTATS\_ \_ , INOPS\_ \_|  
 |\_ , NOINOPS\_ \_|

(16)

> |\_, SGALIMIT=\_ value\_ \_| \_\_\_\_\_>  
 |\_ (value\_ \_ \_)\_ \_|  
 |\_ , F\_ \_|

(17)

> |\_, SGA24=\_ value\_ \_| \_\_\_\_\_> |\_, SIRFMSG=\_ ALLSSCP\_ \_|  
 |\_ (value\_ \_ \_)\_ \_| |\_ OLUSSCP\_ \_|  
 |\_ , F\_ \_| |\_ NONE\_ \_|

(18)

> |\_, SLUALMSG=\_ SUPPRESS\_ \_| \_\_\_\_\_> |\_, SNVC=subnet\_visit\_count\_| \_\_\_\_\_>  
 |\_ NOSUPP\_ \_|

(19)

> |\_, SORDER=\_ ADJSSCP\_ \_| \_\_\_\_\_> |\_, SRCHRED=\_ OFF\_ \_|  
 |\_ APPN\_ \_| |\_ ON\_ \_|  
 |\_ SUBAREA\_ \_|

(20)

> |\_, SRCOUNT=number\_of\_search\_requests\_| \_\_\_\_\_>

(21)

> |\_, SRTIMER=number\_of\_seconds\_| \_\_\_\_\_>

(22)

> |\_, SSDTMOUT=number\_of\_seconds\_| \_\_\_\_\_> |\_, SSEARCH=\_ YES\_ \_|  
 |\_ NO\_ \_|  
 |\_ CACHE\_ \_|



- (18) SNVC can be modified only if BN=YES was specified during VTAM START processing.
- (19) SORDER can be modified only if VTAM has been started as a network node, interchange node, or migration data host.
- (20) SRCOUNT can be modified only if SRCHRED=ON was specified during VTAM START processing.
- (21) SRTIMER can be modified only if SRCHRED=ON was specified during VTAM START processing.
- (22) SSEARCH can be modified only if NODETYPE=NN was specified during VTAM START processing.
- (23) VRTG can be modified only if NODETYPE and HOSTSA are specified.
- (24) VRTGCPCP can be modified only if NODETYPE and HOSTSA are specified.

### Abbreviations

Operand	Abbreviation
MODIFY	F
MSGLEVEL	MSGLVL
PLUALMSG=NOSUPP	PLUALMSG=NOSUP
PLUALMSG=SUPPRESS	PLUALMSG=SUPP
SLUALMSG=NOSUPP	SLUALMSG=NOSUP
SLUALMSG=SUPPRESS	SLUALMSG=SUPP

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for PLUALMSG=SUPPRESS, code only PLUALMSG=SUPP.

### Purpose

The MODIFY VTAMOPTS (VTAM start options) command enables you to change certain values that might have been specified on VTAM start options. See [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference* for descriptions of each of the start options that you can change with this command.

There are no default values on the MODIFY VTAMOPTS command. Only the values that you specify are affected. Operands that are not specified on the command are not affected in any way.

If a start option affects individual resources, and you change the value of the start option with this command, the change does not go into effect until the major nodes for those resources are deactivated and reactivated. The command takes effect for major nodes that are activated after you issue this command and for dynamic cross-network resources that are dynamically defined after the command is issued.

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**procname**

is the procedure name for the command. The procedure name is different for each operating system.

**MVS** If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.

If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

**VM** *procname* is always NET and is an optional operand.

**VSE** *procname* is always NET and is required.



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## 2.1.90 START Command (MVS, VM)

### Starting VTAM in an MVS environment:

```
>> __START procname,,,( _ | Options | _ ) _____><
```

### Starting VTAM in a VM environment:

```
>> vm prefix START _ | Options | _____><
```

### Notes:

1. The start options are listed in this section alphabetically; however, you can code them in any order.
2. **MVS** Precede the option list with three commas and enclose the group of options in parentheses.
3. Start options that are entered on the START command must be separated by commas. Do not leave any blanks between options.

### Options:

```
| NETID=network_id SSCPID=sscp_id SSCPNAME=name _____>
```

```
>—| ALSREQ=NO _____| —| APPNCOS=NONE _____| (1) _____>
| ALSREQ= _ YES _____| —| APPNCOS=class-of-service_name_|
| NO _____|
```

```
>—| ASIRFMSG=OLUSSCP _____| —| ASYDE=TERM _____| _____>
| ASIRFMSG= _ ALLSSCP _____| —| ASYDE= _ KEEP _____|
| OLUSSCP _____| | TERM _____|
| NONE _____|
```

```
>—| AUTHLEN=YES _____| —| AUTORTRY=AUTOCAP _____| _____>
| AUTHLEN= _ NO _____| —| AUTORTRY= _ AUTOCAP _____|
| YES _____| | CDRM _____|
| _____| | ALL _____|
| _____| | NONE _____|
```

```
>—| AUTOTI=0 _____| —| BN=NO _____| (2) _____>
| AUTOTI=time_period_| —| BN= _ NO _____|
| _____| | YES _____|
```

```

> | BNDYN=LIMITED (3) | BNORD=PRIORITY (4) |
> | BNDYN= | BNORD= |
> | LIMITED | PRIORITY |
> | NONE | DEFINED |
> | FULL | |
>
> | BSCMDRS=(STATS,INOPS) |
> | BSCMDRS= |
> | STATS |
> | NOSTATS |
> | (,INOPS) |
> | (,NOINOPS) |
> | (STATS,INOPS) |
> | (,NOINOPS) |
> | (NOSTATS,INOPS) |
> | (,NOINOPS) |
>
> | BSCTMOUT=286 |
> | BSCTMOUT=units_of_time |
>
> | poolname= |
> | ( ) |
> | Buffer Pool Values |
>
> | CACHETI=8 | CDRDYN=YES |
> | CACHETI=number_of_minutes | CDRDYN= |
> | | NO |
> | | YES |
>
> | CDRSCTI=8M | CDSERVR=NO (5) |
> | CDRSCTI=timeout_value | CDSERVR= |
> | | YES |
> | | NO |
>
> | CINDXSIZ=8176 | CMPMIPS=100 (6) |
> | CINDXSIZ=table_size | CMPMIPS=compression_ratio |
>
> | CMPVTAM=0 | COLD |
> | CMPVTAM=compression_level | WARM |
>
> | CONFIG=00 | CONNTYPE=APPN (8) |
> | CONFIG= | CONNTYPE= |
> | file id | APPN |
> | file name (7) | LEN |
>
> | CPCDRSC=NO | CPCP=LEASED (9) |
> | CPCDRSC= | CPCP= |
> | YES | YES |
> | NO | NO |
> | | LEASED |
> | | SWITCHED |
>
> | CSALIMIT=0 | CSA24=0 | DATEFORM=MDY |
> | CSALIMIT=value | CSA24=value | DATEFORM= |
> | | MDY |
> | | DMY |
> | | YMD |
>
> | DIRSIZE=0 (10) | DIRTIME=8D (11) |
> | DIRSIZE=number_of_resources | DIRTIME=time_period |
>
> | DISCNTIM=15 | DLRTCB=32 |
>

```



|\_DISCNTIM=time\_period\_| |\_DLRTCB=number\_of\_task\_control\_blocks\_|

> |\_DSPLYMAX=100\_| |\_DSPLYWLD=FULLWILD\_|  
 > |\_DSPLYMAX=number\_of\_messages\_| |\_DSPLYWLD= FULLWILD  
 NOWILD  
 OPERONLY  
 POAONLY\_|

> |\_DYNADJCP=YES (12) |\_DYNASSCP=YES\_|  
 > |\_DYNADJCP= YES  
 NO\_| |\_DYNASSCP= YES  
 NO\_|

> |\_DYNLU=NO\_| |\_ENHADDR=NO\_|  
 > |\_DYNLU= YES  
 NO\_| |\_ENCRYPTN= YES  
 NO  
 24  
 31\_| |\_ENHADDR= NO  
 YES\_|

> |\_ESIRFMSG=ALLSSCP\_| |\_FLDTAB=ISTMSFLD\_|  
 > |\_ESIRFMSG= ALLSSCP  
 OLUSSCP  
 NONE\_| |\_FLDTAB= table\_name  
 NONE\_|

> |\_FSIRFMSG=OLUSSCP\_| |\_GWSSCP=YES\_|  
 > |\_FSIRFMSG= ALLSSCP  
 OLUSSCP  
 NONE\_| |\_GWSSCP= YES  
 NO\_|

> |\_HNTSIZE=4080\_| |\_HOSTPU=ISTPUS\_|  
 > |\_HNTSIZE=table\_size\_| |\_HOSTPU=host\_subarea\_pu\_name\_|

> |\_HOSTSA=1\_|  
 > |\_HOSTSA=subarea\_number (13)\_|

> |\_HOTIOTRM=0\_|  
 > |\_HOTIOTRM=percentage\_of\_buffer\_pool\_|

> |\_HSRTSIZE=9973\_| |\_INITDB=ALL (14)\_|  
 > |\_HSRTSIZE=number\_of\_queue\_pointers\_| |\_INITDB= ALL  
 DIR  
 TOPO  
 NONE\_|

> |\_INOPDUMP=OFF\_| |\_IOINT=180\_|  
 > |\_INOPDUMP= ON  
 OFF\_| |\_IOINT=number\_of\_seconds\_|

> |\_IOMGLIM=2147483647\_| |\_IOPURGE=0\_|  
 > |\_IOMGLIM=number\_of\_message\_pairs\_| |\_IOPURGE=timeout\_value\_|

> |\_IRNSTRGE=0\_| |\_ISTCOSDF=INDLU\_|  
 > |\_IRNSTRGE=size\_| |\_ISTCOSDF= ALL  
 APPL  
 DEPLU  
 INDLU\_|

```

| NONE |
| < , |
| ( APPL | ) |
| DEPLU |
| INDLU |

```

```

> LIST=00 (15)
| LIST=start_option_list_id |

```

```

> (16)
| LISTBKUP= start_option_list_id |
| DEFAULTS |
| PROMPT |

```

```

> MAXLURU=6144
| MAINTLVL=maintenance_level | | MAXLURU=ru_length |

```

```

> MAXSSCPS=10 | MAXSUBA=15
| MAXSSCPS=number_of_SSCPs | | MAXSUBA=maximum_subarea_number |

```

```

> MIHTMOUT=1800 | MSGLEVEL=BASE
| MIHTMOUT=units_of_time | | MSGLEVEL= |
| | | BASE |
| | | V4R1 |
| | | V4R2 |

```

```

> MSGMOD=NO | MXSAWBUF=10000
| MSGMOD= | | MXSAWBUF=number_of_buffers |
| NO | | |
| YES | | |

```

```

> MXSSCPRU=4096 | MXSUBNUM=511
| MXSSCPRU=ru_length | | MXSUBNUM= |
| | | 255 |
| | | 511 |
| | | 1023 |
| | | 2047 |
| | | 4095 |
| | | 8191 |
| | | 16383 |
| | | 32767 |
| | | 65535 |

```

```

> NCPBUFSZ=512 | NMVTLOG=NPDA
| NCPBUFSZ= | | NMVTLOG= | |
| 512 | | | ALWAYS |
| 1024 | | | NEVER |
| 2048 | | | NPDA |

```

```

> (17)
| NODELST=name | | NODETYPE= |
| | | EN |
| | | NN |

```

```

> NONMODE=NAME
| NQNMODE= |
| NAME |
| NONAME |

```

```

> NUMTREES=100 (18)
| NUMTREES=number_of_routing_trees |

```

OSRTSIZE=43

```

> |_____OSRTSIZE=number_of_queue_pointers_____|_____>

> |_____PDTRCBUF=2_____|_____PIUMAXDS=200_____|_____>
  |_____PDTRCBUF=number_of_buffers_____|_____PIUMAXDS=calculation_factor_____|_____>

> |_____PLUALMSG=NOSUPP_____|_____PPOLOG=NO_____|_____>
  |_____PLUALMSG= SUPPRESS _____|_____PPOLOG= NO _____|_____>
  |_____NOSUPP _____|_____YES _____|_____>

> |_____PROMPT _____| (19) |_____PSSTRACE=NORB_____|_____>
  |_____NOPROMPT_____|_____PSSTRACE= NORB _____|_____>
  |_____IRB _____|_____>
  |_____SRB _____|_____>
  |_____BOTH _____|_____>

> |_____RESUSAGE=100_____| (20) |_____ROUTERES=128_____| (21) _____>
  |_____RESUSAGE=usage_limit_____|_____ROUTERES=resistance_value_____|_____>

> |_____SAWMAXDS=100_____|_____SAWMXQPK=0_____|_____>
  |_____SAWMAXDS=calculation_factor_____|_____SAWMXQPK=calculation_factor_____|_____>

> |_____SDLCMDRS=YES_____|_____>
  |_____SDLCMDRS=(STATS,INOPS)_____|_____>
  |_____SDLCMDRS= YES _____|_____>
  |_____NO _____|_____>
  |_____STATS _____|_____>
  |_____NOSTATS _____|_____>
  |_____ ( , INOPS ) _____|_____>
  |_____ ( , NOINOPS ) _____|_____>
  |_____ ( _STATS_ _ , INOPS_ _ ) _____|_____>
  |_____ _ , NOINOPS_ _____|_____>
  |_____ _NOSTATS_ _ , INOPS_ _____|_____>
  |_____ _ , NOINOPS_ _____|_____>

> |_____SECLVLCP=ADAPT_____| (22) |_____SIRFMSG=ALLSSCP_____|_____>
  |_____SECLVLCP= LEVEL1 _____|_____SIRFMSG= ALLSSCP _____|_____>
  |_____LEVEL2 _____|_____OLUSSCP _____|_____>
  |_____ADAPT _____|_____NONE _____|_____>

> |_____SLUALMSG=NOSUPP_____|_____SNAPREQ=1000_____|_____>
  |_____SLUALMSG= SUPPRESS _____|_____SNAPREQ=number_of_requests_____|_____>
  |_____NOSUPP _____|_____>

> |_____SNVC=3_____| (23) _____>
  |_____SNVC=subnet_visit_count_____|_____>

> |_____SONLIM=(60,30)_____|_____>
  |_____SONLIM= (percent_1,percent_2) _____|_____>
  |_____ (percent_1) _____|_____>
  |_____ ( , percent_2 ) _____|_____>

> |_____SORDER=APPN_____| (24) |_____SRCHRED=OFF_____|_____>
  |_____SORDER= ADJSSCP _____|_____SRCHRED= OFF _____|_____>
  |_____APPN _____|_____ON _____|_____>
  |_____SUBAREA _____|_____>

```

```

> SRCOUNT=10 (25)
> |-----|----->
|_SRCOUNT=number_of_search_requests_|
|-----|----->

> SRTIMER=30 (26) SSCPDYN=YES (27)
> |-----|-----|----->
|_SRTIMER=number_of_seconds_| |SSCPDYN= NO |
|-----|-----|----->
|_YES_|
|-----|----->

> SSCPORD=PRIORITY SSDTMOUT=30
> |-----|-----|----->
|_SSCPORD= DEFINED | |SSDTMOUT=number_of_seconds_|
|_PRIORITY_| |-----|----->

> SSEARCH=YES (28) SUPP=NOSUP
> |-----|-----|----->
|_SSEARCH= YES | |SUPP= NOSUP |
|_NO_| |-----|----->
|_CACHE_| | INFO |
|-----|----->
| WARN |
| NORM |
| SER |
|-----|----->

> SWNORDER=CPNAME
> |-----|----->
|_SWNORDER= CPNAME |
|_STATNID_| |----->

> NOTNSTAT
> |-----|----->
|_TNSTAT | NOCNSL | TIME=60 |
|-----|-----|----->
| CNSL | | TIME=minutes |
|-----|----->

> TRABUFSZ=512
> |-----|----->
|_TRABUFSZ=buffer_size_|
|----->

> NOTRACE,TYPE=BUF (29)
> |-----|----->
|_TRACE,TYPE=BUF | BUF Trace Operands | (30)
|-----|----->

> NOTRACE,TYPE=IO (31)
> |-----|----->
|_TRACE,TYPE=IO | IO Trace Operands | (32)
|-----|----->

> NOTRACE,TYPE=LINE (33)
> |-----|----->
|_TRACE,TYPE=LINE | LINE Trace Operands | (34)
|-----|----->

> NOTRACE,TYPE=SIT (35)
> |-----|----->
|_TRACE,TYPE=SIT | SIT Trace Operands | (36)
|-----|----->

> NOTRACE,TYPE=SMS (37)
> |-----|----->
|_TRACE,TYPE=SMS, ID=VTAMBUF (38)
|-----|----->

```

> TRACE,TYPE=VTAM, | VIT Operands | \_\_\_\_\_ >  
 \_\_\_\_\_ (39) \_\_\_\_\_ >  
 < NOTRACE,TYPE=VTAM \_\_\_\_\_ <

> TRAMNBUF=14 \_\_\_\_\_ TRAMXBUF=28 \_\_\_\_\_ >  
 < TRAMNBUF=number\_of\_buffers \_\_\_\_\_ < TRAMXBUF=number\_of\_buffers \_\_\_\_\_ <

> TRANSLAT=(0,1,2,3,4,5,6,7) \_\_\_\_\_ >  
 < TRANSLAT= value \_\_\_\_\_ < USSTAB=table\_name\_ \_\_\_\_\_ <  
 < ( ) \_\_\_\_\_ <  
 < <- \_\_\_\_\_ <  
 < ( \_\_\_\_\_ ) \_\_\_\_\_ <  
 < OLUALIAS \_\_\_\_\_ <  
 < | 0 \_\_\_\_\_ | <  
 < DLUREAL \_\_\_\_\_ <  
 < | 1 \_\_\_\_\_ | <  
 < DLUSSCP \_\_\_\_\_ <  
 < | 2 \_\_\_\_\_ | <  
 < COSNAME \_\_\_\_\_ <  
 < | 3 \_\_\_\_\_ | <  
 < LOGMODES \_\_\_\_\_ <  
 < | 4 \_\_\_\_\_ | <  
 < LUANAME \_\_\_\_\_ <  
 < | 5 \_\_\_\_\_ | <  
 < USERVER \_\_\_\_\_ <  
 < | 6 \_\_\_\_\_ | <  
 < DLUALIAS \_\_\_\_\_ <  
 < | 7 \_\_\_\_\_ | <

> VERIFYCP=NONE \_\_\_\_\_ (41) VRTG=NO \_\_\_\_\_ (42) >  
 < VERIFYCP= NONE \_\_\_\_\_ < VRTG= YES \_\_\_\_\_ <  
 < OPTIONAL \_\_\_\_\_ < NO \_\_\_\_\_ <  
 < REQUIRED \_\_\_\_\_ <

> VRTGPCPCP=YES \_\_\_\_\_ (43) >  
 < VRTGPCPCP= YES \_\_\_\_\_ <  
 < NO \_\_\_\_\_ <

> VTAMEAS=32001 \_\_\_\_\_ >  
 < VTAMEAS=number\_of\_concurrent\_sessions \_\_\_\_\_ <

> XNETALS=NO \_\_\_\_\_ (44) >  
 < XNETALS=YES \_\_\_\_\_ <  
 < XNETALS= NO \_\_\_\_\_ <  
 < YES \_\_\_\_\_ <

> X25PRIS=14 \_\_\_\_\_ >  
 < X25PRIS=priority\_for\_SNA\_connections \_\_\_\_\_ <

> X25PRIV=14 \_\_\_\_\_ >  
 < X25PRIV=priority\_for\_VCNS\_connections \_\_\_\_\_ <

**Buffer Pool Values:**

> ( \_\_\_\_\_ | baseno \_\_\_\_\_ | \_\_\_\_\_ | bufsize \_\_\_\_\_ | \_\_\_\_\_ | slowpt \_\_\_\_\_ | \_\_\_\_\_ | F \_\_\_\_\_ | \_\_\_\_\_ ) >  
 > \_\_\_\_\_ | xpanno \_\_\_\_\_ | \_\_\_\_\_ | xpanpt \_\_\_\_\_ | \_\_\_\_\_ | xpanlim \_\_\_\_\_ | \_\_\_\_\_ ) >

**BUF Trace Operands:**

```
|_, ID=node_name_ |_, EVERY_ |_, AMOUNT=PARTIAL_ |_____>
|_, AMOUNT=FULL_
|_, AMOUNT=PARTIAL_ |_____>
```

```
> |_, IDTYPE=RESOURCE_ |_____|
|_, IDTYPE=CP_ |_____|
|_, IDTYPE=SSCP_ |_____|
|_, IDTYPE=RESOURCE_ |_____|
```

**IO Trace Operands:**

```
|_, ID=node_name_ |_, EVERY_ |_, IDTYPE=RESOURCE_ |_____|
|_, IDTYPE=CP_ |_____|
|_, IDTYPE=SSCP_ |_____|
|_, IDTYPE=RESOURCE_ |_____|
```

**LINE Trace Operands:**

```
|_, ID=line_name_ |_, COUNT=ALL_ (45) |_____|
|_, COUNT=ALL_ |_____|
|_, COUNT=number_of_bytes_ |_____|
```

**SIT Trace Operands:**

```
|_, ID=line_name_ |_, COUNT=ALL_ (46) |_____>
|_, COUNT=ALL_ |_____|
|_, COUNT=number_of_bytes_ |_____|
```

```
> |_, TRACEPT=trace_point_id_ |_____|
```

**VIT Operands:**

```
|_, MODE=INT, SIZE=50_ |_____>
|_, MODE=EXT_ |_____|
|_, MODE=INT_ |_____|
|_, SIZE=size_ |_____|
```

```
> |_, OPTION=(API,MSG,NRM,PIU,SSCP) (47) |_____|
|_, OPTION=ALL_ |_____|
```

- |           |
|-----------|
| NONE      |
| option    |
| _(option) |
| <_,       |
| _( API    |
| _( APPC   |
| (48)      |
| CFS       |
| CIO       |
| ESC       |
| LCS       |
| LOCK      |
| MSG       |
| NRM       |
| PIU       |
| PSS       |
| SMS       |
| SSCP      |
| (49)      |
| TCP       |
| VCNS      |

**Notes:**

- (1) APPNCOS is meaningful only if the NODETYPE start option is also used.
- (2) BN is meaningful only if the NODETYPE=NN start option is also used.

- (3) BNDYN is meaningful only if the BN=YES start option is also used.
- (4) BNORD is meaningful only if the BN=YES start option is also used.
- (5) CDSERVR is meaningful only if the NODETYPE=NN start option is also used.
- (6) The CMPMIPS start option is meaningful only if the value for CMPVTAM is greater than 1.
- (7) CONFIG= *file\_name* applies to MVS only.
- (8) CONNTYPE is meaningful only if the NODETYPE start option is also used.
- (9) CPCP is meaningful only if the NODETYPE start option is also used.
- (10) DIRSIZE is meaningful only if the NODETYPE=NN start option is also used.
- (11) DIRTIME is meaningful only if the NODETYPE=NN start option is also used.
- (12) DYNADJCP is meaningful only if the NODETYPE start option is also used.
- (13) HOSTSA provides subarea function. If you do not specify HOSTSA, but you specify NODETYPE, there is no default for HOSTSA and subarea function is not provided. If you do not specify HOSTSA and NODETYPE, a default of HOSTSA=1 is assumed and APPN function is not provided.
- (14) INITDB is meaningful only if the NODETYPE=NN start option is also used.
- (15) LIST can be entered by a VTAM operator only. If LIST is coded in an ATCSTRxx file, it is considered to be an error and is ignored.
- (16) LISTBKUP can only be coded in a start option file. If you enter it on the START command or at an operator prompt, VTAM will ignore it.
- (17) NODETYPE provides APPN function. The combination of NODETYPE and HOSTSA determines the configuration (subarea node, interchange node, migration data host, network node, or end node).
- (18) NUMTREES is meaningful only if the NODETYPE=NN start option is also used.
- (19) A VTAM operator cannot enter the PROMPT or NOPROMPT start option; it can be coded only in ATCSTR00. The value coded in ATCSTR00 is ignored if start options are entered on the START command or if VTAM finds an error in a start list. Upon finding an error in a start list, VTAM prompts the operator so that the operator can specify the option correctly.
- (20) RESUSAGE is meaningful only if the NODETYPE=NN start option is also used.
- (21) ROUTERES is meaningful only if the NODETYPE=NN start option is also used.

- (22) The SECLVLCPC start option is meaningful only if the NODETYPE and VERIFYCP start options are also used.
- (23) SNVC is meaningful only if the BN=YES start option is also used.
- (24) SORDER is meaningful only in a network node, interchange node, or migration data host.
- (25) SRCOUNT is meaningful only if the SRCHRED=ON start option is also used.
- (26) SRTIMER is meaningful only if the SRCHRED=ON start option is also used.
- (27) The SSCPDYN start option applies only for interconnected networks (that is, GWSSCP=YES is used).
- (28) SSEARCH is meaningful only if the NODETYPE=NN start option is also used.
- (29) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (30) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (31) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (32) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (33) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (34) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (35) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (36) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (37) Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.
- (38) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (39) NOTRACE,TYPE=VTAM is accepted but ignored. Tracing is started with the default trace table size and the default options.
- (40) Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- (41) The VERIFYCP start option is meaningful only if the NODETYPE start option is also used.



- (42) VRTG is meaningful only if the NODETYPE and HOSTSA start options are also used.
- (43) VRTGCPCP is meaningful only if the NODETYPE and HOSTSA start options are also used.
- (44) The default for XNETALS is NO if BN=NO. The default for XNETALS is YES if BN=YES.
- (45) COUNT applies only to the IBM 3720 and 3745 Communication Controllers.
- (46) COUNT applies only to the IBM 3720 and 3745 Communication Controllers.
- (47) The default options apply only to MODE=INT.
- (48) The CFS trace option applies to MVS only.
- (49) The TCP trace option applies to MVS only.

### Abbreviations

Operand	Abbreviation
START	S
AMOUNT=FULL	AMT=F
AMOUNT=PARTIAL	AMT=P
DATEFORM	DATEFRM
EVERY	E
MSGLEVEL	MSGLVL
OPTION	OPT
PLUALMSG=NOSUPP	PLUALMSG=NOSUP
PLUALMSG=SUPPRESS	PLUALMSG=SUPP
SECLVLC=LEVEL1	SECLVLC=LVL1
SECLVLC=LEVEL2	SECLVLC=LVL2
SLUALMSG=NOSUPP	SLUALMSG=NOSUP
SLUALMSG=SUPPRESS	SLUALMSG=SUPP
TRANSLAT=COSNAME	TRANSLAT=3
TRANSLAT=DLUALIAS	TRANSLAT=7
TRANSLAT=DLUREAL	TRANSLAT=1
TRANSLAT=DLUSSCP	TRANSLAT=2
TRANSLAT=LOGMODES	TRANSLAT=4
TRANSLAT=LUANAME	TRANSLAT=5
TRANSLAT=OLUALIAS	TRANSLAT=0

TRANSLAT=USERVAR	TRANSLAT=6
------------------	------------

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for PLUALMSG=SUPPRESS, code only PLUALMSG=SUPP.

## Purpose

VTAM is started with the START command.

**MVS** You can enter the START command only at the master or a secondary system console.

**VM** Enter the START command at whatever console is controlling the VTAM virtual machine. When starting VTAM with X.25 support, you might want to change the buffer pool specifications in the start list, based upon your storage estimates. In addition, you might also want to change the user-defined configuration list, which contains those major nodes that are activated when VTAM is started, to include packet major nodes.

## Operands

*procname* **MVS**  
is the procedure name for the command.

*procname* can be specified as either *startname.ident* or *startname*, where *startname* is the name of the JCL procedure used to start VTAM and *ident* is an optional identifier.

*procname* used for this command determines the *procname* used for all MODIFY commands as follows:

- If *procname* in the START command was specified as *startname.ident*, where *startname* is the VTAM start procedure and *ident* is the optional identifier, then either *startname.ident* or *ident* can be specified for *procname*.
- If *procname* in the START command was *startname*, then *startname* must be specified for *procname*.

Therefore, if you use NET as the optional identifier on this command, you can consistently use NET as *procname* for all VTAM commands.

*options*  
are VTAM start options supplied by the system programmer. The VTAM operator can enter one or more options. For a description of the start options, see [Chapter 4, "Start Options"](#) in the *VTAM Resource Definition Reference*.

Some of the start options are operating system-dependent.

If more than one line is necessary for the start options:

**MVS** Enter a comma and a closing parenthesis after the last option.  
**VM** Enter a comma after the last option on the line; VTAM prompts for more start options on another line.

The values established by the start options go into effect when VTAM is started and remain in effect until VTAM is halted. Many of the options, however, can be modified with the MODIFY VTAMOPTS command while VTAM is running. You can use the DISPLAY VTAMOPTS command to display the values of the start options.

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## 2.1.91 VARY ACQ Command

Acquire an NCP, and optionally its subordinate resources, from another host:

```
>> vm_prefix VARY NET,ACQ___,ID=ncp_name_____>
|_,OWNER=host_name_|_|_,PUSUB_|_____>
>_____><
|_,ACT_| Operands used with ACT |___|_____><
```

Acquire "inactive" NCP, and optionally its subordinate resources, without activating them:

```
>> vm_prefix VARY NET,ACQ___,ID=ncp_name_____><
|_,PUSUB_|_____><
```

Acquire "inactive" NCP, and optionally its subordinate resources, and activate them:

```
>> vm_prefix VARY NET,ACQ___,ID=ncp_name___,ACT_____>
>___| Operands used with ACT |_____>
|_,PUSUB_|_____>
>_____><
|_,LOADMOD=load_module_name_|_____><
```

Acquire nonswitched PU and its LUs:

```
>> vm_prefix VARY NET,ACQ___,ID=pu_name_____><
|_,ACT_| Operands used with ACT |___|_____><
```

Operands used with ACT:

```
|_____>
|_,LOGON=apl_name_|_____>
|_,LOGMODE=logon_mode_name_|_____>
>|_,SCOPE=COMP_____>
>|_,SCOPE=|_____>
|_____>
|ALL|_____>
|COMP|_____>
|ONLY|_____>
|U|_____>
```

Abbreviations

Operand	Abbreviation
---------	--------------

VARY	V
LOADMOD	LM
PUSUB	P

## Purpose

The VARY ACQ (acquire) command is used to acquire an NCP, or to acquire a peripheral PU (except for switched and local SNA PUs) attached by a nonswitched line. An NCP or a peripheral physical unit attached to an NCP can be acquired as part of a backup and recovery procedure in a multiple-domain network. A physical unit attached to an NCP can also be acquired as part of a switched network backup procedure in either a single-domain or multiple-domain network.

The purpose of the VARY ACQ command is to acquire ownership of:

- NCP resources that are normally owned by another host. In that case, the NCP must have been previously activated.

See ["OWNER"](#) in the *VTAM Resource Definition Reference* for additional information regarding the association of a resource with a particular host.

- All resources within an NCP, including the NCP itself. In that case, the NCP major node must be inactive and contacted through an active link station.
- An individual peripheral physical unit and its logical units.

Acquiring an NCP makes that NCP's resources known to VTAM until the NCP is released or deactivated. Likewise, acquiring a physical unit makes its logical units known until the physical unit is released.

Acquiring a physical PU in a logical hierarchy results in the acquisition of the logical lines in addition to any LUs. Also, the logical lines can be acquired only if the physical PU is acquired. This means that acquiring an NCP acquires the logical lines only if PUSUB is specified. Otherwise, a VARY ACQ command must be entered for the physical PU.

If a subarea VTAM takes over an NCP owned by an APPN VTAM, it is possible that some resources will no longer be known. To avoid this situation, it is recommended that only APPN VTAMs take over resources from other APPN VTAMs. See [Planning for NetView, NCP, and VTAM](#) for descriptions of possible backup and recovery procedures using the VARY ACQ command.

The VARY ACQ command can also be entered for a physical unit when terminating a switched network backup procedure. The purpose of the VARY ACQ command is to make a nonswitched physical unit's logical units known to VTAM after a switched physical unit definition (representing the same physical device with a different physical unit name but with the same logical unit names) is deactivated. See [Planning for NetView, NCP, and VTAM](#) for a description of the switched network backup procedure.

## Operands

**vm\_prefix VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**ACT**

If you use the ACT operand on the VARY ACQ command, other operands of the VARY ACT command are available. The operands you can use are:

° For resources subordinate to the NCP:

- LOGON
- LOGMODE
- SCOPE

° For the NCP and resources subordinate to the NCP:

- LOGON
- LOGMODE
- SCOPE
- LOADMOD

° For PUs and LUs:

- LOGON
- LOGMODE
- SCOPE.

See the ["VARY ACT Command"](#) for a complete description of the operands from the VARY ACT command that apply.

**ID=name**

specifies the name of the resource that is to be acquired. The resource must be either an NCP major node or a physical unit within an NCP major node.

If the resource being acquired is an inactive NCP, it is possible to specify any name for the ID operand, and then use the LOADMOD operand to identify the actual NCP major node. If PUNAME is specified in the BUILD definition statement, the NCP's name must match that PUNAME value.

**LOADMOD=load\_module\_name**

specifies the member name in VTAMLST of the NCP major node to be acquired. This operand applies to the acquisition of inactive NCPs only. If LOADMOD is not specified, the name specified for the ID operand is used as the member name.

See the [LOADMOD](#) operand on the VARY ACT command in topic [2.1.92](#) for a complete description.

**OWNER=host\_name**

applies only when ID specifies an NCP that has previously been activated. VTAM acquires only the resources that have an owner name matching the one on this operand. You can specify only one owner name on this command. However, you can enter multiple acquire commands, each specifying a different owner name. If you do not specify OWNER on this command, all resources that have OWNER coded in their resource definition are acquired, regardless of which host is defined as the owner. However, resources that do not have OWNER coded are not acquired.

The *host\_name* operand is defined in the NCP PCCU macro or coded on specific resources within an NCP, such as LINE or PU. This name specified on the OWNER operand cannot match the name of the VTAM host from which you are issuing the command (that is, VTAM cannot acquire resources that it already owns).

PUSUB

applies only when ID specifies an NCP. PUSUB specifies that physical units and their logical units, subordinate to the acquired NCP are to be acquired in addition to the higher-level resources. If an NCP has previously been acquired without PUSUB, specifying PUSUB in a subsequent VARY ACQ command for the NCP can be used to acquire subordinate PUs and LUs.

If PUSUB is not specified, no PUs and associated LUs are acquired.



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## 2.1.92 VARY ACT Command

Activate an NCP major node:

```
>> vm_prefix VARY NET,ACT___,ID=ncp_name_____>
>|_____|_____>
|_,DUMPSTA=|_____||_____>
|_|link_station_name|_____>
>|_____|_____>
|_,LOGON=appl_name_|_____||_____>
|_|LOGMODE=logon_mode_name|_____>
>|_____|_____>
|_,LOAD=U,LOADFROM=HOST,DUMpload=NO,SAVEMOD=NO_|_____>
|_,LOAD=|NO_____||_____>
|_|U_____||NCP Load Operands|_|_____>
|_|YES_____||_____>
>|_____|_____>
|_,NEWPATH=|_____||_____>
|_|dpu_name_____||_____>
|_|<_|_____||_____>
|_|(dpu_name|_)_____||_____>
>|_____|_____>
|_,RNAME=|_____||_____>
|_|link_station_name_____||_____>
|_|<_|_____||_____>
|_|(link_station_name|_)_____||_____>
>|_____|_____>
|_,SCOPE=COMP_____||_____>
|_,SCOPE=|ALL_____||_|U=channel_unit_address|_____>
|_|COMP_____||_____>
|_|ONLY_____||_____>
|_|U_____||_____>
>|_____|_____>
|_,UPDATE=IMPLICIT_____||_____>
|_,UPDATE=|IMPLICIT_____||_____>
|_|ADD_____||_____>
|_|ALL_____||_____>
```

### Notes:

(1) You can specify up to 3 dynamic path update member names on the NEWPATH operand.

(2) You can specify up to 13 link station names on the RNAME operand.



**NCP Load Operands:**

```

|_,LOADSTA=|_|link_station_name_|_|_,LOADMOD=load_module_name_|>
>|_,LOADFROM=HOST, DUMpload=NO, SAVEMOD=NO
|_,LOADFROM=|EXTERNAL|_|DUMpload=NO|_|SAVEMOD=NO|
|_|DUMpload=|NO|_|YES|
|HOST|_|DUMpload=NO, SAVEMOD=NO
|_|DUMpload=|NO|_|SAVEMOD=NO|
|_|SAVEMOD=|NO|_|YES|
|_|YES, SAVEMOD=YES|

```

**Activate a switched major node:**

```

>> vm_prefix VARY NET,ACT|_,ID=major_node_name_|_|_,DWACT=NO
|_|_,DWACT=|NO|_|YES|>
>|_,LOGON=appl_name_|_|_,LOGMODE=logon_mode_name_|>
>|_,SCOPE=COMP|_|_,UPDATE=IMPLICIT
|_|SCOPE=|ALL|_|IMPLICIT|><
|_|COMP|_|ADD|
|_|ONLY|_|ALL|
|_|U|

```

**Activate a switched line:**

```

>> vm_prefix VARY NET,ACT|_,ID=line_name_|>
>|_|_,U=channel_unit_address_|_|_,ANS=|OFF|_|ON|><
(1)

```

**Note:**

(1) **VM,VSE** The U operand is valid for an SDLC switched line in a channel-attachment major node.

**Activate a type 2.1 PU (adjacent link station) or a nonswitched line under an NCP:**

```

>> vm_prefix VARY NET,ACT|_,ID=|pu_name_|_|_,CPCP=|YES|_|NO|>
|_|_,LOGON=appl_name_|_|_,LOGMODE=logon_mode_name_|>
>|_,SCOPE=COMP|_|_(1)|><
|_|SCOPE=|ALL|_|_,U=channel_unit_address_|

```

COMP
ONLY
U

**Note:**

(1) The U operand is valid for a local SNA PU only.

**Activate a control point (CDRSC minor node or application program minor node):**

```
>> vm_prefix VARY NET,ACT___,ID=name |_, IDTYPE=RESOURCE |_____>
|_, IDTYPE=|_ CP |_____>
|_ RESOURCE |_____>
```

```
> |_, SCOPE=COMP |_____><
|_, SCOPE=|_ ALL |_____><
|_ COMP |_____><
|_ ONLY |_____><
|_ U |_____><
```

**Activate an SSCP (CDRM minor node):**

```
>> vm_prefix VARY NET,ACT___,ID=name |_, IDTYPE=RESOURCE |_____>
|_, IDTYPE=|_ SSCP |_____>
|_ RESOURCE |_____>
```

```
> |_, SCOPE=COMP |_____>< (1)
|_, SCOPE=|_ ALL |_____><
|_ COMP |_____><
|_ ONLY |_____><
|_ U |_____><
|_, VRTGCPCP=|_ YES |_____><
|_ NO |_____><
```

**Note:**

(1) VRTGCPCP is only valid if VRTG=YES is coded for the CDRM, and the CDRM is in an inactive or connectable state.

**MVS,VSE Warm start a major node:**

```
>> __VARY NET,ACT___,ID=major_node_name_,WARM_____><
```

**Activate a definition file (a major node with no subordinate resources):**

```
>> vm_prefix VARY NET,ACT___,ID=major_node_name_____><
```

**Check the syntax of a definition file (major node):**

```
>> vm_prefix VARY NET,ACT___,ID=major_node_name_,SCOPE=SYNTAX_____>
```

```
> |_, LOADMOD=load_module_name_ |_____><
```

**Dynamically reconfigure resources in a major node:**

**Note:** For an NCP major node, follow the syntax diagram for "Activating an NCP major node" and specify the UPDATE operand.

```
>> vm_prefix VARY NET,ACT___,ID=major_node_name_ |_,SCOPE=COMP_____|____->
                                     |_,SCOPE=|_ ALL
                                     |_,SCOPE=|_ COMP
                                     |_,SCOPE=|_ ONLY
                                     |_,SCOPE=|_ U
                                     |_____|_____

>_|_,UPDATE=IMPLICIT_____|_____><
  |_,UPDATE=|_ IMPLICIT
  |_,UPDATE=|_ ADD
  |_,UPDATE=|_ ALL
  |_____|_____
```

**Activate other resources:**

```
>> vm_prefix VARY NET,ACT___,ID=name_ |_,DWACT=NO_____|_____>
                                     |_,DWACT=|_ NO
                                     |_,DWACT=|_ YES
                                     |_____|_____

>_|_,LOGON=appl_name_ _____|_____>
  |_,LOGON=appl_name_ |_,LOGMODE=logon_mode_name_|_____

>_|_,SCOPE=COMP_____|_____ (1) _____><
  |_,SCOPE=|_ ALL
  |_,SCOPE=|_ COMP
  |_,SCOPE=|_ ONLY
  |_,SCOPE=|_ U
  |_____|_____ |_,U=channel_unit_address_|_____
```

**Note:**

(1) The U operand is valid for a local SNA PU, a channel link, **VM,VSE** a BSC line, or **VM,VSE** a nonswitched SDLC line.

**Abbreviations**

Operand	Abbreviation
VARY	V
DUMPLoad=NO	DL=NO
DUMPLoad=YES	DL=YES
DUMPSTA	DST
EXTERNAL	EXT
LOADFROM	LF
LOADFROM=EXTERNAL	EXT
LOADFROM=HOST	HOST
LOADMOD	LM
LOADSTA	LST
LOGMODE	LOG
SAVEMOD=NO	SM=NO

SAVEMOD=YES	SM=YES
SCOPE=ALL	ALL
SCOPE=COMP	COMP
SCOPE=ONLY	ONLY
SCOPE=SYNTAX	SYNTAX

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for LOADFROM=EXTERNAL, code only EXT.

### Purpose

The VARY ACT (activate) command activates VTAM resources. [Figure 6](#) shows each resource type for which the command is valid, and which operands can be used for that resource type. A large dot means the operand can be specified for the resource, and an S means the operand can be specified to sift down to subordinate resources.

If any of the DUMPLOAD, SAVEMOD, or LOADFROM operands are coded on a VARY ACT command, the target of the command is assumed to be an IBM 3720 or 3745 Communication Controller with the hard disk option, and the following default values apply:

- LOADFROM=HOST
- SAVEMOD=NO
- DUMPLOAD=NO.

If all three are omitted, the target of the command is assumed not to be an IBM 3720 or 3745 Communication Controller and these operands do not apply.

**Note:** The combination LOADFROM=HOST,DUMPLOAD=YES,SAVEMOD=NO is not valid.

ANS	CPCP	DUMPLoad	DUMPSTA	DWACT	IDTYPE=CP	IDTYPE=RESOURCE	IDTYPE=SSCP	LOAD	LOADFROM	LOADMOD	LOADSTA	LOGMODE	LOGON	NEWPATH	RNAME	SAVEMOD	SCOPE=ALL/COMP/ONLY/U	SCOPE=SYNTAX	U	UPDATE	VRTGCPCP	WARB	ID=
					•											•	•						Adjacent CP major node
					•											•	•						Adjacent SSCP tables
					•											•	•						Application program major node
				•	•											•							Application program minor node
					•											•	•						APPN COS definition set
					•											•	•			•	•		CDRM major node
					•	•										•							CDRM minor node
					•											•	•						CDRSC major node
				•	•					•	•					•							CDRSC minor node
					•					S	S					•	•						Channel-attachment major node
					•											•		•					Channel link
					•											•							Channel link station
					•					S	S					•	•						Local non-SNA major node
					•					•	•					•							Local non-SNA logical unit
					•					S	S					•	•		•				Local SNA major node
•					•					S	S					•		•					Local SNA physical unit
					•					•	•					•							Local SNA logical unit
					•											•	•						LUGROUP major node
					•											•	•						Model major node
	•	•			•		•	•	•	S	S	•	•	•	•	•	•	•	•	•	•	•	NCP major node
	S				•					S	S					•							Nonswitched line
•					•											•							Switched line
					•											•							Link station
	•				•					S	S					•							Physical unit
					•					•	•					•							Logical unit
					•											•	•						Network node server list
					•											•	•						Path definition set
			•		•					S	S					•	•		•				Switched major node
•			•		•					S	S					•							Switched physical unit
			•		•											•							Switched link station
					•					•	•					•							Switched logical unit
					•											•	•						TGP definition set
					•															•			TRL major node
					•											•	•						XCA major node
					•											•							Nonswitched line
					•											•							Link station
•					•											•							Switched line

VARY ACT														ID=										
ANS	CPCP	DUMPLD	DUMPSTA	DWACT	IDTYPE=CP	IDTYPE=RESOURCE	IDTYPE=SSCP	LOAD	LOADFROM	LOADMOD	LOADSTA	LOGMODE	LOGON	NEWPATH	RNAME	SAVEMOD	SCOPE=ALL/COMP/ONLY/U	SCOPE=SYNTAX	U	UPDATE	VRTGCP	WARM(VSE)	ID=	
											S	S				•							•	Channel-attachment major node (VM/VSE)
											S	S				•		•						BSC line
											S	S				•								BSC cluster
											•	•				•								BSC terminal
											S	S				•								SDLC nonswitched line
•																•		•						SDLC switcheded line
																•								SDLC link station
											S	S				•								SDLC physical unit
											•	•				•								SDLC logical unit
											S	S				•							•	Packet major node (VM/VSE)
											S	S				•								Nonswitched line
																•								Link station
											S	S				•								Physical unit
											•	•				•								Logical unit
																•								Switched line
•																•								LAN major node (VM/VSE)
																•								Nonswitched line
																•								Link station
•																•								Switched line

Figure 6. Valid Resource Types for VARY ACT

Figure 7 shows operands that are mutually exclusive for this command. To read the table, you:

- Look at the operand name on the right of the table.
- Read across the table to the left to find an X (to see the operands that cannot be coded with the operand named in the right-hand list). If the X appears in another operand's vertical column, the two operands are mutually exclusive.
- Match any number found at a row and column junction with the list of numbered notes that accompany the table to get information about unique restrictions or interactions.

ANS = ON																	
X															ANS = OFF		
															CPCP = YES		
														X	CPCP = NO		
															DUMpload = YES		
														X	DUMpload = NO		
															DWACT = YES		
														X	DWACT = NO		
															IDTYPE = CP		
														X	IDTYPE = SSCP		
														X X	IDTYPE = RESOURCE		
															LOAD = YES		
														X X	LOAD = NO		
														X X	LOAD = U		
														1	LOADFROM = HOST		
														1 X 1	LOADFROM = EXTERNAL		
															LOADMOD		
															LOGMODE		
															LOGON		
														3	SAVEMOD = YES		
														1 X 1 5 X 4	SAVEMOD = NO		
														8	SCOPE = ALL		
															X	SCOPE = COMP	
															X X	SCOPE = ONLY	
															X X X	SCOPE = SYNTAX	
															X X X X	SCOPE = U	
															X X	UPDATE = ADD	
															X X	UPDATE = ALL	
															X X	UPDATE = IMPLICIT	
																VRTGCPCP = YES	
																X	VRTGCPCP = NO
																X X X X X X X X	WARM

Figure 7. Mutually Exclusive (X) Operands for VARY ACT

The numbered fields in [Figure 7](#) identify unique requirements and restrictions as follows:

1. LOAD=YES or LOAD=U is required if DUMpload=YES, SAVEMOD=YES, or LOADFROM is coded. The converse is not true.
2. This combination is not valid if SAVEMOD=NO is coded or assumed by default.
3. SAVEMOD=YES is required if DUMpload=YES is coded, but only when LOADFROM=HOST is also specified. The converse is not true.
4. LOADMOD is required if it differs from the ID (that is, if NEWNAME on the BUILD statement differs from the PUNAME).
5. LOADFROM=HOST is required if SAVEMOD=YES is coded. The converse is not true.
6. This combination is not valid if LOADFROM=HOST is coded.

**Note:** Specification of WARM and SCOPE together causes the command to fail.

NO is the default for both SAVEMOD and DUMpload (DUMPLD on the PCCU definition statement). If a value is specified on the PCCU definition statement, it overrides the default. If a value is specified on the VARY ACT command, it overrides both the PCCU definition statement value and the default value. This is shown in [Table 7](#).

[Table 8](#) and [Table 9](#) show the relationships between the SAVEMOD and DUMpload operands as they relate to the LOADFROM=HOST ([Table 8](#)) and LOADFROM=EXT ([Table 9](#)) operands. SAVEMOD and DUMpload (DUMPLD on PCCU) can be specified on either the PCCU definition statement or the VARY ACT command. See "[Network Control Program \(NCP\) Major Node](#)" in the VTAM Resource Definition Reference for information about the PCCU definition statement.

In [Table 8](#), [Table 9](#), and [Table 10](#), the following is assumed:

- **DUMpload** refers to both DUMpload on the VARY ACT command and DUMPLD on the PCCU. The value to be used is determined by [Table 7](#).
- **SAVEMOD** refers to both SAVEMOD on the VARY ACT command and SAVEMOD on the PCCU. The value to be used is determined by [Table 7](#).
- **Hard disk** refers to the hard disk on the IBM 3720 or 3745 Communication Controller.

[Table 10](#) shows how AUTODMP and AUTOIPL relate to the IBM 3720 or 3745 hard disk.

- **AUTODMP:** If the NCP abends, an attempt to put the NCP dump on the hard disk is made if the dump/load switch is set. If there is an NCP dump on the hard disk for this CCU, a request is made to dump the NCP to the host. The value of the AUTODMP operand on the PCCU definition statement determines whether this request is automatically implemented.
- **AUTOIPL:** If the NCP abends, and there is an NCP dump on the hard disk for this CCU, or if the automatic dump/load switch is set to NO, the value of the AUTOIPL operand on the PCCU definition statement determines how the NCP is reloaded.

If DUMpload=YES (as determined in [Table 7](#)), the communication controller attempts to dump and load the NCP. If the dump and load are not successful, the action to be taken depends on the values of AUTODMP and AUTOIPL as shown in [Table 10](#).

**Note:** For the DUMPSTA and LOADSTA operands, the operator must determine from the person who defined the VTAM system, usually the system programmer, whether a name has been given in the system definition statements for the link station. If a name has been defined already, then that name should be used for the DUMPSTA and LOADSTA operands. Otherwise, the operator can use the name automatically defined by VTAM.



Specified. These rules of precedence apply in both the VARY ACT command and PCCU definition statement.

VARY ACT	PCCU		
	YES	NO	Not Specified(1)
YES	YES	YES	Yes
NO	NO	NO	NO
Not Specified	YES	NO	NO

**Note:**

1. NO is the default for both SAVEMOD and DUMPLOAD (DUMPLD on PCCU).

Table 8. Results When LOADFROM=HOST or LOADFROM Is Not Specified

DUMP-LOAD	SAVEMOD	
	YES	NO or Not Specified
YES	<p>The NCP is loaded from the host into the CCU and saved on the hard disk. If the NCP abends:</p> <ul style="list-style-type: none"> <li>◦ If there is no NCP dump on the hard disk for this CCU, the NCP dumps automatically to the hard disk and the CCU is reloaded automatically from the hard disk.</li> <li>◦ If there is an NCP dump on the hard disk for this CCU, a request is made to dump the NCP to the host. <ul style="list-style-type: none"> <li>- If AUTOIPL=YES is coded on the PCCU definition statement, VTAM automatically reloads the NCP into the CCU by transferring the load module from the host.</li> <li>- If AUTOIPL=NO is coded on the PCCU definition statement, the operator must request to reload the NCP into the CCU. This is done in one of the following ways: <ul style="list-style-type: none"> <li>- To transfer the load module from the host, enter the VARY ACT, LOADFROM=HOST command (see <a href="#">Table 10</a>).</li> <li>- To transfer the load module from the hard disk, enter the VARY ACT, LOADFROM=EXT command (see</li> </ul> </li> </ul> </li> </ul>	<p>This is an incorrect specification or ignored if on the PCCU definition statement. The dump/load switches cannot be manipulated without saving the load module onto the hard disk unless the load module already exists on the hard disk and is being reloaded with LOADFROM=EXT.</p>

	<a href="#">Table 10</a> ).	
NO or Not Specified	<p>The NCP is loaded from the host into the CCU and saved on the hard disk. The dump and reload of NCP into the CCU must be transferred to or from the host.</p> <ul style="list-style-type: none"> <li>◦ If AUTOIPL=YES is coded on the PCCU definition statement, VTAM automatically reloads the NCP into the CCU by transferring the load module from the host.</li> <li>◦ If AUTOIPL=NO is coded on the PCCU definition statement, the operator must request to reload the NCP into the CCU. <ul style="list-style-type: none"> <li>- To transfer the load module from the host, enter the VARY ACT, LOADFROM=HOST command (see <a href="#">Table 10</a>).</li> <li>- To transfer the load module from the hard disk, enter the VARY ACT, LOADFROM=EXT command (see <a href="#">Table 10</a>).</li> </ul> </li> </ul>	<p>The NCP is loaded only from the host into the CCU. The dump and reload of NCP into the CCU must be transferred to or from the host.</p> <ul style="list-style-type: none"> <li>◦ If AUTOIPL=YES is coded on the PCCU definition statement, VTAM automatically reloads the NCP into the CCU by transferring the load module from the host.</li> <li>◦ If AUTOIPL=NO is coded on the PCCU definition statement, the operator must request to reload the NCP into the CCU. <ul style="list-style-type: none"> <li>- To transfer the load module from the host, enter the VARY ACT, LOADFROM=HOST command (see <a href="#">Table 10</a>).</li> </ul> </li> </ul>

Table 9. Results When LOADFROM=EXT Is Specified

DUMP-LOAD	SAVEMOD	
	YES	NO or Not Specified
YES	<p>This is an incorrect specification or ignored if on the PCCU definition statement. It cannot be specified to load the CCU from the hard disk (LOADFROM=EXT) and to save the load module on the hard disk at the same time (SAVEMOD=YES).</p>	<p>The NCP is loaded into the CCU from the hard disk. If the NCP abends:</p> <ul style="list-style-type: none"> <li>◦ If there is no NCP dump on the hard disk for this CCU, the NCP is automatically dumped to the hard disk and the CCU is automatically reloaded from the hard disk.</li> <li>◦ If there is an NCP dump on the hard disk for this CCU, a request is made to dump the NCP to the host. <ul style="list-style-type: none"> <li>- If AUTOIPL=YES is coded on the PCCU definition statement, VTAM automatically reloads the NCP into the CCU by transferring the load module from the host.</li> <li>- If AUTOIPL=NO is coded on the PCCU definition statement, the operator must request to reload the NCP into the CCU. This is done in one of the following ways: <ul style="list-style-type: none"> <li>- To transfer the load module from the host, enter the VARY ACT, LOADFROM=HOST command (see <a href="#">Table 10</a>).</li> </ul> </li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- To transfer the load module from the hard disk, enter the VARY ACT, LOADFROM=EXT command (see <a href="#">Table 10</a>).</li> </ul>
NO or Not Specified	<p>This is an incorrect specification or ignored if on the PCCU definition statement. It cannot be specified to load the CCU from the hard disk (LOADFROM=EXT) and to save the load module on the hard disk at the same time (SAVEMOD=YES).</p>	<p>The NCP is loaded into the CCU from the hard disk. The dump and reload of NCP into the CCU must be transferred to or from the host.</p> <ul style="list-style-type: none"> <li>o If AUTOIPL=YES is coded on the PCCU definition statement, VTAM automatically reloads the NCP into the CCU by transferring the load module from the host.</li> <li>o If AUTOIPL=NO is coded on the PCCU definition statement, the operator must request to reload the NCP into the CCU.</li> </ul> <ul style="list-style-type: none"> <li>- To transfer the load module from the host, enter the VARY ACT, LOADFROM=HOST command (see <a href="#">Table 10</a>).</li> </ul>

Table 10. Actions to Be Taken for Unsuccessful DUMP and LOAD

DUMP-LOAD	AUTODMP on PCCU		AUTOIPL on PCCU	
	YES	NO	YES	NO
YES	NCP dump is automatically transferred to the host.	The operator must decide whether to dump the NCP. The operator indicates whether to dump the NCP in response to the prompt shown.	The NCP is automatically loaded into the CCU from the host even though the NCP load module resides on the hard disk.	The operator must reload the NCP by issuing either the VARY ACT, LOADFROM=EXT command to reload the NCP from the hard disk or the VARY ACT, LOADFROM=HOST command to reload the NCP from the host.
NO or Not Specified	NCP dump is automatically transferred to the host.	The operator must decide whether to dump the NCP. The operator indicates whether to dump the NCP in response to the prompt shown.	The NCP is automatically loaded into the CCU from the host.	The operator must reload the NCP by issuing the VARY ACT, LOADFROM=HOST command to reload the NCP from the host.

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### ANS

specifies whether VTAM should put a switched SDLC line in answer mode. The VARY ACT command with the ANS operand has the same effect as the VARY ANS command with the ACT operand. See the ["VARY ANS Command"](#) for more information on the VARY ANS command.

### ANS=ON

specifies that VTAM should put the switched SDLC line in answer mode. When the line is in answer mode (and active), the NCP answers incoming calls from dial-in devices and notifies VTAM of the calls so that sessions can be established.

### ANS=OFF

specifies that VTAM should not put a switched SDLC line in answer mode. If there is an existing session for the line, ANS=OFF does not break the session, but no further calls are accepted after the session ends.

### CPCP

applies for adjacent link stations and indicates whether the connection is to support CP-CP sessions. This operand allows the value of the CPCP operand on the PU definition statement to be overridden. You can also specify CPCP for an NCP nonswitched line to indicate whether PUs under the line are to support CP-CP sessions. If CPCP is not specified on the VARY ACT command, CP-CP session capability on the connection is determined from the PU definition statement or from the CPCP start option. If CPCP is specified on the VARY ACT command, the value affects only a single activation instance. Subsequent activations use the predefined values for that PU.

The resource must be in an inactive or connectable state; otherwise the command fails and an error message is issued. CP-CP session capability is determined during XID exchange and cannot be changed after a connection is established.

### CPCP=YES

indicates that the connection is to support CP-CP sessions.

### CPCP=NO

indicates that the connection is not to support CP-CP sessions.

### DUMpload

applies only if LOAD=YES is specified or if LOAD=U is specified or assumed by default. Specifies whether the automatic dump/load switch in the IBM 3720 or 3745 Communication Controller should be set to on

or off. The switch controls automatic dumping and reloading of an NCP to or from the hard disk in the event of an NCP abend.

See [Table 8](#) and [Table 9](#) for additional information about DUMpload specifications.

Existing automatic IPL settings for a load module are retained by the IBM 3720 or 3745 Communication Controller (that is, DUMpload does not default) if the following are true:

- DUMPLD is not specified in the PCCU definition statement
- DUMpload, SAVEMOD, and LOADFROM are not specified in the VARY ACT command
- A copy of the load module is already stored on the IBM 3720 or 3745 Communication Controller hard disk.

#### DUMpload=YES

turns the automatic dump/load switch on. When the NCP abends, the switch is tested. If the switch is on, and if there is no NCP dump on the hard disk for this CCU, a dump of the NCP is stored on the IBM 3720 or 3745 Communication Controller hard disk. If the dump slot is full and AUTODMP=YES on the PCCU definition statement, the dump is transferred to the host. Otherwise, the network operator is prompted as specified in [Table 10](#).

After a dump has been stored, the controller is reloaded with the active NCP load module from the IBM 3720 or 3745 Communication Controller. The automatic load takes place only if the automatic dump has successfully occurred.

#### DUMpload=NO

turns the automatic dump/load switch off in the communication controller. The controller is not automatically dumped and reloaded from the hard disk.

#### DUMPSTA=link\_station\_name

applies only to the first activation of an NCP. (That is, DUMPSTA does not apply if the NCP is already active or is in the process of being activated.)

DUMPSTA specifies the name of a link station in an adjacent subarea node through which any later static dump operations for this NCP are to be carried out. The VTAM-generated link station name (a 3-digit or 4-digit hexadecimal channel unit address followed by -S) can be specified. The link station can be either a channel link station or an SDLC link station in an NCP major node. The link station cannot be an SDLC link station in a channel-attachment major node. The link station identified for DUMPSTA should also be identified in the channel unit address (U) or RNAME specifications for this NCP, either in the NCP definition or in this VARY ACT command.

**Note:** DUMPSTA does not support switched, X.25, or token-ring link stations.

The DUMPSTA operand, if specified, overrides any NCP definition value of DUMPSTA. If DUMPSTA is not specified in either the NCP definition or this command, VTAM selects (at the time of each dump operation) an

available adjacent link station, giving preference to a channel link station. Similarly, if DUMPSTA is specified without a value (that is, if DUMPSTA= is specified), DUMPSTA assumes a null value and VTAM selects an available adjacent link station as previously described.

**Note:** All references to NCP definition should be "NCP PCCU definition."

#### DWACT

specifies whether to dial the PUs that are activated as a result of the activation of the switched major node or switched PU named on the ID operand.

Activation of PUs subordinate to the switched major node is determined by the ISTATUS value coded on the PU definition statement and the SCOPE value on the VARY ACT command. Specifying DWACT=YES on the major node activation prevents you from having to issue a VARY DIAL command for each PU individually after the PU is activated.

#### DWACT=YES

dials the PUs that are activated as a result of the switched major node or switched PU activation.

#### DWACT=NO

does not dial the PUs that are activated as a result of the switched major node or switched PU activation. Specifying DWACT=NO on the VARY ACT command does not override DWACT=YES specified on the PU definition statement.

#### ID=name

specifies the name of the resource to be activated. The name can be a network-qualified name. It cannot be a USERVAR or LUALIAS name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource. The name can be an ACB name or an alias name, as long as it is not network-qualified.

Following is an example of an APPL major node definition to show how application names can be network-qualified:

```
x      APPL ACBNAME=y,...
```

In the above example, *x* (the application name) can always be network-qualified. *y* (the ACB name) can be network-qualified only if *y* is the same as *x*.

For a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.

If the resource is a TRL major node, specify the VTAMLST member name as the ID value. The command builds the TRL major node using the set of TRLE definition statements that are defined in the TRL major node. Subsequent messages containing information about the TRL major node display ISTTRL as the name of the table. ISTTRL is the name of the VTAM internal table.

If the resource is an NCP, it is possible to specify any name desired for the ID operand, and then use the LOADMOD operand to identify the actual NCP major node. If PUNAME is specified in the BUILD definition statement, the NCP's name must match that PUNAME value.

If the resource is a switched major node containing PUs supported by a dependent LU requester (DLUR), the CPSVRMGR session is not activated until a VARY DIAL command is issued for the physical unit. See the ["VARY DIAL Command"](#) for more information.

The following restrictions apply to VARY ACT depending on whether VTAM has been defined to support APPN function:

- If VTAM has been defined as an APPN-only node, you cannot activate the following resources:
  - NCP
  - CDRM
  - Path definition set
  - Adjacent SSCP.
- If VTAM has been defined as a subarea-only node, you cannot activate the following resources:
  - Adjacent CP
  - Transmission group profile
  - APPN class-of-service table.
- If VTAM has been defined as a migration data host, you cannot activate an NCP.
- If VTAM has been defined as a network node, you cannot activate a network node server list. (The list can only be activated at an end node.)

If the named resource has subordinate resources (for example, logical units subordinate to a physical unit), those subordinate resources can also be activated using the SCOPE or WARM operands.

Independent LUs are not subordinate to any PU. Therefore, the sift-down to subordinate LUs does not affect independent LUs unless the ID value is a CDRSC major node.

You can individually activate multiple adjacent SSCP table definitions. Each new set of definitions is added to the internal table used by VTAM. New definitions for destinations already in the internal table replace the current adjacent SSCP list for those destinations, but you cannot deactivate existing adjacent SSCP lists. If a new table replaces an existing one, VTAM issues a message informing the operator.

To activate a network node server list, issue the VARY ACT command at the end node which will use the list. Note that this command activates the list, but the list is not used until a new CP-CP session is established. If the end node has no CP-CP session when you issue this command, and an active link is available to one of the servers in the list, this command will activate a CP-CP session as well as activating the server list.

You can dynamically replace a network node server list by creating a new list, issuing VARY ACT to activate the new list, and issuing VARY TERM to terminate the existing CP-CP session. VTAM will automatically drive a new CP-CP session using the new list. A network node server list cannot be deactivated.

#### IDTYPE

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE can be used to identify which resource the command should act on.

IDTYPE=CP

specifies that the name on the ID operand is a CP. If an APPN connection exists, VTAM attempts to activate a CP-CP session between the host CP and the resource named on the ID operand.

IDTYPE=SSCP

specifies that the name on the ID operand is an SSCP. VTAM activates the CDRM by the name specified.

IDTYPE=RESOURCE

activates the resource specified on the ID operand.

If the resource VTAM finds is a CP and if an APPN connection exists, VTAM attempts to activate a CP-CP session between the host CP and the resource named on the ID operand.

If the resource VTAM finds is a host CP or an adjacent CP, VTAM searches for a CDRM with the name specified on the ID operand and activates the CDRM, as well.

If a CP and an SSCP are found with the specified name, VTAM activates both the CP and the SSCP simultaneously.

LOAD

applies only to the first activation of an NCP. (That is, LOAD does not apply if the NCP is already active or is in the process of being activated.)

LOAD specifies whether the communication controller associated with the specified NCP is to be reloaded with the appropriate NCP load module.

A communication controller is associated with an NCP for the purposes of this command if any of the following conditions are met:

- It is already known to contain the named NCP.
- It is attached through one or more of the adjacent link stations identified by the NCP's channel unit address (U) or RNAME specifications, or both.
- It is attached through the adjacent link station identified by the LOADSTA specification for the NCP.

LOAD=YES

unconditionally loads the communication controller associated with the specified NCP, regardless of the current state or contents of the communication controller.

**Note:** If the NCP is being loaded by another host when this command is issued, the command fails.

LOAD=NO



prevents the communication controller associated with the specified NCP from being loaded during the processing of this VARY ACT command, regardless of the current state or contents of the communication controller. (The communication controller is still subject to possible reload operations during error recovery procedures subsequent to the activation of the NCP.) If the communication controller does not contain the expected NCP load module, the VARY ACT command fails.

**LOAD=U**

lets VTAM determine whether the communication controller associated with the specified NCP should be loaded during the processing of this VARY ACT command (based on the current contents of the communication controller and on the NCP definition statements), as it was before the availability of the LOAD operand.

For additional information about what VTAM does when LOAD=U is specified, see ["Reloading an NCP"](#) in the *VTAM Network Implementation Guide*.

**Note:** If this command is issued while another host is loading the NCP, you are notified, and VTAM waits until the load is complete from the other host. VTAM then loads the NCP as appropriate.

**LOADFROM**

applies only if LOAD=YES or LOAD=U. It specifies whether VTAM loads the NCP module from the host or from the communication controller hard disk. See ["LOADFROM"](#) in the *VTAM Resource Definition Reference* for a complete description of the LOADFROM operand on the PCCU definition statement.

LOADFROM=HOST is not supported for loading an NCP attached by a token-ring, X.25 PVC or SVC, or X.21 switched connection. Specify LOADFROM=EXTERNAL for those line types.

See [Table 8](#) and [Table 9](#) for additional information about LOADFROM specifications.

**LOADFROM=HOST**

loads the NCP from the host, using the SSP as the interface to the NCP load library.

**Note:** The combination LOADFROM=HOST,DUMpload=YES,SAVEMOD=NO is not valid.

**LOADFROM=EXTERNAL**

loads the NCP from the IBM 3720 or 3745 Communication Controller hard disk.

**LOADMOD=load\_module\_name**

specifies the name of the load module to load. The load module name is the member name specified in the NCP LOADLIB. This name must match the major node name (the member name in VTAMLST).

The LOADMOD operand must be specified if the name of the PU specified in the BUILD definition statement is not the same as the load module name. Failure to code LOADMOD when the PU name and load module name

differ prevents VTAM from locating the specific definition program you now want to activate. If NEWNAME is specified, the LOADMOD value must match the NEWNAME value specified in the BUILD definition statement.

LOADSTA=link\_station\_name

applies only to the first activation of an NCP. (That is, LOADSTA does not apply if the NCP is already active or is in the process of being activated.)

LOADSTA specifies the name of a link station in an adjacent subarea node through which any load operations for this NCP are to be carried out. The VTAM-generated link station name (a 3-digit or 4-digit hexadecimal channel unit address followed by -S) can be specified. The link station can be either a channel link station or an SDLC link station in an NCP major node. The link station identified for LOADSTA should also be identified in the channel unit address (U) or RNAME specifications for this NCP, either in the NCP definition or in this VARY ACT command.

The link station cannot be an SDLC link station in a channel-attachment major node.

The LOADSTA operand, if specified, overrides any NCP definition value of LOADSTA. If LOADSTA is not specified in either the NCP definition or on this command, VTAM selects (at the time of each reload operation) an available adjacent link station, giving preference to a channel link station. Similarly, if LOADSTA is specified without a value (that is, if LOADSTA= is specified), LOADSTA assumes a null value and VTAM selects an available adjacent link station from the NCP link station queue in the following order:

1. Channel
2. Active leased
3. Active dial-out switched
4. Active dial-in switched
5. Pending active leased
6. Pending active dial-out switched
7. Pending active dial-in switched
8. Dummy (undefined).

If the NCP resides in a communication controller that is attached to VTAM by a serial optical channel (SOC), and you are reloading the NCP with a new load module, the LOADSTA operand is required and the link station name that you specify must be defined as an IPL port in the Telecommunication Service Processor (TSP). This is because ESCON support allows up to sixteen SOC link stations to be defined as parallel TGs, and usually only one or two of these link stations are defined as IPL ports. The NCP load will fail if the link station is not defined as an IPL port in the TSP. (Because a maximum of eight VRs can be active at a time, only eight of the sixteen parallel TGs can be attached between the host and the NCP at a time.)

LOGMODE=logon\_mode\_name

specifies the logon mode name to be used for any logon initiated for a logical unit as a result of this command (see the description of the LOGON operand). This logon mode name also becomes the logon mode name for all future automatic logons performed by VTAM for logical units within the scope of this command and for their controlling primary LUs (if any).

LOGMODE is valid only if LOGON is specified. If LOGMODE is specified without LOGON, the command fails and an error message is issued.

If LOGMODE is not specified, the LOGMODE value specified in any previous command applicable to a logical unit also within the scope of this VARY ACT command is used. If no LOGMODE value was ever specified for a given logical unit within the scope of this command, the logical unit's default value is used.

LOGON=appl\_name

specifies the name of an application program (primary LU) to which any secondary LUs within the scope of this command are to be logged on. The application name can be network-qualified. If it is, the network identifier is considered to be real, but the resource name is considered to be generic (that is, the resource name can be either the real application name or a USERVAR name).

If the application name is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

If a USERVAR is found, VTAM resolves its name to the name of the VTAM application with which it is currently associated. If a USERVAR with this name is not found, VTAM searches for an application program with this name.

If the primary LU is an application program in this domain, the name must be that of an application program minor node within an active application program major node.

If the primary LU is a predefined CDRSC, the CDRSC must be active.

If the primary LU is a device-type LU, it must be attached to the same NCP as the secondary LU.

See also the ["VARY LOGON Command"](#) for more information on the operator-initiated logon function.

#### NEWPATH=name

specifies the dynamic path update member names in the VTAM definition library. When the NCP is successfully activated, VTAM processes and sends path table update specifications to the NCP. The NEWPATH operand is valid only when an NCP major node is being activated.

Up to three member names can be specified; if more than three member names are specified, the VARY command is rejected, and you must issue a new path command to activate the NCP. If more than one member name is specified, the names must be enclosed in parentheses and separated by commas.

VTAM sends the path table update specifications by means of the SSCP-PU session before any links, other than the link for the SSCP-PU session, are activated. If you attempt to change or delete the explicit route being used for the SSCP-PU session, the NCP rejects the request (because the explicit route is currently operative), and VTAM displays a warning message.

This operand overrides NEWPATH specifications on the PCCU definition statement in the NCP's generation file (see ["NEWPATH"](#) in the *VTAM Resource Definition Reference*). For example, if the PCCU NEWPATH operand specifies three member names and the VARY ACT NEWPATH operand specifies one member name, only the one member specified in the VARY ACT command is processed. If you specify "NEWPATH=" or "NEWPATH=" in the VARY ACT command, the NEWPATH operand coded in the PCCU definition statement is nullified.

NEWPATH processing does not affect NCP activation in any way. For example, if the member specified with the NEWPATH operand cannot be processed because of a shortage of VTAM storage, an appropriate message is displayed and no further recovery processing is attempted.

When a dynamic path update member is processed as a result of a NEWPATH operand, any path table update specifications for VTAM subareas and other NCP subareas are discarded. However, VTAM checks the validity of PATH statements and issues warning messages if errors are detected.

**RNAME=name**

applies to the activation of an NCP or, in certain migration cases, to the activation of a link station. For information on using RNAME when activating a link station, see [Planning for NetView, NCP, and VTAM](#).

For an NCP, the RNAME operand is described in the following paragraphs and applies only to the first activation of the NCP. (That is, RNAME does not apply if the NCP is already active or is in the process of being activated.)

**Note:** When activating NCPs, if the RNAME is referring to a switched link station, activate the switched major node before issuing the VARY ACT command for the NCP. Otherwise, the NCP activation might fail.

RNAME specifies the names of up to 13 SDLC or channel link stations in adjacent subarea nodes through which the specified NCP is attached to the network. It also specifies which link stations (and associated links) in adjacent subarea nodes are to be automatically activated as part of the activation of the specified NCP. Therefore, these RNAME values identify the location of the communication controller in the network and enable VTAM to establish the necessary connectivity to the specified NCP (if such connectivity does not already exist).

If more than one link station name is specified, the names must be enclosed in parentheses and separated by commas.

The RNAME operand, if specified, overrides any NCP definition RNAME values or the checkpointed RNAME values for the specified NCP. For a list of the checkpointed parameters for each major node and for a general description of the configuration restart facility, see ["Configuration Restart "](#) in the *VTAM Network Implementation Guide*.

If RNAME values are specified on this command, VTAM uses those values to determine the link stations to be used. If the RNAME operand is not specified on this command, VTAM uses the checkpointed RNAME values for the specified NCP (if the WARM operand is specified). If neither the RNAME nor the WARM operand is specified, VTAM uses the NCP definition values for RNAME, if any. If RNAME is not specified in the NCP definition, RNAME assumes a null value, and no SDLC link stations are automatically activated. If the RNAME operand is specified without a value (that is, RNAME= is specified), RNAME assumes a null value.

If both the RNAME and the channel unit address specifications have null values, no automatic link station activations are performed, and there must be link stations already active in adjacent subarea nodes to provide the required connectivity. If this is not so, the VARY ACT command fails.

**SAVEMOD**

applies only if LOAD=YES or LOAD=U. It specifies whether the NCP load module is saved on the communication controller hard disk after the NCP is loaded from the host.

See [Table 8](#) and [Table 9](#) for additional information about SAVEMOD specifications.

**SAVEMOD=YES**

saves the NCP on the communication controller hard disk after the NCP is loaded from the host.

If both load module data sets are full for this CCU, and:

- The name specified matches the name of a load module already stored, the load module with that name is replaced.

- The name specified does not match the name of a load module already stored, the oldest load module is replaced.

SAVEMOD=NO

does not save the NCP load module on the IBM 3720 or 3745 Communication Controller hard disk after the NCP is loaded from the host.

SCOPE

specifies the scope of the command.

WARM and SCOPE cannot be specified on the same command. If both are specified, the command fails.

The only SCOPE value applicable to model major node, LUGROUP major node, path definition set, or adjacent SSCP tables is SCOPE=SYNTAX.

SCOPE has no effect for a TRL major node. If the SCOPE value is specified for this resource, VTAM issues message IST1275I to indicate that the operand was ignored and continues processing.

For configuration restart, the checkpoint data set is updated with information on these resources, unless SCOPE=SYNTAX is specified. No information is stored in the checkpoint data set if the SYNTAX option is used.

SCOPE=ALL

specifies that the resource named in the ID operand and all of the appropriate subordinate resources are to be activated (regardless of their defined ISTATUS values).

SCOPE=COMP

specifies one of the following actions:

- For the initial activation of a major node, activates all subordinate minor nodes according to the ISTATUS specification. (This is the same as SCOPE=U.)
- For a major node that is already active:
  - If UPDATE=ADD|ALL is specified on the same command, VTAM updates the current configuration to match the VTAMLST definition and activates minor nodes based on the ISTATUS value.
  - If UPDATE=IMPLICIT is specified or assumed by default, VTAM activates all subordinate minor nodes that were not previously active. (Logical units are activated according to their ISTATUS specification if the PU was not previously active. Otherwise, they are not activated.)
- For a minor node, the action depends on the node type, as follows:

Node	Action
Group, PU	Same as SCOPE=U
Line, LU, APPL, CDRSC, link station	Same as SCOPE=ONLY

LU activation varies according to the owning PU status when processing a SCOPE=COMP on an active major node. A previously inactive PU is activated and its subordinate LUs are activated according to their ISTATUS specification. The LUs of a previously active PU are ignored.

#### SCOPE=ONLY

specifies that only the resource named in the ID operand is to be activated; none of its subordinate resources are to be activated (regardless of their defined ISTATUS values).

#### SCOPE=SYNTAX

specifies that the major node named on the ID operand is to have its VTAMLST definition file checked for syntax errors. This validation does not include user-replaceable tables such as USS tables, ALS tables, and the like. The error checking consists of validation of syntax, definition statements, operands, and the type of the operands. This checking is the same as is done when the VARY ACT command is used to activate a resource. When SCOPE=SYNTAX is specified, no resource activation takes place.

The ID operand is required. The LOADMOD operand must be used if the name specified on the PUNAME operand in the NCP BUILD definition statement is not the same as the load module name. See the description of the ID operand for more information. All other operands are ignored if SCOPE=SYNTAX is specified.

All major node types (including path definition set and adjacent SSCP tables) shown in [Figure 6](#) can be specified using SCOPE=SYNTAX.

**Note:** SCOPE=SYNTAX builds an internal representation of the resources in the file being checked, and might have an impact on storage until the command completes. VTAM uses approximately 600 bytes of storage for each definition statement included in the definition file. See the [VTAM Resource Definition Reference](#) for more information about definition statements.

#### SCOPE=U

specifies that the resource named in the ID operand, and all the appropriate subordinate resources defined with ISTATUS=ACTIVE, are to be activated.

#### U=channel\_unit\_address

specifies the hexadecimal channel unit address by which a channel attachment to a communication controller, to an adjacent host, or to an SNA physical unit is known to the operating system and through which VTAM is to establish connectivity to the specified NCP, VTAM, or physical unit. A channel unit address must be supplied for a channel-attached physical unit because the physical unit can communicate only through the channel. Likewise, a channel unit address must be supplied for a channel-attached host because the adjacent host can communicate directly only through the channel

attachment. A channel unit address is optional for an NCP because an NCP can also communicate across SDLC links. This operand has no effect if the node is being activated or is currently active.

**VM** Virtual, not real, device addresses must be used when specifying the option.

- For a **channel-attachment major node**, the U operand overrides any previous channel unit address specifications, including the ADDRESS operand on the LINE definition statement of the channel-attachment major node definition.

Omit the U operand if you are activating a channel-attachment major node that has LNCTL=MPC in its definition. Otherwise, the activation of resources in the multipath channel (MPC) group will fail.

If the U operand is omitted and there is no current channel unit address specification for VTAM, the VARY ACT command fails. The VARY ACT command also fails if the U operand is specified without a value (that is, if U= is specified).

- For an **SNA physical unit**, the U operand, if specified, overrides any previous channel unit address specifications for the physical unit, including the CUADDR operand on the PU definition statement.

**MVS,VSE** The U operand, if specified, overrides any specification maintained by configuration restart.

If the U operand is omitted and there is no current channel unit address specification for the physical unit, the VARY ACT command fails. The VARY ACT command also fails if the U operand is specified without a value (that is, if U= is specified).

- For an **NCP**, the U operand, if specified, overrides any NCP definition CUADDR values or the checkpointed channel unit address values for the specified NCP. If a U value is specified on this command, VTAM uses the value to determine the link station to be used. If the U operand is not specified on this command, VTAM uses the checkpointed channel unit address values for the specified NCP (if the WARM operand is specified). If neither the U nor the WARM operand is specified, VTAM uses the NCP definition value for CUADDR, if any. If CUADDR is not specified in the NCP definition, the channel unit address specification assumes a null value, and no channel link station is automatically activated. If the U operand is specified without a value (that is, if U= is specified), the channel unit address specification assumes a null value.

If both the RNAME and the channel unit address specifications have null values, no automatic link station activations are performed, and there must be link stations already active in adjacent subarea nodes to provide the required connectivity. If this is not so, the VARY ACT command fails.

**VM** Before loading from VTAM, issue a GLOBAL LOADLIB command, including the load libraries that contain SSP and the NCP load module. Also, issue a FILEDEF for DDNAME NCPLOAD with this load library.

#### UPDATE

allows you to dynamically implement changes that you have made in a

VTAMLST definition file. You can use the UPDATE operand to make the following kinds of dynamic reconfiguration changes:

- Nonswitched peripheral node: add and delete LUs; dynamically change certain operand values on LU definition statements. This is possible only for the following major nodes:
  - Local SNA
  - **VM,VSE** Channel-attachment SDLC
  - **VM,VSE** Packet.
- NCP major node: add, delete, and move PUs and LUs; dynamically change certain VTAM-only operand values on PU and LU definition statements.
- Switched major node: dynamically change certain operand values on PU and LU definition statements.
- Transport resource list (TRL) major node: add, delete, or replace TRLEs; dynamically change operand values on TRLE definition statements.

VTAM reads the VTAMLST definition file for the major node and updates the current configuration to match the definition. The affected minor nodes must be inactive, but the major node can remain active. For more information on dynamic reconfiguration, see ["Dynamic Reconfiguration and Change of Operands"](#) in the *VTAM Network Implementation Guide*. For information on which operands in PU and LU definition statements can be dynamically changed, see the sections titled ["Dynamic Change of Operands"](#) within the major node descriptions in the *VTAM Resource Definition Reference*.

If you have used the VARY LOGON command to establish an automatic logon relationship that was not coded on the LOGAPPL operand of a definition statement, or if you have used the VARY NOLOGON command to terminate an automatic logon relationship that was coded on the LOGAPPL operand of a definition statement, the VARY ACT,UPDATE=ALL command might undo the effects of these commands. This is because the LOGAPPL operand in the definition file overrides these commands. Even if no LOGAPPL is coded in the definition file, VTAM assumes a null value for LOGAPPL and the null value overrides the VARY LOGON value. To avoid undoing the effects of the VARY LOGON command, code the LOGAPPL definition statement with the desired value. To avoid undoing the effects of the VARY NOLOGON command, delete the LOGAPPL operand from the definition statement. VARY ACT,UPDATE=ALL can undo the effects of the MODIFY DEFAULTS command in the same way.

VTAM issues an error message if a VARY ACT,UPDATE=ALL command is attempted for an active resource. For example, you might have activated an NCP, then issued a VARY LOGON command for some of the LUs under the NCP. (The VARY LOGON command overrides the LOGAPPL value that was used during NCP activation.) If you later issue a VARY ACT,UPDATE=ALL command to make some other kind of change, such as moving a PU from one line to another, and meanwhile the LUs are active that have the new LOGAPPL value, VTAM will issue an error message. This is because the VARY ACT,UPDATE=ALL command overrides the VARY LOGON command; that is, VTAM encounters a defined LOGAPPL value that is different from the current value, so it attempts an operand change, but the operand change fails because the LUs are active.

#### **Dynamic reconfiguration for an NCP:**

For an NCP, this command performs the following functions without regenerating the NCP:

- Adds a nonswitched physical unit and its subordinate LUs to a line



- Adds a logical unit to a nonswitched physical unit
- Passes the GP3174 and RETRIES operands to NCP when dynamically adding a PU
- Moves a nonswitched physical unit and its subordinate LUs from one line to another
- Moves a logical unit to another physical unit
- Changes a nonswitched physical unit link station address (except on the initial activation of the NCP)
- Changes the LOCADDR for an LU (except on the initial activation of the NCP)
- Deletes a nonswitched physical unit and its subordinate LUs from a line
- Deletes a dependent logical unit from a nonswitched physical unit
- Changes certain operand values in PU and LU definition statements
- Adds or deletes frame relay PUs and their associated FRSESET definition statements.

The active and inactive requirements for the reconfiguration operations are shown in [Table 11](#).

Operation/ Resource	Major Node	LINE	PU	LU
Add LU	Active	Either	Either	N/A
Add PU	Active	Either	N/A	N/A
Delete PU(1)	Active	Either	Inactive	Inactive
Delete LU(1)	Active	Either	Either	Inactive
Move PU	Active	Either	Inactive	Inactive
Move LU	Active	Either	Either	Inactive

**Note:**

1. The current state and desired state of the resource must be inactive.

To prepare another host for backup and takeover, you can issue a VARY ACT command with the UPDATE operand at a VTAM that does not own selected NCP resources to prepare that VTAM for a future takeover of those resources. The command fails if UPDATE is specified on the same command with the LOGON, LOGMODE, WARM, or ACQ (as in VARY ACQ) operands. UPDATE has no meaning on the initial activation of major nodes other than an NCP major node.

Conflicts can arise between the NCP source file and the generated NCP load module. If you modify the NCP source, moving PUs and LUs, use UPDATE=ALL when activating an inactive NCP. Otherwise VTAM and NCP will not agree on the location of the PUs and LUs. It is recommended that you always use UPDATE=ALL for the initial activation of an NCP if you are using (or plan to use) dynamic reconfiguration with that NCP. If the source file has changed, VTAM will make the changes and bring up the NCP correctly. If the source file has not changed, VTAM will bring up the NCP as usual.

You can use VARY ACT with the UPDATE operand to dynamically reconfigure a frame relay switching equipment set (FRSESET). In order to modify a FRSESET, you need to know whether the FRSESET was statically or dynamically defined. If you are not sure, you can issue a DISPLAY NET,ID=frseset\_name command to find out. Statically means that the FRSESET was included in the NCP generation. Dynamically means that the FRSESET was not included in the NCP generation. Statically and dynamically defined PUs cannot be specified in the same FRSESET; the PUs must be all static or all dynamic.

If the FRSESET was dynamically defined, you can dynamically add and delete PUs from the set. You can delete PUs with the MODIFY DR, VARY DRDS, or VARY ACT,UPDATE=ALL commands. You can add PUs only with the VARY ACT,UPDATE=ADD or VARY ACT,UPDATE=ALL command.

If the FRSESET was statically defined, you can delete PUs from the set, but you cannot add PUs. In practical terms, this means you need to delete the entire FRSESET and then add it back dynamically in order to make changes. For example, if you have a statically defined FRSESET containing two primary PUs and you want to add two backup PUs, follow these steps:

1. Delete the two primary PUs, thereby deleting the FRSESET itself (because it is empty).
2. Edit the VTAMLST source file to add the PU definitions for the backup PUs and add the backup PUs to the FRSESET.
3. Use the VARY ACT command with UPDATE=ADD or UPDATE=ALL. The VARY ACT command causes the FRSESET to be dynamically defined.

If you delete one or more PUs (using MODIFY DR or VARY DRDS) from a statically defined FRSESET without deleting the whole FRSESET, VARY ACT will cause the deleted PUs to be added back, but they will not be part of the FRSESET.

The first PU under a frame relay line (the LMI) cannot be deleted and it cannot be part of a FRSESET.

For more information on how to define frame relay lines, frame relay PUs, and FRSESETs, see ["Network Control Program \(NCP\) Major Node"](#) in the *VTAM Resource Definition Reference*.

#### **Dynamic reconfiguration for nonswitched peripheral nodes:**

This command adds and deletes LUs for the following major nodes:

- Local SNA
- **VM,VSE** Channel-attachment (SDLC)
- **VM,VSE** Packet

The active and inactive requirements for the reconfiguration operations are shown in [Table 12](#).

Table 12. Active and Inactive Status Requirements for Dynamic Reconfiguration for Nonswitched Peripheral Nodes				
Operation/ Resource	Major Node	LINE	PU	LU
Add LU	Active	Either	Either	N/A
Delete LU	Active	Either	Either	Inactive

**UPDATE=IMPLICIT**

only has meaning on the initial activation of an NCP. Otherwise UPDATE=IMPLICIT has no effect. For the initial activation of an NCP, UPDATE=IMPLICIT dynamically adds resources.

**UPDATE=ADD**

allows you to add resources. The major node must be active, unless it is an NCP major node, which can be either active or inactive. VTAM reads the VTAMLST definition file for the major node and adds any new resources to the current configuration.

**UPDATE=ALL**

allows you to add, move, and delete resources in certain major nodes, and to add, delete, and replace existing TRLEs in an active TRL major node.

**Note:** Moving resources requires that you issue the VARY ACT,UPDATE command twice. Resource deletions occur during the first processing of the command, and resource additions occur during the second processing of the command. See "[Coding Dynamic Reconfiguration Changes](#)" in the *VTAM Network Implementation Guide* for more information on dynamic reconfiguration changes.

UPDATE=ALL also allows you to change certain VTAM-only operands in PU and LU definition statements in the following active nodes:

- Nonswitched peripheral

These include the following major nodes:

- Local SNA
- **VM,VSE** Channel-attachment (SDLC)
- **VM,VSE** Packet
- NCP major node (VTAM-only operands)
- Switched major node.

See the sections titled "[Dynamic Change of Operands](#)" within the major node descriptions in the *VTAM Resource Definition Reference* for more information on the operands that you can change for each major node.

**VRTGCPCP**

applies for cross-domain resource managers (CDRM) and indicates whether the virtual-route-based transmission group is to support CP-CP sessions. This operand allows the value of the VRTGCPCP operand on the CDRM definition statement to be overridden. If VRTGCPCP is not specified on the VARY ACT command, CP-CP session capability over the virtual-route-based transmission group connection is determined from the CDRM definition statement or from the VRTGCPCP start option. If VRTGCPCP is specified on the VARY ACT command, the value affects only a single activation instance. Subsequent activations use the predefined values for that CDRM.

This operand is only valid if VRTG=YES is specified for the CDRM, and the CDRM is in an inactive or connectable state; otherwise the command fails and an error message is issued.

VRTGCPCP=YES

specifies that the virtual-route-based transmission group is to support CP-CP sessions.

VRTGCPCP=NO

specifies that the virtual-route-based transmission group is not to support CP-CP sessions.

#### WARM MVS,VSE

applies only to certain major nodes (as shown in [Figure 6](#)) and specifies that the major node named in the ID operand is to be activated to the status it had when it was last active. That is, those minor nodes that were active the last time the major node was active are reactivated, and other operator-modified values applicable to the major node or its minor nodes (such as controller application name and logmode name for a logical unit) are restored. By recording changes in a configuration restart file, VTAM tracks the status of the minor nodes as well as operator changes to other checkpointed parameters. For a list of the checkpointed parameters for each major node and for a general description of the configuration restart facility, see "[Configuration Restart](#)" in the *VTAM Network Implementation Guide*.

The WARM operand is not allowed and the VARY ACT command fails in the following circumstances:

- WARM and SCOPE are specified on the same command.
- WARM is specified for a major node that is already active.
- WARM is specified when activating a major node that has no associated VSAM configuration restart file or whose configuration restart file has not been used (that is, contains no checkpointed information).

If you used a VARY ACT,UPDATE=ALL command for dynamic reconfiguration of the major node at some time prior to the warm start, the dynamic reconfiguration changes stay in effect after the warm start. This is because VTAM takes a checkpoint during the VARY ACT,UPDATE=ALL processing.



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## 2.1.93 VARY ANS Command

```
>> vm_prefix VARY NET ,ANS=-| OFF | _____ ,ID=line_name _____ >
      | ON |
> _____ ><
  | ACT | _____ |
  | _____ (1) |
  | U=channel_unit_address _____ |
```

### Note:

(1) **VM,VSE** U is valid for an SDLC switched line in a channel-attachment major node.

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

The VARY ANS (answer mode) command enables active switched SDLC lines with dial-in capability to allow or disallow an incoming call from a physical unit defined in a switched major node. For an incoming call to be allowed, an active line must be in answer mode.

The mode setting can be specified in the definition statement for the line and can be changed whenever the line is active by using this command. The mode setting of a line can also be specified when the line is activated (see the description of the [ANS operand on the VARY ACT command](#)).

The VARY ANS command is most often used for lines with both dial-in and dial-out capability. To ensure that a line is available for dial-out requests, it can be taken out of answer mode while it is still active. Incoming calls are blocked, but outgoing calls proceed normally.

### Operands

vm\_prefix **VM**  
 is the prefix required for commands issued to VTAM running under VM.  
 This prefix (usually ) is determined by an operand of the GCS

**VTAM**

LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**ACT**  
activates the line, if it is not active already.

**ANS**  
specifies whether the line is to be put in answer mode.

**ANS=ON**  
specifies that the line is to be put in answer mode. When a line is in answer mode (and active), the answering subarea node accepts an incoming call from a dial-in device and notifies VTAM of the call so that sessions can be established.

**ANS=OFF**  
specifies that the line is to be taken out of answer mode. If there is an existing session using the line, ANS=OFF does not break the session, but no further incoming calls are accepted after the session ends.

**ID=line\_name**  
specifies the name of an SDLC line. The line must be a switched line with dial-in capability. The line must be active, unless the ACT operand is also specified on this command.



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## 2.1.94 VARY DIAL Command

```
>> vm_prefix VARY NET,DIAL___,ID=resource_name___><
                                     |_,CPCP= _ YES _ |
                                     | _ NO _ |
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

The VARY DIAL command can be used to establish the following:

- A switched subarea connection so that LU-LU sessions can be started
- A switched connection to a type 2 or 2.1 device (adjacent link station)
- A CPSVRMGR session between a dependent LU requester (DLUR) and a dependent LU server (DLUS).

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

CPCP

applies for adjacent link stations and allows the value of the CPCP operand on the PU definition statement to be overridden. If CPCP is not specified on the VARY DIAL command, the value for CP-CP session support on the connection is determined from the PU definition statement or from the CPCP start option. If CPCP is specified on the VARY DIAL command, the CP-CP session support on the connection is taken from the command value for a single activation instance. Subsequent activations use the predefined values for that PU.

If the resource does not support APPN, then an error message is issued and the command fails.

The resource must be in a connectable state; otherwise the command

fails and an error message is issued. CP-CP session capability is determined during XID exchange and cannot be changed after a session is established.

CPCP=YES

indicates that the connection is to support CP-CP sessions.

CPCP=NO

indicates that the connection is not to support CP-CP sessions.

ID=resource\_name

specifies the name of a resource. This value can be one of the following:

- The name of the link station specified in the switched major node that specifies the NCP or VTAM to be connected.
- A PU name that specifies a link station with a PUTYPE of 2, 2.1, 4, or 5
- The name of a PU supported by a DLUR.



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## 2.1.95 VARY DRDS Command

```
>> vm_prefix VARY NET,DRDS___, ID=dr_file_name_____><
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

The VARY DRDS command dynamically reconfigures an NCP or a nonswitched peripheral node. If the physical configuration of a communication controller is changed (for example, a physical unit is moved from one line to another), the NCP residing in the communication controller can be reconfigured without having to generate a new NCP. To use this command, a previously filed set of statements called a **dynamic reconfiguration** (DR) file must be available before the major node can be reconfigured. For information on dynamic reconfiguration, see "[Dynamic Reconfiguration and Change of Operands](#)" in the *VTAM Network Implementation Guide*. For information on creating a DR file, see "[Dynamic Reconfiguration and Dynamic Change](#)" in the *VTAM Resource Definition Reference*.

Minor nodes that are dynamically added as a result of this command are automatically activated if the DR definition file defines their initial status as active.

### Dynamic reconfiguration for an NCP:

For an NCP, this command performs the following functions without regenerating the NCP:

- Adds a nonswitched physical unit and its subordinate LUs to a line
- Adds a logical unit to a nonswitched physical unit
- Adds a type 2.1 PU to an NCP ESCON channel.
- Adds an independent LU to an NCP ESCON channel.
- Passes the GP3174 and RETRIES operands to NCP when dynamically adding a PU.
- Moves a nonswitched physical unit and its subordinate LUs from one

line to another

- Changes a nonswitched physical unit link station address
- Deletes a nonswitched physical unit and its subordinate LUs from a line
- Deletes a logical unit from a nonswitched physical unit
- Deletes a type 2.1 PU from an NCP ESCON channel
- Deletes an independent LU from an NCP ESCON channel
- Deletes frame relay type 1 PUs. The first PU (the LMI) under a frame relay line cannot be deleted.

The active and inactive requirements for VARY DRDS for an NCP are shown in [Table 13](#).

Table 13. Active and Inactive Status Requirements for VARY DRDS for an NCP				
Operation/Resource	Major Node	LINE	PU	LU
Add LU	Active	Either	Either	N/A
Add PU	Active	Either	N/A	N/A
Delete PU(1)	Active	Either	Inactive	Inactive
Delete LU(1)	Active	Either	Either	Inactive
Move PU	Active	Either	Inactive	Inactive
<b>Note:</b>				
1. The current state and desired state of the resource must be inactive.				

In order to modify a frame relay switching equipment set (FRSESET), you need to know whether the FRSESET was statically or dynamically defined. If you are not sure, you can issue a DISPLAY NET, ID=*frseset\_name* command to find out. Statically means that the FRSESET was included in the NCP generation. Dynamically means that the FRSESET was not included in the NCP generation. Statically and dynamically defined PUs cannot be specified in the same FRSESET; the PUs must be all static or all dynamic.

If the FRSESET was dynamically defined, you can dynamically add and delete PUs from the set. You can delete PUs with the MODIFY DR, VARY DRDS, or VARY ACT, UPDATE=ALL commands. You can add PUs only with the VARY ACT, UPDATE=ADD or VARY ACT, UPDATE=ALL command.

If the FRSESET was statically defined, you can delete PUs from the set, but you cannot add PUs. In practical terms, this means you need to delete the entire FRSESET and then add it back dynamically in order to make changes. For example, if you have a statically defined FRSESET containing two primary PUs and you want to add two backup PUs, first delete the two primary PUs, thereby deleting the FRSESET itself (because it is empty). Then edit the VTAMLST source file to add the PU definitions for the backup PUs (if necessary) and add the backup PUs to the FRSESET. Then use the VARY ACT command with UPDATE=ADD or UPDATE=ALL. The VARY ACT command causes the FRSESET to be dynamically defined.

If you delete one or more PUs (using MODIFY DR or VARY DRDS) from a statically defined FRSESET without deleting the whole FRSESET, VARY ACT will cause the deleted PUs to be added back, but they will not be part of the FRSESET.

The first PU under a frame relay line (the LMI) cannot be deleted and it cannot be part of a FRSESET.

For more information on how to define frame relay lines, frame relay PUs, and FRSESETs, see "[Network Control Program \(NCP\) Major Node](#)" in the *VTAM Resource Definition Reference*.

#### Dynamic reconfiguration for nonswitched peripheral nodes:

This command adds and deletes LUs for the following major nodes:

- Local SNA
- **VM,VSE** Channel-attachment (SDLC)
- **VM,VSE** Packet.

The active and inactive requirements for the reconfiguration operations are shown in [Table 14](#).

Table 14. Active and Inactive Status Requirements for VARY DRDS for Nonswitched Peripheral Nodes				
Operation/ Resource	Major Node	LINE	PU	LU
Add LU	Active	Either	Either	N/A
Delete LU	Active	Either	Either	Inactive

#### Operands

`vm_prefix` **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

`ID=dr_file_name`  
specifies the name of a dynamic reconfiguration file.



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## 2.1.96 VARY HANGUP Command

```
>> vm_prefix VARY NET,HANGUP___, ID=link_station_name_____><
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

VARY HANGUP is used to take down a switched subarea connection or a switched connection to a type 2 or 2.1 device. This allows the connection to be terminated when it is no longer necessary.

**Note:** VARY HANGUP only terminates the switched connection; it does not deactivate the line or the physical unit.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=link\_station\_name  
specifies the name of the link station. *link\_station\_name* can be the link station in the switched major node that specifies the NCP or VTAM to be disconnected, or *link\_station\_name* can be a link station (PU) with a PU type of 2, 2.1, 4 or 5.



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## 2.1.97 VARY INACT Command

Deactivate an NCP major node:

```
>> vm_prefix VARY NET, INACT __, ID=ncp_name | CDLINK=ACT | _____ >
| _____ |
| _____, CDLINK= ACT | _____ >
| INACT | _____ >

> | RMPO=NO | _____ ><
| _____, RMPO= NO | _____ | TYPE= FORCE | _____ ><
| YES | _____ | IMMED | _____ ><
| _____ | REACT | _____ ><
| _____ | UNCOND | _____ ><
```

Deactivate an NCP line:

```
>> vm_prefix VARY NET, INACT __, ID=line_name | _____ ><
| _____, TYPE= FORCE | _____ ><
| _____ | GIVEBACK | _____ ><
| _____ | IMMED | _____ ><
| _____ | UNCOND | _____ ><
```

Deactivate a CDRM major node:

```
>> vm_prefix VARY NET, INACT __, ID=node_name | _____ >
| _____, SAVESESS | _____ >

> | _____, TYPE= FORCE | _____ ><
| _____ | IMMED | _____ ><
| _____ | UNCOND | _____ ><
```

Deactivate a CDRM minor node:

```
>> vm_prefix VARY NET, INACT __, ID=node_name | _____ >
| _____, IDTYPE=SSCP | _____ >

> | _____, SAVESESS | _____ | _____, TYPE= FORCE | _____ ><
| _____ | IMMED | _____ ><
| _____ | UNCOND | _____ ><
```

Deactivate a CDRSC minor node:

```
>> vm_prefix VARY NET, INACT __, ID=node_name | _____, DELETE=NO | _____ >
| _____, DELETE= NO | _____ >
| _____ | YES | _____ >
```

```
> _____><
|_, IDTYPE=CP_| |_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| UNCOND
```

**Deactivate a dynamic switched PU:**

```
>> vm_prefix VARY NET, INACT __, ID=pu_name _____><
|_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| UNCOND
```

**Deactivate a dependent LU requester (DLUR):**

```
>> vm_prefix VARY NET, INACT __, ID=dlur_name _____><
|_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| UNCOND
```

**Deactivate a PU supported by a DLUR:**

```
>> vm_prefix VARY NET, INACT __, ID=pu_name _____><
|_, TYPE=| FORCE
|_|_|_| GIVEBACK
|_|_|_| IMMED
|_|_|_| REACT
|_|_|_| UNCOND
```

**Deactivate other PUs or VM,VSE a BSC cluster:**

```
>> vm_prefix VARY NET, INACT __, ID=pu_name _____>
```

```
> _____><
|_, FINAL=NO|
|_, FINAL=| NO |_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| REACT
|_|_|_| UNCOND
| YES |_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| UNCOND
```

**Deactivate other resources:**

```
>> vm_prefix VARY NET, INACT __, ID=name _____><
|_, TYPE=| FORCE
|_|_|_| IMMED
|_|_|_| REACT
|_|_|_| UNCOND
```

**Abbreviations**

Operand	Abbreviation
VARY	V
DELETE=YES	DELETE
FINAL=YES	FINAL
RMPO=YES	RMPO

SAVESESS	S
TYPE=FORCE	F or FORCE
TYPE=GIVEBACK	G or GIVEBACK
TYPE=IMMED	I or IMMED
TYPE=REACT	R or REACT
TYPE=UNCOND	U or UNCOND

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for TYPE=IMMED, code only I or IMMED. Do not code TYPE=I.

### Purpose

The VARY INACT command deactivates VTAM resources. For SDLC switched and nonswitched links in a multiple-domain network, it can also return ownership of the line and its associated resources to the original SSCP without disrupting LU-LU sessions. This is usually done as part of error recovery procedures after one SSCP has taken over a failed SSCP's resources. For information on the deactivation of links and link stations, see ["Deactivating Resources"](#) in the *VTAM Network Implementation Guide*.

[Figure 8](#) shows each resource type for which the command is valid and which operands can be used on the command. A large dot means the operand applies to that resource. An I or F in the table shows what value is substituted if an IMMED, UNCOND, FORCE, or REACT operand is specified for a resource to which it does not apply.

VARY INACT										ID=	
CDLINK=ACT/INACT	DELETE=YES/NO	FINAL=YES/NO	IDTYPE = CP	IDTYPE = SS	RMPO= YES/NO	SAVESESS	TYPE=FORCE	TYPE=GIVEBACK	TYPE=IMMED/UNCOND	TYPE=REACT	
											Adjacent CP major node
						●		●	F		Application program major node
						●		●	F		Application program minor node
						I		●	I		Channel-attachment major node
						●		●	F		Channel link
						●		● ●			Channel link station
						●		●	F		CDRSC major node
●		●				●		●	F		CDRSC minor node
		●				●		F	F		CDRSC minor node - adjacent CP
				●	●	●		●	F		CDRM major node
			●	●	●	●		●	F		CDRM minor node
						I		●	I		XCA major node
						●		●	F		Nonswitched line
						●		● ●			Link station
						●		●	F		Switched line
						I		●	I		Local non-SNA major node
						●		●	F		Local non-SNA logical unit
						I		●	I		Local SNA major node
	●					●		● ●			Local SNA physical unit
						●		●	F		Local SNA logical unit
						●		●	F		LUGROUP major node
						●		●	F		Model major node
●			●			●		● ●			NCP major node
						● ●	●	F			Nonswitched line
						● ●	●	F			Switched line
						●	● ●				Link station
	●					●	● ●				Physical unit
						●	●	F			Logical unit
						I		●	I		Switched major node
	●					●	● ●				Switched physical unit
						●	● ●				Switched link station
						●	●	F			Switched logical unit
						●	●	I			Dynamic switched major node
						●	●	I			Dynamic switched physical unit
						●	●	F			Dynamic switched logical unit



VARY INACT																					
CDLINK=	ACT/INACT	DELETE=	YES/NO	FINAL=	YES/NO	IDTYPE =	CP	RMPO=	SSCP	SAFE=	SESS	TYPE=	FORCE	TYPE=	GIVEBACK	TYPE=	IMMED/UNCOND	ID=			
																		I	●	I	Channel-attachment major node (VM/VSE)
																		●	●		SHM physical unit VSE
																		●	●	F	BSC line
																		●	●	●	BSC cluster
																		●	●	F	BSC terminal
																		●	●	F	SDLC nonswitched line
																		●	●	F	SDLC switcheded line
																		●	●	●	SDLC link station
																		●	●	●	SDLC physical unit
																		●	●	F	SDLC logical unit
																		I	●	I	Packet major node (VM/VSE)
																		●	●	F	Nonswitched line
																		●	●	●	Link station
																		●	●	●	Physical unit
																		●	●	F	Logical unit
																		●	●	F	Switched line
																		I	●	I	LAN major node (VM/VSE)
																		●	●	F	Nonswitched line
																		●	●	●	Link station
																		●	●	F	Switched line

Figure 8. Valid Resource Types for VARY INACT

## Operands

### vm\_prefix VM

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

### CDLINK

applies only to the deactivation of an NCP. It specifies whether active, leased, cross-domain links and link stations are to remain active after the NCP major node is deactivated.

This option is effective only on the VARY INACT or [VARY REL command](#) that begins the deactivation of an NCP. For example, if a second VARY INACT (perhaps with the IMMED operand specified) is entered before the first VARY INACT command completes, CDLINK does not apply to the second command and is ignored if specified.

For information on the deactivation of links and link stations, see ["Deactivating Resources"](#) in the *VTAM Network Implementation Guide*.

**VSE** For X.21 short-hold mode/multiple port sharing (SHM/MPS), deactivation of the link results in only the line being deactivated; all subordinate nodes do not change status.

CDLINK=ACT

specifies that active cross-domain links and link stations are to remain active after the NCP major node is deactivated, so that sessions routing information through the NCP over such links can continue without disruption.

CDLINK=INACT

specifies that cross-domain links and link stations are to be deactivated as part of the NCP deactivation. Any session traffic over such links might be disrupted, depending on whether such links and link stations are also owned by some other host. See ["Sharing an NCP"](#) in the *VTAM Network Implementation Guide* for a discussion of how shared ownership affects the results of deactivating a link or link station.

DELETE

applies only to deactivation of cross-domain resources (CDRSCs). It specifies whether they can be deactivated and, at the same time, the RDTE storage associated with the resource released.

If you specify DELETE without including a qualifier (YES or NO), the RDTE storage associated with the resource is released when the CDRSC is deactivated. This is the same result as if you specified DELETE=YES.

DELETE=YES

specifies that the RDTE storage associated with the resource is released when the CDRSC is deactivated. If the LU was created dynamically, then DELETE=YES is not necessary.

DELETE=NO

specifies that the RDTE storage associated with the resource is not released when the CDRSC is deactivated. If the LU was created dynamically, then DELETE=NO is not applicable. If DELETE=NO is specified, it is ignored.

FINAL

specifies whether the physical unit specified in the ID operand will be reactivated.

FINAL=YES

specifies that there are no immediate plans to reactivate the physical unit. The actual effects of this operand are device-dependent, and could include such functions as automatic power-off. See the appropriate component's manual for the specific effects of a DACTPU type hex 01 command on a particular device. For physical units in a local SNA or switched major node, FINAL is meaningful only if the physical unit is fully active before deactivation begins.

FINAL=YES is ignored for type 2.1 physical units if ACTPU is not sent.

If you enter FINAL=YES, you cannot enter TYPE=REACT.

FINAL=NO

specifies that there are plans to reactivate the physical unit.

#### ID=name

specifies the name of any active major or minor node that is to be deactivated. The name can be a network-qualified name. It cannot be a USERVAR or LUALIAS name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource. The name can be an ACB name or an alias name, as long as it is not network-qualified. (See the description of the ID operand on the VARY ACT command for an example of how you can specify a network-qualified application name.)

#### Notes:

1. For a gateway NCP, resources in the nonnative network are not affected by the VARY INACT command.
2. The PUs and LUs within a model major node cannot be individually deactivated with the VARY INACT command. After either a dynamic switched major node or a dynamic switched PU has been deactivated, it cannot be reactivated without being redefined to VTAM. The major difference between dynamically defined devices and statically defined devices is that after a dynamically defined PU is deactivated, its elements will be deleted from VTAM.
3. For ID=*pu\_name*, there is no relationship between the PU and the independent LU. Deactivation of the PU ends any LU-LU sessions that are using the connection. However, the actual independent LU resource remains active because it might be in session over another adjacent link station connection.

Network addresses for the boundary function CDRSC are reclaimed from the terminated sessions if appropriate (for example, if the cross-domain resource is a switched LU), but the RDTE remains intact.

4. **MVS,VSE** For ID=*appl\_name*, VTAM overrides persistence and terminates the application and sessions normally.
5. For ID=ISTCDRDY, VTAM deletes all **dynamically** created CDRSC RDTEs and terminates their associated sessions. CP-CP and CPSVRMGR sessions involving this host are terminated if the partner's CDRSC RDTE was dynamically defined. To avoid losing the CP-CP and CPSVRMGR sessions, you can predefine a CDRSC for the partner LU. The name on the CDRSC statement or the LU statement should be the CPNAME of the session partner. Predefining the CDRSC is suggested only if you expect to deactivate ISTCDRDY while CP-CP sessions are active. (This should be rare.) See ["Cross-Domain Resource \(CDRSC\) Major Node"](#) in the *VTAM Resource Definition Reference* for more information on defining cross-domain resources and independent LUs.
6. For a CDRM, you can specify a network-qualified name, but this does not remove the restriction that the non-network-qualified CDRM name must be unique across networks.
7. Issuing a VARY INACT command to terminate the CP-CP session with an adjacent node might cause later session establishment requests to fail. To resolve the problem, reactivate the CP-CP session or else reactivate the link with CPCP=NO so that it will no longer be used in directed search routing.
8. For a dependent LU requester, VTAM deactivates the CDRSC node that represents the CPSVRMGR session between the DLUR and the DLUS. If

a dependent LU requester is adjacent to a dependent LU server, the CDRSC also represents the CP-CP session. For a normal deactivation, all pending and queued sessions for supported PUs and LUs fail, but inactivation does not complete until all active LU-LU sessions are terminated. A forced deactivation ends all current sessions for LUs and PUs supported by this DLUR. See the [VTAM Network Implementation Guide](#) for further information about the CPSVRMGR session.

9. For a PU supported by a DLUR, VTAM deactivates the PU. If there are no active or pending SSCP-PU sessions using the CPSVRMGR session, the CPSVRMGR session is deactivated.

#### IDTYPE

specifies the type of resource that the ID operand names. If several types of resources share the same name, IDTYPE identifies which resource the command should act on.

IDTYPE is required and has no default if the resource named on the ID operand is the host CDRM. IDTYPE is optional if the resource is an adjacent CP or an external CDRM; if both an adjacent CP and an external CDRM are found, the default is IDTYPE=SSCP. If you attempt to deactivate the host CP, the command will fail.

#### IDTYPE=CP

deactivates the CP with the name specified on the ID operand.

#### IDTYPE=SSCP

deactivates the SSCP with the name specified on the ID operand.

#### RMPO

applies only to NCP major nodes. RMPO specifies whether the communication controller in which the NCP is running is to be powered off automatically at the completion of the deactivation.

RMPO can be done only by an implicitly activated link station.

#### RMPO=YES

powers off the communication controller automatically. The communication controller must be link-attached, and must support the remote power-off facility for this operand to be effective. Use the same link for the RMPO operation as you used earlier to load and activate the remote NCP.

#### RMPO=NO

does not power off the communication controller automatically.

#### SAVESESS

applies to CDRM major and minor nodes. SAVESESS specifies that active LU-LU sessions set up using the SSCP-SSCP session, which is being terminated by the VARY INACT command, remain active. Queued or pending sessions using the specified CDRM are terminated.

After you deactivate a CDRM with SAVESESS, the active sessions that remain are no longer associated with the CDRM. Therefore, subsequent activations and deactivations of the CDRM have no effect on these sessions.

The SAVESESS operand is not required during normal deactivation, and if specified, does not change the normal deactivation.

#### TYPE

specifies the type of deactivation (other than normal deactivation). Unless IMMED, UNCOND, FORCE, REACT, or GIVEBACK is specified, normal deactivation occurs. The TYPE operand is not valid for an ADJCP major node.

During normal deactivation, queued and pending sessions fail; the VARY INACT command is queued until all active sessions are terminated.

**Note:** During normal deactivation of an NCP, some active sessions might be disrupted. For more information on the effects of deactivating an NCP, see ["Deactivating an NCP"](#) in the *VTAM Network Implementation Guide*.

#### TYPE=IMMED or TYPE=UNCOND

means that the specified resource and applicable subordinate resources are to be deactivated **immediately**.

If TYPE=IMMED or TYPE=UNCOND, sessions involving the affected resources are disrupted. However, before completing the deactivation, VTAM waits for application programs being deactivated, or for application programs in session with resources being deactivated, to formally end their sessions (that is, issue CLSDST).

A TYPE=IMMED or TYPE=UNCOND operand can be specified on a VARY INACT command entered while a normal deactivation is in progress.

#### Notes:

1. TYPE=IMMED and TYPE=UNCOND have the same function. TYPE=UNCOND is consistent with the ["VARY TERM Command."](#)
2. If you specify IMMED or UNCOND on this command for a dependent LU requester, the value is automatically promoted to FORCE.

#### TYPE=FORCE

means that the specified resource and applicable subordinate resources are to undergo forced deactivation. This type of deactivation might be advisable for resources that do not respond to normal or immediate (I) deactivation requests, or that are preventing completion of a [VTAM HALT command](#). A forced deactivation instructs VTAM to deactivate its internal representations of the applicable resources and to send appropriate deactivation requests to the resources or their superior nodes, without waiting for responses to these requests. Therefore, a forced deactivation of a resource could result in a mismatch between VTAM's record of the status of a resource and the actual status of the resource in the network.

If TYPE=FORCE, sessions involving the resources are disrupted, and VTAM might have to wait (depending on how a given application program is coded) for application programs being deactivated, or

for application programs in session with resources being deactivated, to formally end their sessions (that is, issue CLSDST) before completing the deactivation. A forced deactivation might cause VTAM to enter the wait state. It could then be necessary to deactivate an associated resource in order to free the system.

Forced deactivation of a local device might result in a slight wait because VTAM might have I/O outstanding for the device. VTAM cannot complete deactivation until the outstanding I/O is completed.

**Notes:**

1. Normally, all sessions involving a resource that undergoes forced deactivation terminate as a result of this command, but there are exceptions. For example, if there is no CDRM-CDRM session with the owning SSCP of the session partner, or if the CDRM of a session partner is unknown because of takeover, those sessions are not terminated.
2. Forced deactivation of an NCP link unconditionally takes down the link, regardless of the shared ownership of the link. However, any lines under the NCP that would remain active during an automatic network shutdown (ANS) remain active after a forced deactivation of the NCP.
3. V INACT FORCE deletes a dynamic CDRSC independent of the [CDRSCTI start option](#). This will cause a buffer trace to be turned off.

The TYPE=FORCE operand can be specified on a VARY INACT command entered while a normal or immediate deactivation or a VTAM HALT is in progress.

**VSE** For X.21 short-hold mode/multiple port sharing (SHM/MPS) physical units, use TYPE=FORCE only when a normal deactivation attempt fails. If you use TYPE=FORCE, it might be necessary to re-execute the IML for the front-end processor before you reactivate the physical unit.

**TYPE=REACT**

means that the specified resource and applicable subordinate resources are to undergo deactivation and subsequent reactivation. This type of deactivation and reactivation might be advisable for resources that are not responding to VTAM commands, but that the operator wants to remain active. A forced reactivation instructs VTAM to deactivate its internal representations of the applicable resources and to send appropriate deactivation requests to the resources or their superior nodes, waiting for responses before beginning reactivation. If any of the resources still do not respond, a VARY INACT command with the TYPE=FORCE operand should be entered to force deactivation of those resources.

A device contained in a dynamic switched major node cannot be deactivated with TYPE=REACT. After such a PU is deactivated, it is no longer known to VTAM and cannot be reactivated with an operator command. Dynamic LUs under a dynamic PU can be deactivated and subsequently reactivated as long as their PU is not deactivated.

**Notes:**

1. Normally, sessions involving a REACT deactivated resource terminate as a result of this command, but there are exceptions. For example, if there is no CDRM-CDRM session

with the owning SSCP of the session partner, or if the CDRM of a session partner is unknown because of takeover, those sessions are not terminated. These sessions also do not respond to reactivation, and are not displayed as activated in response to this command.

If this command is issued for an NCP, the SSCP-PU session between VTAM and the NCP is disrupted. VTAM does not terminate any LU-LU sessions; they might or might not be disrupted, depending on what the NCP does for automatic network shutdown (ANS). LU-LU sessions involving type 2.1 PUs generally stay up.

A second VARY INACT command with TYPE=REACT issued before the first one has time to complete has the same effect as specifying the TYPE=FORCE option.

Any type of deactivation request (normal, immediate, or forced) can be entered while a forced reactivation is in progress if you want termination of the reactivation. As previously stated, forced deactivation might be the only effective deactivation method if a resource fails to respond to the forced reactivation.

2. If you specify REACT on this command for a dependent LU requester, the value is automatically promoted to FORCE.

#### TYPE=GIVEBACK

applies to SDLC switched and nonswitched links, leased lines, and switched PUs that are supported by dependent LU requesters (DLURs) that allow ANS=CONTINUE. (Token ring is considered to be a switched connection.) The specified resource and applicable subordinate resources are released from this SSCP. VTAM terminates queued and pending sessions before deactivating the resource. If the specified resource was defined with ANS=CONTINUE, active LU-LU sessions remain active.

If the link does not support giveback, VTAM waits for the session to terminate before giveback is completed.

Under certain conditions, sessions returned with giveback remain displayable in the SSCP that issued the giveback. Either of the following conditions produce such results:

- If the session partner is in the domain of the SSCP owning the resource before giveback
- If the session is cross-network and the old owner of the resource was a gateway SSCP and was in session with the gateway NCP.

#### Notes:

1. Issuing this command overrides any outstanding command for the node.
2. If you specify GIVEBACK on this command for a dependent LU requester that does not support ANS=CONTINUE, the value is automatically promoted to FORCE.



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## 2.1.98 VARY INOP Command

```
>> vm_prefix VARY NET, INOP __, ID=line_name | END=NO | _____ ><
| _____ |
| , END= NO |
| YES |
```

### Abbreviations

Operand	Abbreviation
VARY	V
END=YES	END

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for END=YES, code only END.

### Purpose

You can use the VARY INOP command to terminate a manual dial operation if the VTAM operator is unable to complete the call.

A physical unit in a switched major node can be dialed either automatically or manually to establish a session with a logical unit. For manual dialing, VTAM issues a message containing the following information:

- The name of the line that VTAM will try to use to make the connection. The line must be a switched line with dial-out capability.
- The telephone number that the VTAM operator is to dial. This number is the number specified in the DIALNO operand of the appropriate PATH statement associated with the physical unit that the operator is dialing.

After receiving this information, the VTAM operator must try to make the connection by dialing the specified telephone number. If the operator is unable to complete the connection, the operator should enter the VARY INOP command either to ask VTAM to search for an alternate path or to ask VTAM to terminate the session request without a search for an alternate path.

### Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

END

specifies whether VTAM is to search for an alternate line on which to send the session request.

END=NO

searches for another appropriate line to the physical unit.

END=YES

does not search for another appropriate line to the physical unit.

ID=line\_name

specifies the name of the line used to attempt the manual dial connection. This name is included in the VTAM message requesting manual dialing.



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## 2.1.99 VARY LOGON Command

```
>> vm_prefix VARY NET , LOGON=appl_name , ID=slu_name _____ >
> _____ ><
|_ , LOGMODE=logon_mode_name | _____ |_ , ACT | _____
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

You can use the VARY LOGON command to change an existing automatic logon specification or to create an automatic logon specification. This command applies to any device-type logical unit, whether channel-attached or link-attached. Neither the device-type logical unit, which is the secondary LU, nor the primary LU receiving the automatic logon has to be active when the VARY LOGON command is issued.

**Note:** This command is restricted to the VTAM owning the SLU specified in the ID operand.

An automatic logon specification remains in effect until one of the following occurs:

- The primary logical unit controlling the secondary logical unit is changed with VARY LOGON or VARY ACT,LOGON command.
- A [VARY NOLOGON command](#) is entered for the secondary logical unit.

**Note:** If you use the VARY LOGON command to create or change an automatic logon specification, be aware that later use of a VARY ACT,UPDATE=ALL command for dynamic reconfiguration can undo the effects of the VARY LOGON command. This is because the LOGAPPL value in the definition file overrides the value that was established with the VARY LOGON command. Even if no LOGAPPL is coded in the definition file, VTAM assumes a null value for LOGAPPL and the null value overrides the VARY LOGON value. To prevent the automatic logon specification from being deleted unintentionally, code the LOGAPPL definition statement with the desired value.

Any automatic logon request made as a result of this specification might

be accepted or rejected by the primary LU.

The VARY LOGON command specifies only a primary LU session partner for automatic logon (when the specified secondary LU becomes available for a session); it does not activate the secondary LU. To activate the secondary LU (or a resource to which the secondary LU is subordinate) and change the automatic logon specification at the same time, use the VARY ACT command with the LOGON operand (see the [LOGON](#) operand on the VARY ACT command in topic [2.1.92](#)). for more information.

For independent SLUs, the VARY LOGON command initiates a session with the controlling PLU only if there are no sessions already established with the specified PLU. Repeated use of the VARY LOGON command for the same LU and controlling PLU establishes only a single session. A series of VARY LOGON commands for the same LU specifying different controlling PLUs establishes sessions between the LU and each of the controlling PLUs specified. The controlling PLU is the one specified in the last command. The other sessions are not automatically re-established after they terminate.

**Note:** When you enable automatic logons to TSO (either by using the VARY LOGON command or by specifying LOGAPPL=TSO in a definition statement), a new logon attempt is made when the user session ends, even if it ends in error. This is because it is not the session with TSO that is failing. If a loop occurs, for example message IKT029I being issued repeatedly, you can break the automatic logon relationship by issuing a VARY NOLOGON command. If you have a user-written application in your network called TSO, then enabling automatic logons to TSO could have unpredictable results.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ACT

activates any subordinate resources within the scope of this command. If ACT is specified on the VARY LOGON command, other operands of the VARY ACT command are available. See [Figure 6](#) for the operands you can use. Use the LOGON column of that table to identify which resources are applicable.

ID=slu\_name

specifies the name of the secondary LU. This name can be one of the following:

- A device-type logical unit
- A resource with subordinate device-type logical units
- A boundary function CDRSC.

If the value is a boundary function CDRSC, the boundary function CDRSC named must be known to VTAM at the time the command is issued. That is, it must have been predefined or dynamically defined because of another session. In addition, it must have a default ALS list.

Boundary function CDRSCs are only subordinate to the CDRSC major node where they were defined (ISTPDILU or ISTCDRDY). Boundary function CDRSCs are not subordinate to any device type major node (NCP, local SNA, etc.), nor to a line or PU, even if the independent LU was defined within or under these resources.

Because of this, independent LUs are not subordinate to any PU.

Therefore, the sift-down to subordinate LUs does not affect independent LUs unless the ID value is a CDRSC major node.

The VARY LOGON command affects only LUs. If another resource type is specified, the logical units affected are those subordinate to the resource that is specified on this command.

The name can be a network-qualified name. If the name specified on the ID operand is network-qualified, this name is considered to be the real name of the resource.

LOGMODE=logon\_mode\_name

specifies the name of the logon mode entry to be used for any logon initiated for a logical unit as a result of this command. This logon mode name also becomes the logon mode name for all future automatic logons performed by VTAM for logical units within the scope of this command, and for their controlling primary LUs (if any).

LOGON can be specified without LOGMODE, but LOGMODE cannot be specified without LOGON. If LOGMODE is specified without the LOGON operand, LOGMODE is ignored and no error message is sent.

If LOGMODE is not specified, the LOGMODE value specified in any previous command applicable to a logical unit within the scope of this current VARY LOGON command is used. If no LOGMODE value was ever specified for a given logical unit within the scope of this command, the logical unit's default value is used.

LOGON=appl\_name

specifies the name of an application program (primary LU) to which any secondary LUs within the scope of this command are to be logged on. The application name can be network-qualified. If it is, the network identifier is considered to be real, but the resource name is considered to be generic (that is, the resource name can be either the real application name or a USERVAR name).

If the application name is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name.

If a USERVAR is found, VTAM resolves its name to the name of the VTAM application with which it is currently associated. If a USERVAR with this name is not found, VTAM searches for an application program with this name.

If the primary LU is an application program in this domain, the name must be that of an application program minor node within an active application program major node.

If the primary LU is a predefined CDRSC, the CDRSC must be active.

If the primary LU is a device-type LU, it must be attached to the same NCP as the secondary LU.



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## 2.1.100 VARY NOLOGON Command

```
>> vm_prefix VARY NET , NOLOGON = * cdrsc_name plu_name uservar_name ID=slu_name ><
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

Use the VARY NOLOGON command to delete an existing automatic logon specification that was established by the [VARY LOGON command](#) or the LOGAPPL operand on a definition statement. This command applies to any device-type logical unit, whether channel-attached or link-attached. The device-type logical unit does not have to be active when the VARY NOLOGON command is issued; however, the major node must be active.

The VARY NOLOGON command deletes any existing automatic logon specification for the named logical unit. When the command is issued, any active or pending sessions that resulted from an automatic logon specification will continue. When these sessions end, however, the logical unit will no longer have an automatic logon specification until a VARY LOGON is entered for it.

**Note:** If you use the VARY NOLOGON command to delete an automatic logon specification that was coded on the LOGAPPL operand of a definition statement, be aware that later use of a VARY ACT,UPDATE=ALL command for dynamic reconfiguration can undo the effects of the VARY NOLOGON command. This is because the LOGAPPL value in the definition file overrides the operator command. To prevent the automatic logon specification from being added back unintentionally, delete the LOGAPPL operand from the definition statement.

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

ID=*slu\_name*

specifies the name of the secondary LU. This name can be one of the following:

- A device-type logical unit
- A resource with subordinate device-type logical units
- A boundary function CDRSC.

Boundary function CDRSCs are subordinate only to the CDRSC major node where they were defined (ISTPDILU or ISTCDRDY). Boundary function CDRSCs are not subordinate to any device type major node (NCP, local SNA, etc.), nor to a line or PU, even if the independent LU was defined within or under these resources.

Because of this, independent LUs are not subordinate to any PU. Therefore, the sift-down to subordinate LUs does not affect independent LUs unless the ID value is a CDRSC major node.

The VARY NOLOGON command affects only LUs. If another resource type is specified, the logical units affected are those subordinate to the resource specified on the command.

The name can be a network-qualified name. If *name* is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name. (See the description of the ID operand on the VARY ACT command for an example of how you can specify a network-qualified application name.)

NOLOGON

specifies the scope of the VARY NOLOGON command. It can be a network-qualified name. The NOLOGON operand must specify the same name that was used on the LOGON operand or the LOGAPPL definition, with the following exception (because the host's network ID is assumed):

- In NETA, LOGON=NETA.CICS can be cancelled by NOLOGON=NETA.CICS or NOLOGON=CICS
- In NETA, LOGON=CICS can be cancelled by NOLOGON=NETA.CICS or NOLOGON=CICS.

If the application name is an ACB name, and the ACB name matches the name on the APPL definition statement, then you can use a network-qualified ACB name. (See the description of the ID operand on the VARY ACT command for an example of how you can specify a network-qualified application name.)

NOLOGON=*plu\_name*

specifies that only logical units that are either:

- Identified by *slu\_name* or
- Subordinate to *slu\_name*

and have *plu\_name* as their controlling PLU are to have their automatic logon specification deleted.

NOLOGON=*cdrsc\_name*

specifies the name of a CDRSC minor node within an active CDRSC major node. NOLOGON=*cdrsc\_name* must be specified when the primary LU is an application program in another domain or another network.

NOLOGON=uservar\_name

specifies the name of a USERVAR that VTAM resolves to be the application with which it is currently associated. If a USERVAR with the specified name is not found, VTAM searches for an application program with that name.

NOLOGON=\*

specifies that all secondary logical units that are either:

- Identified by *slu\_name* or
- Subordinate to *slu\_name*

are to have their automatic logon specification deleted, regardless of which PLU is currently in control.

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## 2.1.101 VARY PATH Command

```
>> vm_prefix VARY NET,PATH= NOUSE _____ >
      | USE |
> _,GID=group_id, ID=switched_major_node_name _____ ><
  | _,PID=path_id, ID=switched_pu_name |
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

Use this command to modify the availability of a dial-out path to a specific switched physical unit or a group of dial-out paths within a switched major node.

A physical unit in a switched major node can be dialed through one or more dial-out paths associated with the physical unit. Switched path control is initially established in a switched major node definition by the USE operand of the PATH statement associated with a physical unit. Unless USE=NO has been specified, the path is automatically enabled for use by VTAM when the physical unit is activated.

**Note:** The PATH statement referred to on this command description is in the switched major node definition; do not confuse it with the PATH statements used to define a path definition set.

Dial-out path usage can be altered by enabling or disabling:

- A single dial-out path to the physical unit (represented by a PID)
- A logical group of dial-out paths in the same switched major node (represented by a GID).

### Operands

vm\_prefix **VM**  
is the prefix required for commands issued to VTAM running under VM.

This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

**GID=group\_id**

specifies the group identifier of the dial-out paths to be made usable or unusable. The group identifier is defined by the GID operand of the PATH statements in a switched major node definition. This value must be a decimal integer 1-255.

**ID=name**

specifies the name of the switched major node (if the GID operand is specified) or the name of the physical unit in a switched major node (if the PID operand is specified) for which dial-out path status is to be changed.

**PATH**

specifies the paths identified by the PID or GID operand to enable or disable.

**PATH=USE**

specifies that one or more paths identified by the PID or GID operand are to be enabled (changed from unusable to usable), if they are not already enabled.

**PATH=NOUSE**

specifies that one or more paths identified by the PID or GID operand are to be disabled (changed from usable to unusable), if they are not already disabled. If the path is currently in use, PATH=NOUSE does not take effect until after the existing dial connection is broken.

**PID=path\_id**

specifies the path identifier of the dial-out path to be made usable or unusable. This value must be a decimal integer 1-255.

The path identifier is defined by the PID operand of a PATH statement. This PATH statement must be associated with the physical unit specified in the ID operand of this command. (This PATH statement is in the switched major node definition; do not confuse it with the PATH statements used to define a path definition set.)



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## 2.1.102 VARY REL Command

Release a previously acquired NCP:

```
>> vm_prefix VARY NET,REL___,ID=ncp_name___|___,OWNER=host_name_|___>
>|___,CDLINK=ACT___|___|___,TYPE=GIVEBACK___|___><
|___,CDLINK=ACT___|___|___,TYPE=IMMED___|___><
|___,CDLINK=INACT___|___|___,TYPE=IMMED___|___><
```

Release a PU:

```
>> vm_prefix VARY NET,REL___,ID=pu_name___|___,OWNER=host_name_|___>
>|___,FINAL=NO___|___|___,TYPE=IMMED___|___><
|___,FINAL=NO___|___|___,TYPE=IMMED___|___><
|___,FINAL=YES___|___|___,TYPE=IMMED___|___><
```

### Abbreviations

Operand	Abbreviation
VARY	V
FINAL=YES	FINAL
TYPE=GIVEBACK	G or GIVEBACK
TYPE=IMMED	I or IMMED

When using an abbreviation in place of an operand, code the abbreviation exactly as shown in the table. For example, when coding the abbreviation for TYPE=IMMED, code only I or IMMED. Do not code TYPE=I.

### Purpose

Use the VARY REL (release) command to release a previously acquired NCP or to release a physical unit attached by a nonswitched line to an NCP (regardless of whether the physical unit was previously acquired).

The VARY REL command is usually applied to a previously acquired NCP or physical unit attached to an NCP as part of a backup and recovery procedure in a multiple-domain network. A physical unit attached to an NCP can also be released as part of a switched network backup procedure in either a single- or multiple-domain network. The purpose of the VARY REL

command is to relinquish ownership of the following resources:

- NCP resources that are normally owned by another host (if the NCP was activated before being acquired)
- All resources within an NCP, including the NCP itself (if the NCP was acquired without having been previously activated)
- An individual physical unit and its logical units.

Releasing resources within an NCP makes them unknown to VTAM until the NCP is reacquired; releasing a physical unit makes it unusable by the releasing host and makes its logical units unknown until the physical unit is reacquired. Releasing an NCP that had not been previously active also results in deactivation of the NCP. (Here there is no functional difference between the VARY REL and [VARY INACT](#) commands.) See [Planning for NetView, NCP, and VTAM](#) for a description of possible backup and recovery procedures that use the VARY REL command.

As part of a switched network backup procedure for NCP resources, the VARY REL command can be entered for a physical unit that was not previously acquired. The purpose of the VARY REL command is to make the physical unit's logical units unknown to VTAM so that a corresponding switched physical unit definition (representing the same physical device with a different physical unit name but with the same logical unit names) can be activated. See [Planning for NetView, NCP, and VTAM](#) for a description of the switched network backup procedure.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

## CDLINK

applies only to an NCP being released. It specifies whether any active cross-domain links and link stations are to remain active (in the NCP, not with respect to VTAM) after they are released. That is, the CDLINK operand specifies whether VTAM is to send deactivation requests to cross-domain links and link stations when the internal representations of these resources are deactivated as part of the VARY REL command processing.

For an NCP that was activated before being acquired, the CDLINK operand is ignored. The NCP remains active after the VARY REL command completes. Even though VTAM considers such links and link stations to be inactive, the NCP still considers them to be owned by VTAM. Therefore, specifying CDLINK=ACT in an environment of shared link and link station ownership might provide no benefits (because the shared ownership prevents traffic disruption on the link), but could cost the ability of an other host to become a shared owner (because the share count is one closer to its limit than it needs to be). It could also prevent the original host from acquiring and activating the link. See ["Deactivating Resources"](#) in the *VTAM Network Implementation Guide* for details of special considerations and cautions that might be applicable to deactivation of cross-domain links and link stations.

For an NCP acquired without having been previously activated, this option is effective only on the first command (whether [VARY INACT](#) or VARY REL) applied to the NCP. Any subsequent CDLINK specifications are ignored.

**CDLINK=ACT**

specifies that active cross-domain links and link stations are to remain active after they are released, so that sessions routing information through the NCP over such links can continue without disruption.

**CDLINK=INACT**

specifies that cross-domain links and link stations within the scope of the release are to be deactivated as part of the NCP release processing. Any session traffic over such links might be disrupted (depending on whether such links and link stations are also owned by some other host). See "[Sharing an NCP](#)" in the *VTAM Network Implementation Guide* for a discussion of how shared ownership affects the results of deactivating a link or link station.

**FINAL**

specifies whether the physical unit specified on the ID operand will be reactivated.

**FINAL=YES**

specifies that there are no immediate plans to reactivate the physical unit. The actual effects of this operand are device-dependent, and could include such functions as automatic power-off. See the appropriate component's manual for the specific effects of a DACTPU type hex 01 command on a particular device. For physical units in a local SNA or switched major node, FINAL is meaningful only if the physical unit is fully active before deactivation begins.

FINAL=YES is ignored for type 2.1 physical units if ACTPU is not sent.

**FINAL=NO**

specifies that there are plans to reactivate the physical unit.

**ID=name**

specifies the name of the NCP or physical unit to be released.

**OWNER=host\_name**

specifies that the command is to apply only to resources defined with the OWNER operand, and whose owning SSCP matches the *host\_name* specified in the command. *host\_name* cannot be the name of the VTAM host from which you are issuing this command.

**TYPE**

specifies the type of release. If neither GIVEBACK nor IMMED is specified, normal release occurs. Normal release does not break existing sessions, but does prevent the establishment of new sessions with nodes within the scope of this command.

**TYPE=GIVEBACK**

applies only to an NCP and specifies that all subordinate resources that are capable of nondisruptive deactivation are to be released without disruption to existing LU-LU sessions.

**Note:** Because GIVEBACK is only supported at the line level, a normal release is performed for the following resources:

- Lines attached to this NCP that are not capable of nondisruptive deactivation
- PUs that are attached to a line that is not being released.

TYPE=IMMED

specifies immediate release. If you specify TYPE=IMMED, sessions involving the resources being released are disrupted.

You can specify TYPE=IMMED on a VARY REL command entered while a normal or giveback release is in progress.



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## 2.1.103 VARY TERM Command

```
>> vm_prefix VARY NET, TERM _, LU1=lu_name_ _, LU2=lu_name_ >
      _, LU2=lu_name_ _, LU1=lu_name_
      _, PLU=plu_name_ _, SLU=slu_name_
      _, SLU=slu_name_ _, PLU=plu_name_
      _, SID=session_id >

> _, TYPE=UNCOND _, SCOPE=ACT >
  _, TYPE= COND _, SCOPE= ACT
           FORCE ALL
           UNCOND O

> _, NOTIFY=YES ><
  _, NOTIFY= NO
              YES
```

### Abbreviations

Operand	Abbreviation
VARY	V

### Purpose

The VARY TERM command terminates a session or group of sessions. The command can identify one or several of the following sessions for termination:

- ° A single session by its session identifier (SID)
- ° All of the sessions for which a specified logical unit is the primary session partner (PLU)
- ° All of the sessions for which a specified logical unit is the secondary session partner (SLU)
- ° All of the sessions between a specified pair of logical units having a specified primary/secondary relationship as session partners (PLU and SLU)

- All of the sessions for which a specified logical unit is a session partner, without regard to its primary or secondary status (LU1)
- All of the sessions between a specified pair of logical units, without regard to their primary/secondary relationship as session partners (LU1 and LU2).

You can use the ["DISPLAY SESSIONS Command"](#) to display the sessions that are to be terminated with this command. If a session is displayed with an "A-" session state, you cannot issue a VARY TERM command for it at this host. Instead, issue VARY TERM from one of the session end points.

**MVS,VSE** VTAM overrides persistence and terminates the application and sessions normally.

Issuing a VARY TERM command to terminate the CP-CP session with an adjacent node might cause later session establishment requests to fail. To resolve the problem, reactivate the CP-CP session or else reactivate the link with CPCP=NO so that it will no longer be used in directed search routing.

## Operands

vm\_prefix **VM**

is the prefix required for commands issued to VTAM running under VM. This prefix (usually **VTAM**) is determined by an operand of the GCS LOADCMD command. Use the prefix required by your network.

**MVS,VSE** Do not use a command prefix.

LU1=lu\_name

identifies the logical unit whose sessions are to be terminated. If you also specify the LU2 operand, only sessions involving both specified logical units are terminated. LU1 can be either the primary LU or the secondary LU.

lu\_name can be a network-qualified name. If the name is network-qualified, it is considered to be the real name of the resource. If a non-network-qualified name is specified, the name can be an ACB name, an alias name, or the real name of a local resource.

If a cross-network CDRSC is to be specified on the LU1 operand and the CDRSC is defined using NQNMODE=NQNAME (either by definition or start option), it must be specified as a network-qualified name.

LU2=lu\_name

identifies the logical unit whose sessions are to be terminated. If you also specify the LU1 operand, only sessions involving both specified logical units are terminated. LU2 can be either the primary LU or the secondary LU.

lu\_name can be a network-qualified name. If the name is network-qualified, it is considered to be the real name of the resource.

If a cross-network CDRSC is to be specified on the LU2 operand and the CDRSC is defined using NQNMODE=NQNAME (either by definition or start option), it must be specified as a network-qualified name.

NOTIFY

specifies whether VTAM is to send a notification message to the



operator when all affected sessions have ended.

NOTIFY=YES

sends a notification message to the operator when all affected sessions have ended.

NOTIFY=NO

does not send a message when all affected sessions have ended.

PLU=*plu\_name*

identifies a primary logical unit. All sessions in which this logical unit functions as the primary session partner are terminated. If you also specify the SLU operand, only sessions involving both specified logical units in the specified primary/secondary relationship are terminated.

The value for *plu\_name* can be a network-qualified name. If the name is network-qualified, it is considered to be the real name of the resource. If a network-qualified name is not specified, the default network identifier will be from the network where the command was issued.

If a cross-network CDRSC is to be specified on the PLU operand and the CDRSC is defined using NQNMODE=NQNAME (either by definition or start option), it must be specified as a network-qualified name.

SCOPE

specifies the scope of the command.

SCOPE=ACT

terminates only active sessions.

Note that the termination of an active session between a device-type logical unit and its controlling primary LU terminates the session (unless the session is terminated using TYPE=FORCE) but does not alter the basic controller relationship between them.

Deactivation and reactivation of the logical unit (including error recovery procedures), or use of the logical unit by another primary LU, results in the re-establishment of the logical unit's session with its controlling application program. If this is not the case, the controller session can be re-established with a [VARY LOGON command](#) or by a specific session request from the primary LU.

SCOPE=ALL

terminates all sessions, whether active or queued.

SCOPE=Q

terminates only queued sessions.

Note that the termination of a queued session between a device-type logical unit and its controlling primary LU does not alter the basic controller relationship between them.

**SID=sessionid**  
 identifies the VTAM session to terminate. You can display the session ID by issuing the [DISPLAY ID,SCOPE=ALL command](#). The application program can be in either this domain (application program minor node) or another domain (CDRSC minor node). The session ID must be a valid hex number.

**SLU=slu\_name**  
 identifies a secondary logical unit. All sessions in which this logical unit functions as the secondary session partner are terminated. If you specify the PLU operand, only sessions involving both specified logical units in the specified primary/secondary relationship are terminated.

*slu\_name* can be a network-qualified name. If the name is network-qualified, it is considered to be the real name of the resource.

If a cross-network CDRSC is to be specified on the SLU operand and the CDRSC is defined using NQNMODE=NQNAME (either by definition or start option), it must be specified as a network-qualified name.

**TYPE**  
 specifies the type of session termination to be performed. If this command applies to queued sessions, they are terminated. This command will terminate only the primary session between the PLU and SLU; the backup session will not terminate.

#### Notes:

1. For a phantom session (an active session for which no SIB exists in this host), issue V NET,TERM,TYPE=UNCOND or V NET,TERM,TYPE=FORCE to terminate the session.
2. If the VARY TERM command is issued in the SLU's host after takeover has occurred and the PLU for the session resides in another host, the session might terminate properly. In that case, the VARY TERM command should be issued from the host where the PLU resides.
3. For a CP-CP session, TYPE=COND or UNCOND is converted by VTAM to TYPE=FORCE. The session will **not** be automatically re-established even if other CP-CP session-capable connections are subsequently activated. If you want to reactivate the session, issue a VARY ACT,ID=*adjacent\_cp*,IDTYPE=CP command.
4. For a CPSVRMGR session between a DLUR and a DLUS, TYPE=COND or UNCOND is converted to FORCE. If the DLUR allows ANS=CONTINUE, VTAM performs GIVEBACK for PUs supported by the DLUR, and current LU-LU sessions are not disrupted because the LUs become shadow resources.

**TYPE=COND**  
 specifies conditional termination.

**Note:** This command is rejected if the termination request is for a session with an unknown partner.

If this command applies to active sessions, they might be disrupted. PLUs involved in such sessions are notified of the operator's request for termination and have the option to terminate the session.

If the PLU is an independent LU, the session remains active because independent LUs cannot perform orderly termination. If the session remains active, it is marked "session end pending" in each SSCP that knows of the termination request.

**TYPE=UNCOND**  
specifies unconditional termination.

If this command applies to active sessions, they are disrupted. PLUs involved in such sessions are notified of the disruption.

For cross-domain and cross-network sessions, the following rules apply:

- If one of the SSCP-SSCP sessions between the host originating the request and the host of a target PLU is down (that is, the target PLU cannot be notified), specifying **TYPE=UNCOND** is the same as specifying **TYPE=FORCE**.
- If the following conditions are true, the **TYPE** is promoted to **FORCE**:
  1. The **VARY TERM** command is issued at a host other than the PLU's host, and
  2. Either session partner is located in an APPN network, or the session passes through an APPN network between the PLU and the SLU

**Note:** If **VARY TERM** is issued from the PLU's host, the **TYPE** of session termination is not changed.

For an automatic logon relationship, the promotion of **UNCOND** to **FORCE** causes the session to re-drive. To avoid re-driving the session, issue **VARY TERM,TYPE=COND**.

For a session using a dynamic **USERVAR**, the promotion of **UNCOND** to **FORCE** causes the deletion of that automatic **USERVAR** at the SLU host. To avoid deleting the **USERVAR**, issue **VARY TERM,TYPE=COND**.

**TYPE=FORCE**  
specifies forced termination. If this command applies to active sessions, they are disrupted, and application programs involved in such sessions are notified of the disruption.

If a controlling relationship is set up for the logical unit, the session re-drives because the termination was of an abnormal type.



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## 3.1 Chapter 3. Logon Manager Operator Commands (MVS)

The logon manager permits a terminal user to pass through VTAM and log on to an independent application running on a transaction processing facility (TPF). More specifically, it allows a dependent secondary logical unit (SLU) to initiate a session with an independent primary logical unit (PLU).

**The logon manager is a VTAM application. Any similarity between VTAM commands and logon manager commands is coincidental.**

This chapter is a reference to the logon manager operator commands. It includes a description of each command's format and applicable operands. The descriptions are arranged alphabetically by command name.

Subtopics:

- [3.1.1 Command Fundamentals](#)
- [3.1.2 MODIFY HELP Command](#)
- [3.1.3 MODIFY INFO Command](#)
- [3.1.4 MODIFY MEMBER Command](#)
- [3.1.5 MODIFY MINLINK Command](#)
- [3.1.6 MODIFY STOP Command](#)
- [3.1.7 START Command](#)



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## 3.1.1 Command Fundamentals

A logon manager operator command consists of:

- The command name or its abbreviation
- A procedure name, referred to as a *procname* in the command syntax, that tells the operating system to send the command to the logon manager for processing. The *procname* must be the same as the *procname* specified in the logon manager START command.

**Note:** The logon manager procedure name is not VTAM.

- Operands that describe the operation to be performed.

Subtopics:

- [3.1.1.1 Syntax Notation](#)
- [3.1.1.2 Entering Operator Commands](#)
- [3.1.1.3 Correct and Incorrect Commands](#)



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### 3.1.1.1 Syntax Notation

See ["How to Read the Syntax Diagrams"](#) for details on the operator command syntax notation.

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## 3.1.1.2 Entering Operator Commands

Logon manager operator commands are entered and logon manager messages are received at the system console or remote network console. Logon manager commands cannot exceed 80 characters and must be entered on a single input line from whatever input device is being used.

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### 3.1.1.3 Correct and Incorrect Commands

The logon manager issues messages indicating whether commands are accepted or rejected.

When a command is entered with correct syntax and valid operands, the logon manager issues a message of acknowledgement. Note, however, that the acknowledgement of a command does not imply that the command will complete.

If the command contains a syntax error or incorrect operands, the logon manager issues one or more error messages and rejects the command.

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## 3.1.2 MODIFY HELP Command

```
>>__MODIFY procname,HELP_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY HELP command displays the syntax and a brief description of each logon manager command.

### Operands

`procname`  
must be the same as the `procname` specified in the logon manager START command.

`HELP`  
displays logon manager help information.

### Examples

Displaying logon manager help:

```
modify elmngr,help
ELM022I HELP REQUEST ACCEPTED
ELM023I VALID COMMAND PARAMETERS ARE:
ELM024I HELP          ...GET VALID COMMAND FORMATS
ELM025I INFO, ID=NNNNNNNN ...GET STATUS FOR RESOURCE NAMED NNNNNNNN
ELM026I INFO, ID=CLU      ...GET STATUS FOR EACH CONTROL LOGICAL UNIT
ELM027I INFO, ID=CLU, PEND ...GET STATUS FOR EACH PENDING CLU
ELM028I INFO, ID=APPL     ...GET STATUS FOR EACH SUPPORTED APPLICATION
ELM029I INFO, ID=APPL, PEND ...GET STATUS FOR EACH PENDING APPL
ELM030I INFO, ID=ALL      ...GET STATUS FOR EACH CLU AND APPL
ELM031I INFO, ID=ALL, PEND ...GET STATUS FOR EACH PENDING CLU AND APPL
ELM032I MEMBER=MMMMMMMM ...PROCESS DEFINITION MEMBER MMMMMMMM
ELM033I MINLINK=VVV, ID=ALL...SET MINLINK VALUE TO VVV (1 - 255)
ELM034I                FOR EACH SUPPORTED APPLICATION
```

### 3.1.2 "VTAM V4R2 Operation" IBM Library Server

```
ELM035I MINLINK=VVV, ID=NNNNNNNNN... SET MINLINK VALUE FOR APPL NNNNNNNNN  
ELM036I STOP ...REQUESTS CLOSEDOWN
```

---



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## 3.1.3 MODIFY INFO Command

```
>>__MODIFY procname, INFO , ID= name _____><
                                     | APPL |
                                     | CLU  |
                                     | ALL  |
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY INFO command displays information about logon manager resources.

### Operands

`procname`  
must be the same as the `procname` specified in the logon manager START command.

`ID`  
identifies the resource or resources to include in the display.

`ID=name`  
displays only the named resource.

`ID=APPL`  
displays only logon manager TPF applications.

`ID=CLU`  
displays only channel-attached control point LUs.

`ID=ALL`  
displays both logon manager TPF applications and channel-attached control point LUs.

**PEND**

displays only resources with a status of pending (that is, resources in the process of being activated or deactivated).

If ID=name, displays the named resource only if the resource is in a pending state.

If ID=APPL, displays each logon manager application in a pending state.

If ID=CLU, displays each channel-attached control point LU in a pending state.

If ID=ALL, displays each logon manager application and each channel-attached control point LU in a pending state.

**Resulting Display**

The resulting display shows:

- The resource name
- The resource session status (active, inactive, or pending)
- The reason code for the resource, if appropriate
- The number of session initiation requests sent to the resource.

**Examples**

Displaying a specific logon manager resource:

**modify elmgr,info,id=trapl**

```
ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:
ELM040I TRAPL CLU ACTIVE SESCNT=19 SESLMT=32 0
```

Displaying pending logon manager TPF applications:

**modify elmgr,info,id=appl,pend**

```
ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:
ELM040I RES APPL PENDACTV LNKCNT=5 MINLINK=1 OPNOST 0
ELM040I FIN APPL PENDINAC LNKCNT=4 MINLINK=2 LOSTERM 22
```

Displaying logon manager channel-attached control point LUs:

**modify elmgr,info,id=clu**

```
ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:
ELM040I TRAPL CLU ACTIVE SESCNT=0 SESLMT=0 0
```

Displaying all logon manager resources:

**modify elmgr,info,id=all**

```
ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:
ELM040I RES APPL INACTIVE LNKCNT=0 MINLINK=1 0
ELM040I FIN APPL INACTIVE LNKCNT=0 MINLINK=2 0
ELM040I TEST1 APPL INACTIVE LNKCNT=0 MINLINK=1 0
ELM040I TEST2 APPL INACTIVE LNKCNT=0 MINLINK=1 0
```



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## 3.1.4 MODIFY MEMBER Command

```
>>__MODIFY procname, MEMBER=member_name_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY MEMBER command redefines the network configuration known to the logon manager. If the system programmer has modified the specified member, this command implements the changes by rebuilding the logon manager control blocks using the new definitions.

### Operands

*procname*  
must be the same as the *procname* specified in the logon manager START command.

*MEMBER*=*member\_name*  
identifies the member of the ELMDEFDS file to read.



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## 3.1.5 MODIFY MINLINK Command

```
>>__MODIFY procname,MINLINK=number_of_lus__,ID=appl_name____><
|_____|ALL_____|_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY MINLINK command changes the minimum number of supporting channel-attached, control-point logical units that the logon manager requires before allowing the TPF application to enter into a session.

### Operands

**procname**  
must be the same as the *procname* specified in the logon manager START command.

**ID**  
specifies whether to change the number of required links for one TPF application or for all applications.

**ID=appl\_name**  
identifies the application for which the number of required links is to change.

**ID=ALL**  
specifies that the minimum number of required links should change for all applications.

**MINLINK=number\_of\_lus**  
specifies the minimum number of supporting channel-attached, control-point logical units that the logon manager requires before allowing the TPF application to enter into a session. Specify a decimal integer 1-255.



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## 3.1.6 MODIFY STOP Command

```
>>__MODIFY procname, STOP_____><
```

### Abbreviations

Operand	Abbreviation
MODIFY	F

### Purpose

The MODIFY STOP command terminates a logon manager session. When this command is issued, the logon manager shuts down its ACBs, and returns control to MVS.

### Operands

`procname`  
must be the same as the *procname* specified in the logon manager START command.

STOP  
terminates the logon manager. Although all active sessions continue until completion, the logon manager denies any requests to initiate new sessions. When all active sessions end, the logon manager terminates.

The VTAM operator commands [HALT](#), [HALT QUICK](#), and [HALT CANCEL](#) also can be used to terminate a logon manager session. The effect of these commands on the logon manager is the same as their effect on any VTAM application.



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## 3.1.7 START Command

```
>>__START procname_____><
```

### Abbreviations

Operand	Abbreviation
START	S

### Purpose

The START command starts the logon manager. Enter this command from either the master console or a secondary system console.

The system programmer supplies logon manager start options in the JCL used to start the logon manager. If the options are not supplied, VTAM prompts the operator for the required options.

### Operands

*procname*  
is the name of the MVS procedure containing the JCL necessary to start the logon manager.

This *procname* must be used for all logon manager commands.



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## 4.1 Chapter 4. VSCS Operator Commands (VM)

This chapter is a reference to the operator commands available to the VM/SNA console support (VSCS) component of VTAM. It includes a description of the format and the applicable operands for each command. The descriptions are arranged alphabetically by command.

### Subtopics:

- [4.1.1 Command Fundamentals](#)
- [4.1.2 VSCS Buffer Use Commands](#)
- [4.1.3 VSCS CHANGE Command](#)
- [4.1.4 VSCS DISPLAY Command](#)
- [4.1.5 VSCS DUMPLU Command](#)
- [4.1.6 VSCS FORCE Command](#)
- [4.1.7 VSCS PRINTER Command](#)
- [4.1.8 VSCS QUERY Command](#)
- [4.1.9 VSCS QUIT, HALT, and CANCEL Commands](#)
- [4.1.10 VSCS START Command](#)
- [4.1.11 VSCS STORAGE Command](#)
- [4.1.12 VSCS Tracing Commands](#)



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## 4.1.1 Command Fundamentals

A VSCS operator command consists of the command name or its abbreviation and various operands that describe the operation to be performed.

VSCS operator commands are subcommands of the group control system (GCS) VSCS operator commands. All VSCS operator commands must be preceded by a prefix, usually "VSCS," which is determined by an operand of the GCS LOADCMD command. This prefix tells GCS to route the command to the VSCS command processor. This command may be coded in the PROFILE GCS file for the VSCS virtual machine.

Subtopics:

- [4.1.1.1 Syntax Notation](#)
- [4.1.1.2 Entering Operator Commands](#)



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### 4.1.1.1 Syntax Notation

See ["How to Read the Syntax Diagrams"](#) for details on the operator command syntax notation.

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## 4.1.1.2 Entering Operator Commands

Operator commands are entered and VSCS messages are received at the VSCS virtual machine's operator console, or VSCS can be controlled from the system operator's console using the secondary console image facility.

Operator command input devices, particular program operator application programs, and the VSCS program operator interface impose size limitations on the length of VSCS operator commands that can be entered. Except for the prompting that VSCS provides for start options, all VSCS operator commands must be entered on a single input line from whatever input device is being used.

Subtopics:

- [4.1.1.2.1 Correct and Incorrect Commands](#)



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#### 4.1.1.2.1 Correct and Incorrect Commands

VSCS issues messages that tell the operators whether the commands they entered were accepted or rejected. Note that this does not indicate command completion. When a command is entered correctly with valid operands, VSCS issues a message of acknowledgment. If a syntax error is made in entering a command, VSCS issues one or more error messages and rejects the command.

VSCS commands must not exceed 119 characters. If a command exceeds this limit, it is truncated at 119 characters with no messages indicating this was done unless the truncated command is not valid (an operand or its value is no longer complete).



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## 4.1.2 VSCS Buffer Use Commands

```
>> vscs | BFRFIFO | _____ ><
      | BFRLIFO |
```

### Purpose

During its operation, VSCS maintains pools of dynamic free buffers. Ordinarily, VSCS obtains and releases buffers from the storage pools in a last-in-first-out (BFRLIFO) fashion. You can specify, however, that VSCS use all the buffers in a single storage pool before reusing any, a first-in-first-out (BFRFIFO) technique. Use this as a debugging aid to examine the entire contents of a buffer, not only a few bytes, as with the trace table.

**Note:** This function can also be performed through the BFRFIFO operand of the DTIGEN macroinstruction. A description of the DTIGEN macroinstruction and its BFRFIFO operand is in the [VTAM Resource Definition Reference](#).

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**BFRFIFO**  
specifies that VSCS will use buffers in a first-in-first-out fashion. The use of this debugging aid increases VSCS processing time.

**Note:** When FIFO queuing is in effect, storage evaluation of free segments is suspended until LIFO queuing is restored.

**BFRLIFO**  
is used to revert the buffer use setting to the last-in-first-out method of buffer allocation. BFRLIFO specifies that the most recently-freed buffers will be the first allocated. BFRLIFO is the initial buffer use setting.



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## 4.1.3 VSCS CHANGE Command

```
>> vscs CHANGE _| Options | _____><
      (1)
```

### Note:

(1) Blanks are required between the option specifications.

### Options:

```
| _____>
| AOLIMIT=amount_of_storage_| CONFTEXT= Y | _____>
| _____>
| _____>
| DEF3278= Y | DEXIT= Y | _____>
| N | N | _____>
| _____>
| DMPFREQ=number_of_seconds_| _____>
| _____>
| DMPINTC=number_of_internal_dumps_| _____>
| _____>
| DMPSYSC=number_of_system_dumps_| DSPACE=number_of_messages_| _____>
| _____>
| DPXMTL=number_of_bytes_| FSREAD= Y | KEXIT= Y | _____>
| _____>
| N | N | _____>
| P | _____>
| _____>
| KSPACE=number_of_messages_| KPXMTL=number_of_bytes_| _____>
| _____>
| LEXIT= Y | LURTRY=number_of_reactivation_attempts_| _____>
| N | _____>
| _____>
| ONELOGO= Y | PRTSHR= Y | _____>
| N | N | _____>
| _____>
| ODEPTH=number_of_pending_requests_| RCVBFRL=number_of_bytes_| _____>
| _____>
| SCIPCNT=number_of_recovery_attempts_| _____>
```

```

> | _SCIPNUM=number_of_recovery_attempts_ | _____>
> | _SCRIPTIM=number_of_seconds_ | | _STCHKTM=number_of_seconds_ | _____>
> | _STRELTM=number_of_seconds_ | | _TIMECPY=number_of_seconds_ | _____>
> | _TIMEREL=number_of_seconds_ | | _TSKRTRY=number_of_task_retries_ | _____>
> | _VSAMLM=number_of_messages_ | | _WTWXL=number_of_characters_ | _____>
> | _W2741L=number_of_characters_ | | _W3767L=number_of_characters_ | _____>

```

### Abbreviations

Operand	Abbreviation
CHANGE	C

### Purpose

The CHANGE command allows you to modify various DTIGEN start options without having to halt and restart VSCS. With the CHANGE command, you can affect VSCS' use of:

- Storage when sending or receiving data for a logical unit
- System dump facilities during repetitive dump situations
- User exit control.

The syntax for the CHANGE command operands is the same as for the DTIGEN start options, with the exception of blanks being used as separators instead of commas. There are no defaults on the CHANGE command--only the values that you explicitly specify are changed. See the [VTAM Network Implementation Guide](#) for more information on the DTIGEN start options.

### Notes:

1. The CHANGE command allows multiple keyword parameter and value pairs. An incorrect parameter normally only nullifies that parameter and value. However, if you are close to the end of the input buffer, your input might appear valid, but might not be visible to VSCS. Therefore, it is considered incorrect.
2. Changes made to the DTIGEN operands with the CHANGE command are in effect only while VSCS is active. Change the DTIGEN operands using the DTIGEN macroinstruction to make the changes permanent. See the [VTAM Resource Definition Reference](#) for information on the DTIGEN macroinstruction.
3. The CHANGE command alters the DTIGEN operands immediately, but the changes go into effect when VSCS uses that particular operand.
4. The storage allocated for DPXMTL, KPXMTL, and RCVBFRL is not optimized

when using the VSCS CHANGE command. Use the DTIGEN macroinstruction to allow VSCS to optimize the size specified in the start options.

5. Misuse of the CHANGE command could cause serious performance problems on your system.
6. Only the DTIGEN start options specified on the CHANGE command can be altered with the CHANGE command.
7. Use the ["VSCS\\_DISPLAY Command"](#) to determine the current values of the DTIGEN start options.

## Operands

### VSCS

is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

### AQLIMIT=amount\_of\_storage

specifies the maximum amount of storage for exception response mode PIUs queued for each LU. The larger the value, the more exception response PIUs (PIUs that do not require a definite response) VSCS can issue, and the more VSCS private storage is used.

The valid range for AQLIMIT is 8192-32768. Any value that is not a multiple of 1024 is rounded up to the next multiple of 1024.

AQLIMIT is only used when the DTIGEN exception response mode option is set (SCHED=Y).

### CONFTEXT

specifies whether logical unit data should be considered confidential. In VTAM, this will only take effect on new sessions.

#### CONFTEXT=Y

specifies that logical unit data should be considered confidential.

#### CONFTEXT=N

specifies that logical unit data should not be considered confidential.

### DEF3278

specifies whether LU type 0s should be assumed to be 3278 type devices.

#### DEF3278=Y

specifies that LU type 0s should be assumed to be 3278 type devices.

#### DEF3278=N

specifies that LU type 0s should be assumed to be 3277 type devices.

DEXIT

specifies whether the user-coded display data translation exits should be given control. This will take effect the next time data is sent or received from a display logical unit.

DEXIT=Y

specifies that the user-coded display data translation exits should be given control.

DEXIT=N

specifies that the user-coded display data translation exits should not be given control.

DMPFREQ=number\_of\_seconds

specifies the time interval in which DMPINTC and DMPSYSC control the number of repetitive dumps allowed. This takes effect immediately, but is only used when repetitive dumps are occurring. The valid value range is DMPTIME-86399.

DMPINTC=number\_of\_internal\_dumps

specifies the number of repetitive internal dumps allowed during the time interval specified by DMPFREQ. This takes effect immediately. The valid value range is 0-255.

DMPSYSC=number\_system\_dumps

specifies the number of repetitive system detected dumps allowed during the time interval specified by DMPFREQ. This takes effect immediately. The valid value range is 0-255.

DPACE=number\_of\_messages

specifies the pacing value between VSCS and CCS for a display LU. This only affects new logons to CP. The valid value range is 0-255.

DPXMTL=number\_of\_bytes

specifies the transmit buffer size used for non full-screen display data. This will take effect the next time a transmit buffer is obtained for a display logical unit. The valid value range is 256-32600.

FSREAD

specifies whether VSCS should save the user's display screen before displaying CP messages on the screen.

FSREAD=Y

specifies that VSCS should save the user's display screen before displaying CP messages on the screen. This will take effect immediately.

If Y is coded, VSCS invokes this function under two conditions:

- If VSCS receives a CP READ while the user is in full-screen mode

- After VSCS receives a CP-generated console mode write request (for example, a CP MSG command) while in full-screen mode and then receives any input from the user.

FSREAD=N

specifies that VSCS should not save the user's display screen before displaying CP messages on the screen. This will take effect immediately.

If N is coded, user data can be lost when messages are received and the display is in full-screen mode.

FSREAD=P

specifies that VSCS should save the user's display screen before displaying CP messages on the screen, if the messages are generated by the use of a PA key (PA1, PA2, or PA3). This will take effect immediately.

KEXIT

specifies whether the user-coded keyboard/printer data translation exit should be given control. This will take effect the next time data is sent or received from a keyboard/printer logical unit.

KEXIT=Y

specifies that the user-coded keyboard/printer data translation exit should be given control.

KEXIT=N

specifies that the user-coded keyboard/printer data translation exit should not be given control.

KPACE=number\_of\_messages

specifies the pacing value between VSCS and CCS for a keyboard/printer logical unit. This only affects new logons to CP. The valid value range is 1-255.

**Note:** This has no effect on TWX devices, whose pace values are always 1.

KPXMTL=number\_of\_bytes

specifies the transmit buffer size used for keyboard/printer data. This will take effect the next time a transmit buffer is obtained for a keyboard/printer logical unit. The valid value range is 138-32600.

LEXIT

specifies whether the VSCS logon exit should be given control to process logon requests. This takes effect when the next logon request is received.

LEXIT=Y

specifies that the VSCS logon exit should be given control to process logon requests.

LEXIT=N

specifies that the VSCS logon exit should not be given control to process logon requests.

LURTRY=number\_of\_reactivation\_attempts

specifies the error retry count for each LU. This will take effect immediately. The valid value range is 0-TSKRTRY.

ONELOGO

specifies whether an LU which receives the VM logo is to be returned to VTAM after logging off or disconnecting from CP. This will take effect immediately.

ONELOGO=Y

specifies that an LU which receives the VM logo is to be returned to VTAM after logging off or disconnecting from CP.

ONELOGO=N

specifies that an LU which receives the VM logo is not to be returned to VTAM after logging off or disconnecting from CP.

PRTSHR

specifies whether VSCS should allow printer reallocation and sharing. This takes effect immediately.

PRTSHR=Y

specifies that VSCS should allow printer reallocation and sharing.

PRTSHR=N

specifies that VSCS should not allow printer reallocation and sharing.

QDEPTH=number\_of\_pending\_requests

specifies the number of pending requests allowed for an LU before the LU is purged. The valid value range is 200-32600.

RCVBFRL=number\_of\_bytes

specifies the buffer length, in bytes, for VTAM RECEIVE requests issued by VSCS. This will take effect as input data is received from VTAM. The valid value range is 85-32600.

SCIPCNT=number\_of\_recovery\_attempts

specifies the number of times VSCS will attempt to recover each logical unit after a network outage. This will take effect immediately. The valid value range is 0-10.

SCIPNUM=number\_of\_recovery\_attempts

specifies the number of SIMLOGON attempts to be issued during the time

interval specified by SCIPTIM. This will take effect immediately, but will not affect any logical units already suspended until the SCIPTIM interval has expired. The valid value range is 0-32600.

SCIPTIM=number\_of\_seconds

specifies the time interval in which SCIPNUM logical units can attempt recovery. This takes effect immediately, but will not directly affect any logical units already suspended until the previous time interval has expired. The valid value range is 0-3600 (1 hour).

STCHKTM=number\_of\_seconds

specifies the time interval between checks of VSCS storage for unused segments. This will take effect immediately if currently set to zero or after the current interval expires. The valid value range is 0-86399.

STRELTM=number\_seconds

specifies the time interval between releases of VSCS storage already found to be unused. This will take effect immediately if currently set to zero or after the current interval expires. The valid value range is 0-86399.

TIMECPY=number\_of\_seconds

specifies the printer allocation time limit in seconds. This will take effect immediately, but will not affect any current timers set. The valid value range is 0-30.

TIMEREL=number\_of\_seconds

specifies the printer deallocation time limit in seconds. This will take effect immediately, but will not affect any current timers set. The valid value range is 0-86399.

TSKRTRY=number\_of\_task\_retries

specifies the task retry count (the maximum number of retries of a task that abends) before VSCS termination is invoked. This will take effect immediately. The valid value range is 0-255.

VSAMLM=number\_of\_messages

specifies the maximum number of concurrent IUCV messages that can be transferred between VSCS and CCS at any one time. This value has limited effect on current CP connections and full effect on new CP connections. The valid value range is 4-255.

WTWXL=number\_of\_characters

specifies the initial line length provided to CP for TWX logical units. This will take effect on new CP TWX connections. You can change the length with the CP TERMINAL command after logon. The valid value range is 1-255.

W2741L=number\_of\_characters

specifies the initial line length provided to CP for 2741 keyboard/printer logical units. This will take effect on new CP 2741 connections. You can change the length with the CP TERMINAL command after logon. The valid value range is 1-255.

W3767L=number\_of\_characters

specifies the initial line length provided to CP for 3767 keyboards/printer logical units. This will take effect on new CP 3767 connections. You can change the length with the CP TERMINAL command after logon. The valid value range is 1-255.



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## 4.1.4 VSCS DISPLAY Command

```
>> vscs DISPLAY ID= lu_name | OPTIONS | PRTTAB ><
```

### Abbreviations

Operand	Abbreviation
DISPLAY	D

### Purpose

Use the DISPLAY command to display:

- Device characteristics and current status of any LU in session with VSCS
- Status of any printer defined or attached to VSCS
- Current setting of the DTIGEN start options. This information is useful in determining if the correct logmode and printer status were used for a particular LU.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**ID=lu\_name**  
specifies the LU name or names whose status and characteristics you wish to review. Separate the LU names by blanks.

The LU names can be network-qualified. If the names are not network-qualified, all LUs matching the specified *lu\_name* are displayed.

**OPTIONS**  
requests that some of the DTIGEN operands and start options be displayed.

**PRTTAB**

requests that all VSCS printer table entries be displayed, along with the DTIGEN operands that pertain to VSCS printers.

## Examples

Displaying LUs:

```
vscls d id=l7201a neta.l7211a vtam
```

```
DTIS60I DISPLAY COMMAND ACCEPTED
DTIS61I LU NAME = NETA.L7201A DEVICE TYPE = 3277 MODEL = 2
DTIS62I LU TYPE = 0 DEVICE FEATURES = NEDS APL( OLD )
DTIS63I SCREEN SIZE = 24 BY 80 ALTERNATE SIZE = BY PACE = 24
DTIS65I IUCV PATHIDS = 2 1 CURRENT RPL COMMAND = SEND RPL IS FREE
DTIS66I CURRENT STATES: PS = NMH VS = NORM DR
DTIS67I LOGON TIME = 13 : 40 : 01 USERID = TMAINT
DTIS68I SEND COUNT = 00000006 RECEIVE COUNT = 00000002
DTIS61I LU NAME = NETA.L7211A DEVICE TYPE = 3277 MODEL = 2
DTIS62I LU TYPE = 0 DEVICE FEATURES = NEDS APL( OLD )
DTIS63I SCREEN SIZE = 24 BY 80 ALTERNATE SIZE = BY PACE = 24
DTIS65I IUCV PATHIDS = 3 2 CURRENT RPL COMMAND = SEND RPL IS FREE
DTIS66I CURRENT STATES: PS = NMH VS = NORM DR
DTIS67I LOGON TIME = 13 : 40 : 23 USERID = MAINT
DTIS68I SEND COUNT = 00000008 RECEIVE COUNT = 00000002
DTIS61I LU NAME = NETA.VTAM DEVICE TYPE = 3277 MODEL = X
DTIS62I LU TYPE = 0 DEVICE FEATURES = NEDS APL( OLD )
DTIS63I SCREEN SIZE = 0 BY 0 ALTERNATE SIZE = BY PACE = 0
DTIS65I IUCV PATHIDS = 0 0 CURRENT RPL COMMAND = NONE RPL IS FREE
DTIS66I CURRENT STATES: PS = LIP VS = NORM DR
DTIS67I LOGON TIME = 13 : 32 : 13 USERID = NONE
DTIS68I SEND COUNT = 00000000 RECEIVE COUNT = 00000000
DTIS77I VSCS COMMAND PROCESSING COMPLETE
```

Displaying start options:

```
vscls d options
```

```
DTIS60I DISPLAY COMMAND ACCEPTED
DTIX10I DEXIT - N FSREAD - Y KEXIT - N ONELOGO - N
DTIX11I PRTSHR - Y CONFTEXT - N DEF3278 - N LEXIT - N
DTIX12I DMPFREQ - 0 DMPINTC - 0 DMPSYSC - 0 DMPTIME - 90
DTIX13I DPACE - 0 DPXMTL - 1948 KPACE - 10 KPXMTL - 284
DTIX14I RCVBFRL - 284 LURTRY - 5 TSKRTRY - 10 AQLIMIT - 16384
DTIX15I SCIPCNT - 2 SCIPNUM - 0 SCIPTIM - 0 QDEPTH - 200
DTIX16I STCHKTM - 0 STRELTM - 0 TIMECPY - 3 TIMEREL - 120
DTIX17I VSAMLM - 10 WTWXL - 72 W2741L - 129 W3767L - 129
DTIS77I VSCS COMMAND PROCESSING COMPLETE
```

Displaying the contents of the printer table:

```
vscls d prttab
```

```
DTIS60I DISPLAY COMMAND ACCEPTED
DTIX02I PRINTER SHARING = Y TABLE ENTRIES = 16
DTIX04I PRT NAME DSP NAME STATE TYPE COND
DTIX05I NETWORKC.PRINTER1 IDLE OPER INACT
DTIX05I NETA.PRINTER2 IDLE OPER INACT
DTIX05I NETWORKB.PRINTER3 IDLE OPER INACT
DTIS77I VSCS COMMAND PROCESSING COMPLETE
```



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## 4.1.5 VSCS DUMPLU Command

```
>> vscs DUMPLU ID= lu_name | _____ ><
```

### Abbreviations

Operand	Abbreviation
DUMPLU	DLU

### Purpose

Use the DUMPLU command to obtain documentation for one or more VSCS LUs without having to dump the entire VSCS virtual machine.

This command generates a unique dump title for each LU specified by the ID operand. The title states that the dump was requested by the operator. The title also contains the LU name.

If the size of the partial dump is too large, or the required control blocks are not available, this command requests a complete dump of the virtual machine.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**ID=lu\_name**  
specifies the name of one or more LUs for which you require a partial dump. Separate the LU names by blanks.

The LU names can be network-qualified. If the names are not network-qualified, all LUs matching the specified *lu\_name* are dumped.







## 4.1.6 VSCS FORCE Command

```
>> vscs FORCE ID= <lu_name | _____ ><
```

### Abbreviations

Operand	Abbreviation
FORCE	F

### Purpose

The VSCS FORCE command enables the VSCS operator to force the termination of the CP connection and the associated VTAM LU session when CP FORCE and VARY INACT commands are not able to terminate the session. The VSCS FORCE command will terminate the session even if there is current VTAM I/O outstanding, but there is no guarantee that the session will cleanup. Issue the VSCS FORCE command more than once per LU if necessary.

The VSCS FORCE command automatically removes printer table entries if they are not in use. If the printer is being logged on, issue the VSCS FORCE command twice to remove it from the printer table. The DISPLAY PRRTAB command can be used to determine the current state for any VSCS printer.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**ID=lu\_name**  
specifies the name of one or more LUs whose sessions you wish to terminate. Separate the LU names by blanks.

The LU names can be network-qualified. If the network identifier is not provided, it is assumed to be the owning VTAM's network identifier.

### Examples

Forcing session termination:

**vscs force id=17201a**

DTIS51I FORCE COMMAND ACCEPTED

DTIS77I VSCS COMMAND PROCESSING COMPLETE

DTIS52I FORCE INITIATED FOR NETA.L7201A BY OPERATOR

DTIS53I NETA.L7201A FORCE HAS COMPLETED

---



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## 4.1.7 VSCS PRINTER Command

```
>> vscs PRINTER | ID= | lu_name | _____ ><
```

### Abbreviations

Operand	Abbreviation
PRINTER	P

### Purpose

The VSCS PRINTER command allows printer sharing. This command enables VSCS to recognize printer names by placing the LU name of the printer in the printer active table.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**ID=lu\_name**  
specifies the name of one or more printer LUs in the VTAM network that are available to VSCS for sharing. There can be as many names as will fit in 119 characters including the command PRINTER. If the command line exceeds 119 characters, it is truncated at 119 characters with no message indicating this was done.

Separate the LU names by blanks.

The LU names can be network-qualified. If the network identifier is not provided, it is assumed to be the owning VTAM's network identifier.

### Examples

Adding a printer LU name to the printer active table:

```
vscs p a81a721  
DTIS77I VSCS COMMAND PROCESSING COMPLETE
```

---



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## 4.1.8 VSCS QUERY Command

```
>> vscs QUERY <<
```

### Abbreviations

Operand	Abbreviation
QUERY	Q

### Purpose

The VSCS QUERY command lets the operator check the status of diagnostic tool options, such as buffer use and VSCS tracing. The QUERY command displays the location of the VSCS trace table (if it exists), status of VSCS tracing, and buffer use status.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

### Examples

Querying VSCS:

```
vscs query
DTIS74I TRACE TABLE STARTS AT 01A25020 END 01A2CD5F , CURRENT 01A25780 , SIZE 2000
DTIS84I SELECTIVE TRACE ACTIVE FOR LOGICAL UNIT NETWORKC.PRINTER1
DTIS84I SELECTIVE TRACE ACTIVE FOR LOGICAL UNIT NETA.L7201A
DTIS87I SELECTIVE CCS, DISPATCHER, VTAM TRACE ACTIVE FOR 2 LU(S)
DTIS96I 62 MORE MAY BE ACTIVATED
DTIS93I VSCS EXTERNAL TRACE IS DISABLED
DTIS78I BUFFER DEQUEUE IS IN NORMAL MODE(BFRLIFO)
DTIS77I VSCS COMMAND PROCESSING COMPLETE
```



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## 4.1.9 VSCS QUIT, HALT, and CANCEL Commands

```
>> vscs QUIT _____><
```

```
>> vscs HALT _____><
```

```
>> vscs CANCEL _____><
```

### Purpose

There are three different commands for terminating VSCS:

- The QUIT command causes VSCS to terminate normally. All users are disconnected and VSCS is terminated.
- The HALT command is included for compatibility with VTAM. It terminates VSCS like the VSCS QUIT command.
- The CANCEL command should be used only when QUIT or HALT do not work. The CANCEL command causes immediate abnormal termination of VSCS without any orderly cleanup of LUs. The VSCS CANCEL command creates an abend with a completion code of X'13E'.

### Operands

VSCS  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.



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## 4.1.10 VSCS START Command

```
>> vscs START | PARM=load_module_number | <<
```

### Purpose

The VSCS START command starts VSCS. VSCS can be started independently of VTAM, though it will not complete initialization until VTAM and the VSCS application node are active. If VSCS is started before VTAM, it will periodically attempt to retry startup until VTAM is initialized and the VSCS application program node is activated, or until the maximum number of retries is reached. Retry is attempted once every 30 seconds, and the maximum number of retries can be specified by the VSCS start option, ACBLOOP.

### Operands

**vscs**  
is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

**PARM=load\_module\_number**  
specifies a set of DTIGEN operands and start options to use. This value must be a single digit number (0-9) that corresponds to the number of a DTIUSERx load module containing the link-edited DTIGEN operands and start options. For information on using the DTIGEN macroinstruction to code alternate DTIGEN operands and start options, see the [VTAM Resource Definition Reference](#).



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## 4.1.11 VSCS STORAGE Command

>> [vscs STORAGE](#) <<

### Abbreviations

Operand	Abbreviation
STORAGE	S

### Purpose

The VSCS STORAGE command displays the DTIGEN operands and start options that affect dynamic storage utilization, as well as the current dynamic storage utilization. This information is useful in adjusting the DTIGEN operands and start options to minimize the VSCS dynamic storage usage. If the DTIGEN start options STCHKTM and STRELTM are zero, dynamic storage information is not displayed. (See the [VTAM Network Implementation Guide](#) for more information on the DTIGEN operands and start options.)

### Operands

VSCS is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

### Examples

Displaying VSCS dynamic storage utilization when the values of STCHKTM and STRELTM are zero:

```

vscs storage
DTIS15I DYNAMIC STORAGE UTILIZATION
DTIS16I RCVBFRL -      284 DPXMTL -      1948 KPXMTL -      284
DTIS17I RPLNUM -       8 VSAMLM -       10 VEIBS -       3
DTIS18I BLKMULT -       1 STCHKTM -       0 STRELTM -       0
DTIS19I GETMAIN -      11 FREEMAIN -       1 SWAP -       0
DTIS20I VTAMSES -       0 CPCONNS -       0 CPMAX -       0
DTIS11I SPECIAL -       0 SPGET -       0 SPFREE -       0
DTIS12I BADSIZE -       0 BADCOUNT -       0
DTIS50I STATIC STORAGE UTILIZATION

```

```

DTIS23I PATHTAB - 1608 LOGO - 2720 VTAMWA - 1376
DTIS24I PRINTER - 0 K TRACE - 31 K
DTIS77I VSCS COMMAND PROCESSING COMPLETE

```

Displaying VSCS dynamic storage utilization when the value of either STCHKTM or STRELTM is greater than zero:

**vscs storage**

```

DTIS15I DYNAMIC STORAGE UTILIZATION
DTIS16I RCVBFRL - 284 DPXMTL - 1948 KPXMTL - 284
DTIS17I RPLNUM - 8 VSAML - 10 VEIBS - 15
DTIS18I BLKMULT - 1 STCHKTM - 3 STRELTM - 0
DTIS19I GETMAIN - 21 FREEMAIN - 1 SWAP - 0
DTIS20I VTAMSES - 1 CPCONNS - 1 CPMAX - 1
DTIS11I SPECIAL - 0 SPGET - 0 SPFFREE - 0
DTIS12I BADSIZE - 0 BADCOUNT - 0
DTIS14I DYNAMIC STORAGE IN USE
DTIS21I POOL HIGHWATER/VTAMSES CURRENT AVAILABLE LIFO
DTIS22I PS 10 / 1 9 7 TOTAL= 56 K
DTIS22I VS 3 / 1 3 2 TOTAL= 12 K
DTIS22I VX 2 / 1 2 0 TOTAL= 8 K
DTIS14I DYNAMIC STORAGE NOT IN USE
DTIS21I POOL HIGHWATER/VTAMSES CURRENT AVAILABLE LIFO
DTIS22I S1 3 / 1 3 3 TOTAL= 12 K
DTIS22I S2 0 / 0 0 0 TOTAL= 0 K
DTIS22I S3 0 / 0 0 0 TOTAL= 0 K
DTIS50I STATIC STORAGE UTILIZATION
DTIS23I PATHTAB - 1608 LOGO - 2720 VTAMWA - 1376
DTIS24I PRINTER - 0 K TRACE - 31 K
DTIS77I VSCS COMMAND PROCESSING COMPLETE

```



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## 4.1.12 VSCS Tracing Commands

Turn on global tracing (all LUs):

```
>> vscs TRACEON * ><
```

Turn on global tracing (set trace options):

```
>> vscs TRACEON (CCS VTAM ><
  <
  ( ALL <
    ILU
    SIZE number_of_entries
    EXT
    STAT
  <
    CCS
    DAT
    DISP
    FRE
    GET
    OPER
    VTAM
    EXT
    ILU
    SIZE number_of_entries
    STAT
```

Turn on selective tracing (specify the LUs and the options):

```
>> vscs TRACEON < lu name >
```

```
> (CCS VTAM ><
  <
  ( ALL <
    ILU
    SIZE number_of_entries
    EXT
    STAT
  <
    CCS
    DAT
    DISP
    OPER
    VTAM
    EXT
    ILU
    SIZE number_of_entries
    STAT
```

Turn off global tracing:

```
>> vscs TRACEOFF * ><
```

Turn off global tracing (specify options to turn off):

```
>> vscs TRACEOFF ( ALL | STAT | _____ ) ><
      |
      | < _____ |
      | CCS | _____ |
      | DAT | _____ |
      | DISP | _____ |
      | FRE | _____ |
      | GET | _____ |
      | OPER | _____ |
      | VTAM | _____ |
      | ILU | _____ |
      | EXT | _____ |
      | STAT | _____ |
```

Turn off selective tracing (specify the LUs and options to turn off):

```
>> vscs TRACEOFF < lu_name | _____ ) ><
      |
      | ( ALL | STAT | _____ ) |
      |
      | < _____ |
      | CCS | _____ |
      | DAT | _____ |
      | DISP | _____ |
      | OPER | _____ |
      | VTAM | _____ |
      | ILU | _____ |
      | EXT | _____ |
      | STAT | _____ |
```

### Abbreviations

Operand	Abbreviation
TRACEON	TO
TRACEOFF	TF

### Purpose

You can use the TRACEON and TRACEOFF commands to modify the trace options that were specified on DTIGEN when VSCS was started. You can trace all LUs (global tracing) or individual LUs (selective tracing) and you can record trace data to an external file.

The length of the entire command cannot exceed 130 characters. Any characters beyond 130 are truncated and ignored.

### Operands

#### vscs

is the prefix required for commands issued to VSCS. This prefix (usually "VSCS") is determined by an operand of the GCS LOADCMD command. This command can be coded in the PROFILE GCS file for the VSCS virtual machine. Use the prefix required by your installation.

#### lu\_name

turns selective tracing on or off for the specified LUs. Up to 64 logical units can be traced at one time. Separate the LU names by



spaces.

The LU names can be network-qualified. If the network identifier is not provided, it is assumed to be the issuing network's network identifier.

\*

turns selective tracing on or off for all LUs.

The \* turns global tracing on or off (tracing of all LUs). You cannot specify \* and trace options on the same command, but you can specify \* on one command and trace options on another command.

You can use TRACEON \* to start global tracing or to reset selective tracing to global tracing. When you reset selective tracing to global, all currently active trace options remain active except the ILU option. You have to explicitly start the ILU option for global tracing if you want it. Remember also to start the global trace options GET and FRE if you want them.

TRACEOFF \* stops all traces and deactivates the trace facility.

ALL

acts as a toggle to turn tracing on or off.

With global tracing, TRACEON (ALL starts the CCS, DAT, DISP, GET, FRE, OPER, and VTAM trace options. With selective tracing, TRACEON (ALL starts the CCS, DAT, DISP, OPER, and VTAM trace options. When used with the EXT option, ALL starts the recording of trace data externally as well as internally.

TRACEOFF (ALL stops all traces except for STAT and deactivates the trace facility.

CCS

starts or stops tracing of the flow of data to and from CCS. CCS is one of two default trace options.

DAT

starts or stops tracing of user data transmitted to and received from a user's LU. Data is traced using the format received from CCS or in the format provided to CCS. The internal trace captures up to 18 bytes of data; the external trace captures up to 241 bytes of data.

DISP

starts or stops tracing of the VSCS dispatcher.

EXT

acts as a toggle to start or stop sending trace data to an external medium, such as a file. When EXT is inactive, trace data is recorded internally. When EXT is active, the same trace data is recorded both internally and externally. The system external trace facility must be active for data to be recorded. See [VTAM Diagnosis](#) for additional information about use of the external trace facility.

FRE

starts or stops tracing of requests to the VSCS storage manager to free blocks of storage.

**Note:** GET and FRE pertain only to global tracing. GET and FRE trace entries are only recorded in the global trace table; they are not recorded in individual LU trace tables. You cannot specify GET and FRE on a command that starts or stops selective tracing. If trace options GET and FRE are currently active, and you begin selective tracing, the GET and FRE options are turned off.

## GET

starts or stops tracing of requests to the VSCS storage manager to get blocks of storage.

## ILU

causes trace entries that are generated by the LU-related trace options (CCS, VTAM, DISP, and DAT) to be recorded in individual LU trace tables, as well as in the global trace table. VSCS allocates an individual LU trace table for each LU being traced. (Either selective tracing of specified LUs or global tracing of all LUs can be in effect.) You can specify the size of individual LU trace tables with the SIZE trace option.

If you specify the ILU trace option with EXT, trace data is recorded internally in the global trace table, internally in individual LU trace tables, and externally to a trace file. (All entries are recorded in both the global trace table and the external file.)

If you specify the ILU option on a TRACEOFF command, VSCS stops recording LU-related trace entries in individual trace tables and deallocates the individual trace tables. VSCS continues to record trace data for active trace options in the global trace table and external trace file. The trace data in the individual trace tables is lost, but the same data is available in the global trace table if it has not wrapped.

**Note:** The ILU option can have a significant impact on storage and performance, particularly if you are tracing a large number of LUs. You should carefully consider the private storage requirements for individual LU trace tables and the effect on performance before activating the ILU trace option.

## OPER

provides an indication, in the VSCS trace table or externally, when a VSCS command or message is issued.

## SIZE number\_of\_entries

is valid only with the TRACEON command and only when the ILU trace option is in effect (that is, ILU is specified on the same TRACEON command with SIZE, or ILU was specified on a previous command). SIZE specifies the number of 32-byte entries in each LU's trace table. SIZE can be any integer in the range 5-125.

If you do not specify SIZE, the following order of precedence is used to determine the default size:

1. The SIZE value previously specified on a TRACEON command
2. The ILUSIZE start option on a DTIGEN macro in the current DTIUSERx module
3. 40.

The size of each trace table might be somewhat larger than the value specified on the SIZE trace option because VSCS allocates storage in predefined block sizes. You can use the ["VSCS QUERY Command"](#) to show the location and actual size of the global trace table and the options that are active. You can use the ["VSCS DISPLAY Command"](#) to show the location and size of an LU's trace table.

If VSCS tracing is already active, you can issue another TRACEON command using the SIZE operand. This causes VSCS to allocate the new size of tables for each new LU that logs on after the command is issued. Currently allocated trace tables are not affected. See the

[VTAM Network Implementation Guide](#) for additional information about allocation of storage.

#### STAT

provides storage statistics trace externally. This trace option must be specified on the VSCS tracing commands to activate or deactivate the tracing. The STCHKTM DTIGEN start option must be set to a value greater than zero before data can be recorded.

**Note:** STAT does not use the same VSCS tracing facility as the other options. The external recording of STAT is independent of the EXT option.

#### VTAM

starts or stops tracing of the VTAM application program interface. VTAM is one of two default trace options.



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# A.0 Appendix A. Cross-Reference for VTAM DISPLAY Commands

This appendix is supplied to help you determine which DISPLAY command to use to locate a specific piece of information. The list of DISPLAY command output is not exhaustive, but it does contain the most widely used output.

The DISPLAY commands are listed across the top of the table with the information in the output examples located down the left side of the table. To determine which DISPLAY command displays a given piece of information, locate the information on the left side and read across to find a large dot. A dot indicates that the command provides the requested piece of information. More than one dot indicates that more than one DISPLAY command displays the requested piece of information.

An example of the usage for this table would be if you want to display an access method control block name (ACB name). First you would locate "ACB name" on the left side of the table. Next, read across the table and identify the columns where there are dots. In this case, this information can be displayed by three different DISPLAY commands: APPLS, ID, and PENDING. Refer to the specific DISPLAY command in [Chapter 2, "VTAM Operator Commands,"](#) for details on how to display a particular piece of information using a command.

**DISPLAY Command**

**DISPLAY Command Output**

Access method control block (ACB name)  
 Active sessions  
 Adjacent cluster table definitions  
 Adjacent CP  
 Adjacent SSCP tables  
 Adjacent subarea address  
 Adjacent subarea node  
 Application program  
 Application program name  
 APPN directory database  
 Buffer pool data  
 Buffer trace  
 Buffer usage  
 CDRM  
 CDRM for a CDRSC  
 Channel-attached links  
 Channel unit address (CUA)  
 Checkpoint date and time  
 Class-of-service mapping  
 Class-of-service name  
 Class-of-service (COS) table  
 Clusters  
 Common service area (CSA) buffers  
 Communication scanner processor (CSP)  
 Conversation ID (CONVID)  
 CP - CP session information  
 Cross-domain resource (CDRSCS)  
 Current transmission group (CTG)  
 Data compression  
 Data space usage  
 Dependent LU requester  
 Destination node  
 Destination subarea address  
 Dump name  
 Dump procedure address  
 Dynamic CDRSC support  
 Elapse time (ETIME)  
 Element address  
 Exit routines  
 Expansion limit  
 Explicit route length  
 Explicit route (ER) number

	ADJCLUST	ADJCP	ADJSSCPS	APPLS	BFRUSE	BNCOSMAP	CDRMS	CDRSCS	CLSTRS	CNOS	CONVID	COS	DIRECTORY	DISK	DLURS	EXIT	GROUPS	ID	LINES	LMTBL	LUGROUPS	
Access method control block (ACB name)			•															•				
Active sessions																			•			
Adjacent cluster table definitions	•																					
Adjacent CP		•																	•			
Adjacent SSCP tables			•																			
Adjacent subarea address																			•			
Adjacent subarea node																			•			
Application program				•				•														
Application program name										•	•								•		•	
APPN directory database													•									
Buffer pool data					•																	
Buffer trace																				•		
Buffer usage					•																	
CDRM								•												•		
CDRM for a CDRSC								•												•		
Channel-attached links																					•	
Channel unit address (CUA)																			•	•		
Checkpoint date and time																						
Class-of-service mapping						•																
Class-of-service name																						
Class-of-service (COS) table													•									
Clusters									•													
Common service area (CSA) buffers					•																	
Communication scanner processor (CSP)																						
Conversation ID (CONVID)											•											
CP - CP session information		•																		•		
Cross-domain resource (CDRSCS)								•												•		
Current transmission group (CTG)																				•		
Data compression																						
Data space usage																						
Dependent LU requester																•						
Destination node																						
Destination subarea address																						
Dump name														•								
Dump procedure address																				•		
Dynamic CDRSC support																				•		
Elapse time (ETIME)											•											
Element address								•												•		
Exit routines																	•					
Expansion limit					•																	
Explicit route length																						
Explicit route (ER) number																						

DISPLAY Command

DISPLAY Command Output

Access method control block (ACB name)  
 Active sessions  
 Adjacent cluster table definitions  
 Adjacent CP  
 Adjacent SSCP tables  
 Adjacent subarea address  
 Adjacent subarea node  
 Application program  
 Application program name  
 APPN directory database  
 Buffer pool data  
 Buffer trace  
 Buffer usage  
 CDRM  
 CDRM for a CDRSC  
 Channel-attached links  
 Channel unit address (CUA)  
 Checkpoint date and time  
 Class-of-service mapping  
 Class-of-service name  
 Class-of-service (COS) table  
 Clusters  
 Common service area (CSA) buffers  
 Communication scanner processor (CSP)  
 Conversation ID (CONVID)  
 CP - CP session information  
 Cross-domain resource (CDRSCS)  
 Current transmission group (CTG)  
 Data compression  
 Data space usage  
 Dependent LU requester  
 Destination node  
 Destination subarea address  
 Dump name  
 Dump procedure address  
 Dynamic CDRSC support  
 Elapse time (ETIME)  
 Element address  
 Exit routines  
 Expansion limit  
 Explicit route length  
 Explicit route (ER) number

	MAJNODES	MODELS	NCPSTOR	NETSRVR	PATHS	PATHTAB	PENDING	ROUTE	RSCLIST	SESSIONS	STATIONS	STATS	STORUSE	TABLE	TERMS	TGPS	TOPO	TRACES	TRL	TSOUSER	USERVAR	VTAMOPTS
Access method control block (ACB name)							●															
Active sessions									●													
Adjacent cluster table definitions																						
Adjacent CP																						
Adjacent SSCP tables																						
Adjacent subarea address					●			●														
Adjacent subarea node																						
Application program							●		●													
Application program name																				●	●	
APPN directory database																						
Buffer pool data																						
Buffer trace																			●			
Buffer usage																						
CDRM									●													
CDRM for a CDRSC																						
Channel-attached links																						
Channel unit address (CUA)																						
Checkpoint date and time																		●				
Class-of-service mapping																						
Class-of-service name								●														
Class-of-service (COS) table										●												
Clusters							●		●													
Common service area (CSA) buffers																						
Communication scanner processor (CSP)																						
Conversation ID (CONVID)																						
CP - CP session information																		●				
Cross-domain resource (CDRSCS)									●													
Current transmission group (CTG)																						
Data compression												●										
Data space usage													●									
Dependent LU requester																						
Destination node																		●				
Destination subarea address						●		●														
Dump name																						
Dump procedure address																						
Dynamic CDRSC support																						
Elapse time (ETIME)																						
Element address																						
Exit routines																						
Expansion limit																						
Explicit route length					●																	
Explicit route (ER) number						●		●														

Figure 9. DISPLAY Output Cross Reference (A-E)

**DISPLAY Command**

**DISPLAY Command Output**

Generalized PIU trace (GPT)  
 Generated TG (GTG)  
 Group identifier (GID)  
 I/O traces  
 Independent LUs  
 Intermediate routing node buffers  
 Intermediate routing node trace  
 Job name  
 Line group  
 Line name  
 Line trace  
 Line type  
 Lines/links  
 Link station  
 Load module name  
 Load procedure status  
 Logical unit (LU)  
 Logical unit name (LUNAME)  
 Logon mode name  
 Major node name  
 Major node data  
 Major node subordinate resources  
 Minor node data  
 Minor node subordinate resources  
 Model LUs  
 Model PUs  
 Negpoll (negative response polling)  
 Network control program (NCP)  
 Network ID  
 Network node servers  
 Node characteristics  
 Node type  
 Origin node  
 Owned TGs  
 Paths, switched

	ADJCLUST	ADJCP	ADJSSCPS	APPLS	BFRUSE	BNCOSMAP	CDRMS	CDRSCS	CLSTRS	CNOS	CONVID	COS	DIRECTORY	DISK	DLURS	EXIT	GROUPS	ID	LINES	LMTBL	LUGROUPS	
Generalized PIU trace (GPT)																			•			
Generated TG (GTG)																			•			
Group identifier (GID)																						
I/O traces																			•			
Independent LUs								•														
Intermediate routing node buffers					•																	
Intermediate routing node trace																			•			
Job name																			•			
Line group																			•			
Line name																			•			
Line trace																			•			
Line type																			•			
Lines/links																	•	•				
Link station																						
Load module name														•								
Load procedure status																			•			
Logical unit (LU)								•											•			
Logical unit name (LUNAME)										•	•										•	
Logon mode name										•	•										•	
Major node name	•		•				•	•				•						•	•			•
Major node data																			•			
Major node subordinate resources																			•			•
Minor node data																			•			
Minor node subordinate resources																			•			
Model LUs																						•
Model PUs																						
Negpoll (negative response polling)																			•			
Network control program (NCP)														•					•			
Network ID			•				•	•				•										
Network node servers																						
Node characteristics																						
Node type		•																	•			
Origin node																						
Owned TGs																						
Paths, switched																						

DISPLAY Command Output	DISPLAY Command																						
	MAJNODES	MODELS	NCPSTOR	NETSRVR	PATHS	PATHTAB	PENDING	ROUTE	RSCLIST	SESSIONS	STATIONS	STATS	STORUSE	TABLE	TERMS	TGPS	TOPO	TRACES	TRL	TSOUSER	USERVAR	VTAMOPTS	
Generalized PIU trace (GPT)																		•					
Generated TG (GTG)																							
Group identifier (GID)					•																		
I/O traces																			•				
Independent LUs																							
Intermediate routing node buffers																							
Intermediate routing node trace																							
Job name																							
Line group									•														
Line name									•						•								
Line trace																			•				
Line type																							
Lines/links					•		•																
Link station											•												
Load module name																							
Load procedure status																							
Logical unit (LU)							•		•							•							
Logical unit name (LUNAME)																							
Logon mode name																							
Major node name	•	•							•		•					•							
Major node data																							
Major node subordinate resources																							
Minor node data																							
Minor node subordinate resources																							
Model LUs		•																					
Model PUs		•																					
Negpoll (negative response polling)																							
Network control program (NCP)				•				•															
Network ID								•	•		•												
Network node servers					•																		
Node characteristics																							
Node type																							
Origin node									•														
Owned TGs																							
Paths, switched																							

Figure 10. DISPLAY Output Cross Reference (G-P)



**DISPLAY Command**

**DISPLAY Command Output**

	ADJCLUST	ADJCP	ADJSSCPS	APPLS	BFRUSE	BNCOSMAP	CDRMS	CDRSCS	CLSTRS	CNOS	CONVID	COS	DIRECTORY	DISK	DLURS	EXIT	GROUPS	ID	LINES	LMTBL	LUGROUPS	
Path Identifier (PID)																						
Physical unit (PU)									•										•			
Physical unit name																						
Primary LU																			•			
Resource use count																						
Scanner interface trace (SIT)																			•			
Secondary LU																			•			
Session ID											•								•			
Session limit																			•			
Sessions																			•			
SIO count																			•			
Start options																						
Stepname																			•			
Storage				•																		
Subarea address								•											•			
Table name																						
Table type																						
Telephone number																						
TSO trace																						
TSO user ID																						
Transmission group data		•																	•			
Transmission priority (TP)																			•			
Transport resource list entry																			•			
USERVAR class																						
USERVAR name																						
USERVAR type																						
VCNS user				•																•		
Virtual route number																			•			
VTAM internal trace																						
VTAM segment type				•																		
Weight of node or TG																						

**DISPLAY Command**

	MAJNODES	MODELS	NCPSTOR	NETSRVR	PATHS	PATHTAB	PENDING	ROUTE	RSCLIST	SESSIONS	STATIONS	STATS	STORUSE	TABLE	TERMS	TGPS	TOPO	TRACES	TRL	TSOUSER	USERVAR	VTAMOPTS
Path identifier (PID)					•																	
Physical unit (PU)							•		•						•							
Physical unit name																			•			
Primary LU										•												
Resource use count													•									
Scanner interface trace (SIT)																			•			
Secondary LU										•												
Session ID										•												
Session limit										•												
Sessions										•												
SIO count																						
Start options																						•
Stepname																						
Storage			•									•	•									
Subarea address											•											
Table name														•								
Table type														•								
Telephone number																						
TSO trace																			•		•	
TSO user ID																					•	
Transmission group data							•		•								•					
Transmission priority (TP)								•														
Transport resource list entry																				•		
USERVAR class																						•
USERVAR name																						•
USERVAR type																						•
VCNS user	•																					
Virtual route number							•		•													
VTAM internal trace																			•			
VTAM segment type																						
Weight of node or TG																						•

Figure 11. DISPLAY Output Cross Reference (P-W)

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# Glossary

For definitions of the terms and abbreviations used in this book, refer to the *VTAM Glossary*.

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# Bibliography

Subtopics:

- [BACK 1.BIBLIOGRAPHY.1 VTAM V4R2 Publications](#)
  - [BACK 1.BIBLIOGRAPHY.2 Related Publications](#)
- 



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## BACK\_1.BIBLIOGRAPHY.1 VTAM V4R2 Publications

Following are descriptions of the books in the VTAM V4R2 library for the MVS/ESA, VM/ESA, and VSE/ESA operating systems. The books are arranged here according to the tasks they describe:

- Planning
- Installation, Resource Definition, and Tuning
- Customization
- Operation
- Writing Application Programs
- Diagnosis
- Quick Reference.

The complete set of unlicensed books in this section can be ordered using a single order number, SBOF-4394 for MVS, SBOF-7001 for VM, and SBOF-7002 for VSE.

### Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.1 Softcopy Information](#)
- [BACK\\_1.BIBLIOGRAPHY.1.2 Marketing Information](#)
- [BACK\\_1.BIBLIOGRAPHY.1.3 Planning](#)
- [BACK\\_1.BIBLIOGRAPHY.1.4 Installation, Resource Definition, and Tuning](#)
- [BACK\\_1.BIBLIOGRAPHY.1.5 Operation](#)
- [BACK\\_1.BIBLIOGRAPHY.1.6 Customization](#)
- [BACK\\_1.BIBLIOGRAPHY.1.7 Writing Application Programs](#)
- [BACK\\_1.BIBLIOGRAPHY.1.8 Diagnosis](#)
- [BACK\\_1.BIBLIOGRAPHY.1.9 VTAM AnyNet Feature for V4R2 for MVS/ESA](#)
- [BACK\\_1.BIBLIOGRAPHY.1.10 MPTN Architecture Publications](#)
- [BACK\\_1.BIBLIOGRAPHY.1.11 APPC Application Suite Feature for V4R2 for MVS/ESA](#)



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## BACK\_1.BIBLIOGRAPHY.1.1 Softcopy Information

Subtopics:

- [\\_BACK\\_1.BIBLIOGRAPHY.1.1.1 IBM Networking Softcopy Collection Kit CD-ROM \(SK2T-6012\)](#)



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## BACK\_1.BIBLIOGRAPHY.1.1.1 IBM Networking Softcopy Collection Kit CD-ROM (SK2T-6012)

The softcopy library contains softcopy versions of the licensed and unlicensed books for VTAM V4R2 and the VTAM AnyNet Feature for V4R2 for MVS/ESA.

All of the unlicensed and licensed VTAM books described in this section are available in softcopy on this CD-ROM. These softcopy files can be read using any of the IBM BookManager READ programs. They can also be read with the IBM Library Reader program shipped on this CD.

In addition, this CD contains the Online Message Facility. The Online Message Facility is an OS/2 program that provides online access to information from *VTAM Messages and Codes* and other BookManager softcopy books. The facility helps network operators and system programmers operate and diagnose problems without interrupting those tasks.

The CD also contains softcopy of the unlicensed books of many other products.



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## BACK\_1.BIBLIOGRAPHY.1.2 Marketing Information

A Networking Overview and the following IBM Networking Previews are available:

- AnyNet
- VTAM.

Ask your IBM marketing representative for more information.

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## BACK\_1.BIBLIOGRAPHY.1.3 Planning

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.3.1 Planning for NetView, NCP, and VTAM \(SC31-7122\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.2 Planning for Integrated Networks \(SC31-7123\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.3 Planning Aids: Pre-Installation Planning Checklist for NetView, NCP, and VTAM \(SX75-0092\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.4 VTAM Licensed Program Specifications \(GC31-6490\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.5 VTAM Release Guide for MVS/ESA \(GC31-6492\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.6 VTAM Release Guide for VM/ESA \(GC31-8089\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.7 VTAM Release Guide for VSE/ESA \(GC31-8090\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.8 VTAM Migration Guide for MVS/ESA \(GC31-6491\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.9 VTAM Migration Guide for VM/ESA \(GC31-8071\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.10 VTAM Migration Guide for VSE/ESA \(GC31-8072\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.11 Estimating Storage for VTAM \(SK2T-2007\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.12 VTAM Overview for VM/ESA and VSE/ESA \(GC31-8114\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.3.13 VTAM Glossary \(GC31-6558\)](#)
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## **BACK\_1.BIBLIOGRAPHY.1.3.1 Planning for NetView, NCP, and VTAM (SC31-7122)**

This book helps you plan for new products or for migrating to new releases of networking products. It describes product functions, explains benefits you can gain from using them in different situations, and address cross-product implications. The book contains cross-task reference information and storage estimates.



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## BACK\_1.BIBLIOGRAPHY.1.3.2 Planning for Integrated Networks (SC31-7123)

This book helps you plan for SNA (subarea and APPN) and TCP/IP networks. It includes discussion of protocol strategies, migration scenarios, processing goals, and management considerations.

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## **BACK\_1.BIBLIOGRAPHY.1.3.3 Planning Aids: Pre-Installation Planning Checklist for NetView, NCP, and VTAM (SX75-0092)**

This checklist identifies important tasks to consider and complete before you begin to install these product. The document can be reproduced and folded to fit easily in a pocket or folder for quick reference and easy portability.



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## BACK\_1.BIBLIOGRAPHY.1.3.4 VTAM Licensed Program Specifications (GC31-6490)

This flyer is the warranty for VTAM and includes:

- A list of new functions
- Descriptions of VTAM features
- Machine requirements
- Programming requirements.



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## **BACK\_1.BIBLIOGRAPHY.1.3.5 VTAM Release Guide for MVS/ESA (GC31-6492)**

This guide provides an overview of the new functions in VTAM V4R2 and includes:

- Advantages of new functions
- Planning considerations for new functions
- Effect of new functions on existing functions
- Changes to commands, definition statements, and messages
- Programming requirements, such as the release of NCP required.



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## **BACK\_1.BIBLIOGRAPHY.1.3.6 VTAM Release Guide for VM/ESA (GC31-8089)**

This guide provides an overview of the new functions in VTAM V4R2 and includes:

- Advantages of new functions
- Planning considerations for new functions
- Effect of new functions on existing functions
- Changes to commands, definition statements, and messages
- Programming requirements, such as the release of NCP required.



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## **BACK\_1.BIBLIOGRAPHY.1.3.7 VTAM Release Guide for VSE/ESA (GC31-8090)**

This guide provides an overview of the new functions in VTAM V4R2 and includes:

- Advantages of new functions
- Planning considerations for new functions
- Effect of new functions on existing functions
- Changes to commands, definition statements, and messages
- Programming requirements, such as the release of NCP required.



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## BACK\_1.BIBLIOGRAPHY.1.3.8 VTAM Migration Guide for MVS/ESA (GC31-6491)

This guide helps you upgrade VTAM V4R1, V3R4.2, V3R4.1, V3R4, or V3R3 to VTAM V4R2. It includes:

- Planning to upgrade to VTAM V4R2
  - Upward and downward compatibility
  - Software and hardware requirements
  - Storage requirements
  - Impacts of new functions and enhancements performed without changes to user interfaces
  - Changes to installation process
- Upgrading user interfaces to VTAM V4R2
  - Changes to start options
  - Changes to buffer pools
  - Changes to definition statements
  - Changes to IBM-supplied default user-definable tables and modules
  - Changes to user-definable table macroinstructions
  - Changes to commands
  - Changes to messages
  - Changes to VTAM application programming interface
  - Changes to installation-wide exit routines
  - Changes to control blocks
- Implementing optional functions and enhancements introduced in VTAM V4R2
  - Overview of each new function and enhancement introduced since VTAM V3R3
  - Pointers to other books in the library where implementation details can be found.



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## BACK\_1.BIBLIOGRAPHY.1.3.9 VTAM Migration Guide for VM/ESA (GC31-8071)

This guide helps you upgrade VTAM V3R4.1 or V3R4 to VTAM V4R2. It includes:

- Planning to upgrade to VTAM V4R2
  - Upward and downward compatibility
  - Software and hardware requirements
  - Storage requirements
  - Impacts of new functions and enhancements performed without changes to user interfaces
  - Changes to installation process
- Upgrading user interfaces to VTAM V4R2
  - Changes to start options
  - Changes to buffer pools
  - Changes to definition statements
  - Changes to IBM-supplied default user-definable tables and modules
  - Changes to user-definable table macroinstructions
  - Changes to commands
  - Changes to messages
  - Changes to VTAM application programming interface
  - Changes to installation-wide exit routines
  - Changes to control blocks
- Implementing optional functions and enhancements introduced in VTAM V4R2
  - Overview of each new function and enhancement introduced since VTAM V3R4
  - Pointers to other books in the library where implementation details can be found.



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## BACK\_1.BIBLIOGRAPHY.1.3.10 VTAM Migration Guide for VSE/ESA (GC31-8072)

This guide helps you upgrade VTAM V3R4, V3R3, or V3R2 to VTAM V4R2. It includes:

- Planning to upgrade to VTAM V4R2
  - Upward and downward compatibility
  - Software and hardware requirements
  - Storage requirements
  - Impacts of new functions and enhancements performed without changes to user interfaces
  - Changes to installation process
- Upgrading user interfaces to VTAM V4R2
  - Changes to start options
  - Changes to buffer pools
  - Changes to definition statements
  - Changes to IBM-supplied default user-definable tables and modules
  - Changes to user-definable table macroinstructions
  - Changes to commands
  - Changes to messages
  - Changes to VTAM application programming interface
  - Changes to installation-wide exit routines
  - Changes to control blocks
- Implementing optional functions and enhancements introduced in VTAM V4R2
  - Overview of each new function and enhancement introduced since VTAM V3R2
  - Pointers to other books in the library where implementation details can be found.



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## BACK\_1.BIBLIOGRAPHY.1.3.11 Estimating Storage for VTAM (SK2T-2007)

This interactive program helps you estimate the storage requirements for VTAM. The diskette includes:

- Step-by-step procedures
- Formulas used to calculate storage.



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## BACK\_1.BIBLIOGRAPHY.1.3.12 VTAM Overview for VM/ESA and VSE/ESA (GC31-8114)

This document is designed to be used with each book of the VTAM library. It helps you understand which functions are included with each package available for VTAM V4R2 for VM/ESA and VSE/ESA.

- VTAM V4R2 Client/Server
- VTAM V4R2 MultiDomain
- VTAM V4R2 InterEnterprise.

It also provides instructions for how to order a particular package.

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## BACK\_1.BIBLIOGRAPHY.1.3.13 VTAM Glossary (GC31-6558)

This glossary defines terms and abbreviations for VTAM and related products. It includes information from the *IBM Dictionary of Computing*, SC20-1699.

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## BACK\_1.BIBLIOGRAPHY.1.4 Installation, Resource Definition, and Tuning

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.4.1 VTAM Network Implementation Guide \(SC31-6494\)](#)
- [BACK\\_1.BIBLIOGRAPHY.1.4.2 VTAM Resource Definition Reference \(SC31-6498\)](#)
- [BACK\\_1.BIBLIOGRAPHY.1.4.3 VTAM Resource Definition Samples \(SC31-6499\)](#)



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## **BACK\_1.BIBLIOGRAPHY.1.4.1 VTAM Network Implementation Guide (SC31-6494)**

This book presents the major concepts involved in implementing a VTAM network, and includes:

- Buffer pools, slowdown, pacing, storage considerations
- Implementation considerations
- Installation procedures
- Sample major node definitions
- Migration considerations
- Tables and filters
- TSO, VSCS, VCNS, and other programs that run with VTAM
- Tuning procedures
- VTAM start options.

Use this book in conjunction with the *VTAM Resource Definition Reference*.

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## BACK\_1.BIBLIOGRAPHY.1.4.2 VTAM Resource Definition Reference (SC31-6498)

This book describes each VTAM definition statement, start option, and macroinstruction for user tables. It also describes NCP definition statements that affect VTAM. The information includes:

- IBM-supplied default tables (logon mode, USS and X.25)
- DTIGEN macroinstruction (VSCS start options)
- Major node definitions
- User-defined tables and filters
- VTAM start options.

If you are unfamiliar with the major concepts involved in implementing a VTAM network, use this book in conjunction with the *VTAM Network Implementation Guide*.



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## BACK\_1.BIBLIOGRAPHY.1.4.3 VTAM Resource Definition Samples (SC31-6499)

This book contains sample definitions to help you implement VTAM functions in your networks, and includes sample major node definitions.

Use this book in conjunction with the *VTAM Network Implementation Guide* and *VTAM Resource Definition Reference*.



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## BACK\_1.BIBLIOGRAPHY.1.5 Operation

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.5.1 VTAM Operation \(SC31-6495\)](#)
- [BACK\\_1.BIBLIOGRAPHY.1.5.2 VTAM Operation Quick Reference \(SX75-0205\)](#)
- [BACK\\_1.BIBLIOGRAPHY.1.5.3 VTAM Messages and Codes \(SC31-6493\)](#)
- [BACK\\_1.BIBLIOGRAPHY.1.5.4 Using IBM CommandTree/2 \(SC31-7013\)](#)



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## BACK\_1.BIBLIOGRAPHY.1.5.1 VTAM Operation (SC31-6495)

This book serves as a reference for programmers and operators requiring detailed information about specific operator commands. The information includes:

- VTAM commands and start options
- Logon manager commands
- DISPLAY output examples (messages received)
- VSCS commands.



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## BACK\_1.BIBLIOGRAPHY.1.5.2 VTAM Operation Quick Reference (SX75-0205)

This book contains essential information about VTAM and VSCS operator commands.

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## BACK\_1.BIBLIOGRAPHY.1.5.3 VTAM Messages and Codes (SC31-6493)

This book describes messages, codes, and other information associated with VTAM messages and includes:

- Messages:
  - ELM messages for logon manager
  - IKT messages for TSO/VTAM
  - IST messages for VTAM network operators
  - ISU messages for sockets-over-SNA
  - USS messages
  - VSCS messages
  
- Codes and other information that display in VTAM messages:
  - Abend codes
  - Command and RU types in VTAM messages
  - Node and ID types in VTAM messages
  - Return codes for macroinstructions including ACB OPEN and CLOSE macroinstruction error fields, RTNCD-FDB2 return code combinations, and LU 6.2 RCPRI-RCSEC return codes
  - Sense codes including VTAM sense code hints, SNA sense field values for RPL-based macroinstructions, and 3270 SNA and non-SNA device sense fields
  - Status codes including resource status and session state codes
  - Wait state event codes and IDs
  
- Supplemental message-related information:
  - Message additions, deletions, and changes
  - Message flooding prevention
  - Message groups and subgroups
  - Message routing and suppression including descriptor codes, routing codes, and suppression levels for ELM, IKT, IST, and ISU messages

- Message text and description formats
  - Message text of MSGLVL option messages including general information on the MSGLVL option
  - Message text of all VTAM network operator messages including variable field lengths
  - Online Message Facility.
- 



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## BACK\_1.BIBLIOGRAPHY.1.5.4 Using IBM CommandTree/2 (SC31-7013)

IBM CommandTree/2 is a workstation product that enables an operator to construct commands and send them to a specified destination for processing. The VTAM command set library includes:

- VTAM commands
- Logon manager commands
- Help for commands and start options.
- VSCS commands



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## BACK\_1.BIBLIOGRAPHY.1.6 Customization

Subtopics:

- [\\_BACK\\_1.BIBLIOGRAPHY.1.6.1 VTAM Customization \(LY43-0063\)](#)



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## BACK\_1.BIBLIOGRAPHY.1.6.1 VTAM Customization (LY43-0063)

This book enables you to customize VTAM, and includes:

- Communication network management (CNM) routing table
  - Installing tables and modules in VM
  - Logon-interpret routine requirements
  - Logon manager installation-wide exit routine for the CLU search exit
  - VSCS data manipulation installation-wide exit routine
  - TSO/VTAM installation-wide exit routines
  - VTAM installation-wide exit routines:
    - Command verification exit (ISTCMMND)
    - Configuration services XID exit (ISTEXCCS) with description of IBM-supplied default exit
    - Directory services management exit (ISTEXCDM)
    - Generic resource resolution exit (ISTEXCGR)
    - SDDLU exit (ISTEXCSD) with description of IBM-supplied default exit
    - Session accounting exit (ISTAUCAG)
    - Session authorization exit (ISTAUCAT)
    - Session management exit (ISTEXCAA) with example
    - TPRINT processing exit (ISTRAEUE)
    - USERVAR exit (ISTEXCUV) with description of IBM-supplied default exit
    - Virtual route pacing window size calculation exit (ISTPUCWC)
    - Virtual route selection exit (ISTEXCVR).
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## BACK\_1.BIBLIOGRAPHY.1.7 Writing Application Programs

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.7.1 VTAM Programming \(SC31-6496\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.7.2 VTAM Programming for LU 6.2 \(SC31-6497\)](#)
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## BACK\_1.BIBLIOGRAPHY.1.7.1 VTAM Programming (SC31-6496)

This book describes how to use VTAM macroinstructions to send data to and receive data from (1) a terminal in either the same or a different domain, or (2) another application program in either the same or a different domain. The information includes:

- API concepts
  - Cryptography
  - RUs and exchanges
  - Session establishment and termination
- BIND area format
- Communication Network Management Interface
- Dictionary of VTAM macroinstructions
- OPEN or CLOSE errors
- Operating system differences
- Program Operator Coding requirements
- RAPI DSECTs and control block mappings
- RAPI global variables
- Resource-identification and access-method-support vector lists
- RPL-based macroinstructions
- RPL RTNCD, FDB2 codes
- User exit routines.



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## BACK\_1.BIBLIOGRAPHY.1.7.2 VTAM Programming for LU 6.2 (SC31-6497)

This book describes the VTAM LU 6.2 programming interface for host application programs. This book applies to programs that use only LU 6.2 sessions or that use LU 6.2 sessions along with other session types. (Only LU 6.2 sessions are covered in this book.) The information includes:

- Allocating and deallocating conversations
- APPCCMD macroinstructions and LU 6.2 DSECTs
- BIND image and response and ISTDBIND
- Conversation states
- Description and use of the following control blocks:
  - CNOS session limits control block
  - DEFINE control block
  - DISPLAY control block
  - RESTORE control block
- FMH-5 and PIP data
- LU 6.2 global variables
- Resource-identification and access-method-support vector lists
- RCPRI,RCSEC codes
- Sample program for retrieving RESTORE information
- Sample VTAM LU 6.2 application program
- Session- and conversation-level security and data encryption
- Sending and receiving data
- Sense codes for FMH-7 and UNBIND
- Summary of register usage
- Sync point services
- User exit routines.



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## BACK\_1.BIBLIOGRAPHY.1.8 Diagnosis

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.8.1 VTAM Diagnosis \(LY43-0065\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.8.2 VTAM Data Areas for MVS/ESA \(LY43-0064\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.8.3 VTAM Data Areas for VM/ESA \(LY43-0103\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.8.4 VTAM Data Areas for VSE/ESA \(LY43-0104\)](#)
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## BACK\_1.BIBLIOGRAPHY.1.8.1 VTAM Diagnosis (LY43-0065)

This book helps you identify a VTAM problem, classify it, and collect information about it before you call the IBM Support Center. The information collected includes traces, dumps, and other problem documentation. The information includes:

- Command syntax for running traces and collecting and analyzing dumps
- VIT entries
- Procedures for collecting documentation (VTAM, VSCS, TSO)
- VTAM internal trace and VIT analysis tool
- FFST Probes
- Channel programs
- Flow diagrams
- Procedures for locating buffer pools
- VSCS dump and traces
- CPCB operation codes
- Storage and control block ID codes
- PIU discard reason codes
- Offset names and locations for VTAM buffer pools



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## BACK\_1.BIBLIOGRAPHY.1.8.2 VTAM Data Areas for MVS/ESA (LY43-0064)

This book describes VTAM data areas and can be used to read a VTAM dump. It is intended for IBM programming service representatives and customer personnel who are diagnosing problems with VTAM.

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## BACK\_1.BIBLIOGRAPHY.1.8.3 VTAM Data Areas for VM/ESA (LY43-0103)

This book describes VTAM data areas and can be used to read a VTAM dump. It is intended for IBM programming service representatives and customer personnel who are diagnosing problems with VTAM.

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## BACK\_1.BIBLIOGRAPHY.1.8.4 VTAM Data Areas for VSE/ESA (LY43-0104)

This book describes VTAM data areas and can be used to read a VTAM dump. It is intended for IBM programming service representatives and customer personnel who are diagnosing problems with VTAM.

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## BACK\_1.BIBLIOGRAPHY.1.9 VTAM AnyNet Feature for V4R2 for MVS/ESA

Subtopics:

- [\\_BACK\\_1.BIBLIOGRAPHY.1.9.1 VTAM AnyNet Feature for V4R2: Guide to Sockets over SNA Gateway for OS/2 \(SC31-6528\)](#)
  - [\\_BACK\\_1.BIBLIOGRAPHY.1.9.2 VTAM AnyNet Feature for V4R2: Guide to Sockets over SNA \(SC31-6526\)](#)
  - [\\_BACK\\_1.BIBLIOGRAPHY.1.9.3 VTAM AnyNet Feature for V4R2: Guide to SNA over TCP/IP \(SC31-6527\)](#)
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## **BACK\_1.BIBLIOGRAPHY.1.9.1 VTAM AnyNet Feature for V4R2: Guide to Sockets over SNA Gateway for OS/2 (SC31-6528)**

This guide provides information to help you install, configure, use, and diagnose the sockets-over-SNA-gateway function for OS/2. This function allows socket applications running on a TCP/IP network to communicate with socket applications running on an SNA network.



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## BACK\_1.BIBLIOGRAPHY.1.9.2 VTAM AnyNet Feature for V4R2: Guide to Sockets over SNA (SC31-6526)

This guide provides information to help you install, configure, use, and diagnose Sockets over SNA. It also provides information to help you prepare application programs to use sockets over SNA.

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## BACK\_1.BIBLIOGRAPHY.1.9.3 VTAM AnyNet Feature for V4R2: Guide to SNA over TCP/IP (SC31-6527)

This guide provides information to help you install, configure, use, and diagnose SNA over TCP/IP.

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## **BACK\_1.BIBLIOGRAPHY.1.10 MPTN Architecture Publications**

*Networking Blueprint Executive Overview (GC31-7057)*

*Multiprotocol Transport Networking: Technical Overview (GC31-7073)*

*Multiprotocol Transport Networking: Formats (GC31-7074)*

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## BACK\_1.BIBLIOGRAPHY.1.11 APPC Application Suite Feature for V4R2 for MVS/ESA

Subtopics:

- [BACK\\_1.BIBLIOGRAPHY.1.11.1 APPC Application Suite User's Guide \(SC31-6532\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.11.2 APPC Application Suite Administration \(SC31-6533\)](#)
  - [BACK\\_1.BIBLIOGRAPHY.1.11.3 APPC Application Suite Programming \(SC31-6534\)](#)
- 



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## BACK\_1.BIBLIOGRAPHY.1.11.1 APPC Application Suite User's Guide (SC31-6532)

This book documents the end-user interface (concepts, commands, and messages) for the AFTP, ANAME, and APING facilities of the APPC Application Suite for MVS/ESA. Although it's primary audience is the end user, administrators and application programmers may also find it useful.

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## BACK\_1.BIBLIOGRAPHY.1.11.2 APPC Application Suite Administration (SC31-6533)

This book contains the information that administrators need to configure the APPC Application Suite for MVS/ESA and to manage the APING, ANAME, AFTP, and A3270 servers.

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## **BACK\_1.BIBLIOGRAPHY.1.11.3 APPC Application Suite Programming (SC31-6534)**

This book provides the information application programmers need to add the functions of the AFTP and ANAME APIs to their application programs.

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## BACK\_1.BIBLIOGRAPHY.2 Related Publications

[NCP, SSP, and EP Diagnosis Guide](#) (LY43-0033)

*System Network Architecture Technical Overview* (GC30-3072)

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