z/OS Communications Server 3.1

Quick Reference

SC27-3665-60

Note:

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 235.

This edition applies to 3.1 of z/OS® (5655-ZOS), and to subsequent releases and modifications until otherwise indicated in new editions.

Last updated: 2024-01-20

Contents

Tables

About this document

This quick reference summarizes information found in:

- z/OS Communications Server: IP Configuration Guide
- z/OS Communications Server: IP User's Guide and Commands
- z/OS Communications Server: IP System Administrator's Commands
- z/OS Communications Server: SNA Operation
- z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures

The information in this document includes descriptions of support for both IPv4 and IPv6 networking protocols. Unless explicitly noted, descriptions of IP protocol support concern IPv4. IPv6 support is qualified within the text.

This document is provided as a source of commonly used operation information for experienced system programmers and operators, and it contains information on:

- IP MVS™ Operator commands
- VTAM® commands
- VTAM start options

Use the table of contents to locate the reference information you need. For more detailed information, refer to the document listed at the start of each section.

Summary of changes

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability. Technical changes or additions to the text and illustrations for the current edition are indicated by a vertical line to the left of the change.

Changes made in z/OS Communications Server 3.1

The following content is new, changed, or no longer included in z/OS 3.1.

Changed information

- OSA-Express® Enhanced Inbound Blocking (EIB), see the following topics:
  - “F VTAMOPTS command” on page 184
  - “Start options” on page 213
- Withdrawal of support of VTAM LSA and TCP/IP LCS devices, see the following topics:
  - “F NOTRACE command” on page 165
  - “F TRACE command” on page 178
  - “Start options” on page 213

Chapter 1. IP commands

In this section, commands are listed alphabetically.

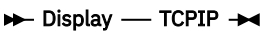
For more information on these commands, see z/OS Communications Server: IP Configuration Guide and z/OS Communications Server: IP System Administrator's Commands.

IP MVS operator commands

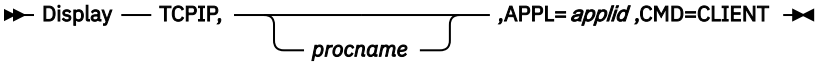
DISPLAY TCPIP

Display the status of the current TCP/IP images:

This is the general format of the DISPLAY command used to display the status of the current TCP/IP images.

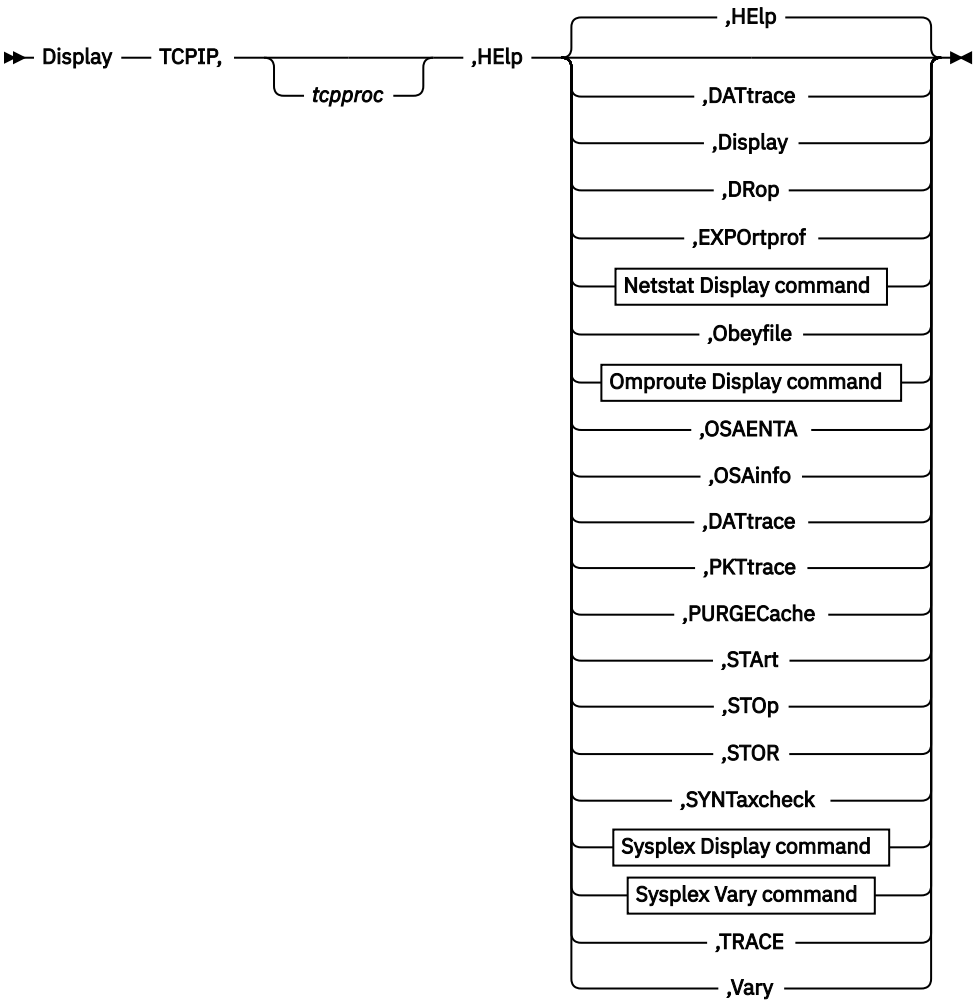


This is the format of DISPLAY command used to display information about TCP/IP applications.

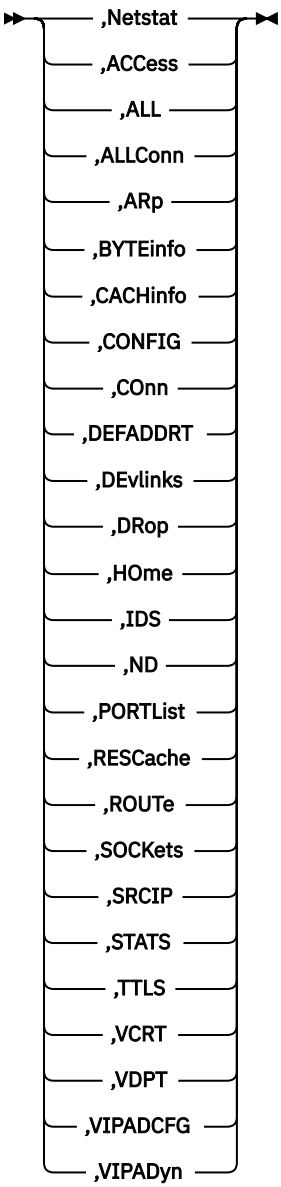


DISPLAY TCPIP HELP

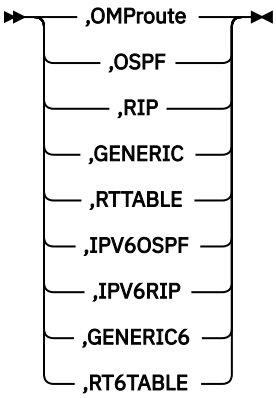
Display the syntax of MVS operator commands for TCP/IP:



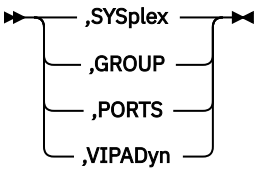
Netstat Display command



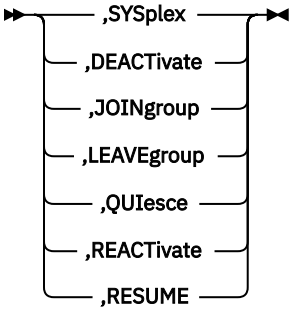
Omproute Display command



Sysplex Display command

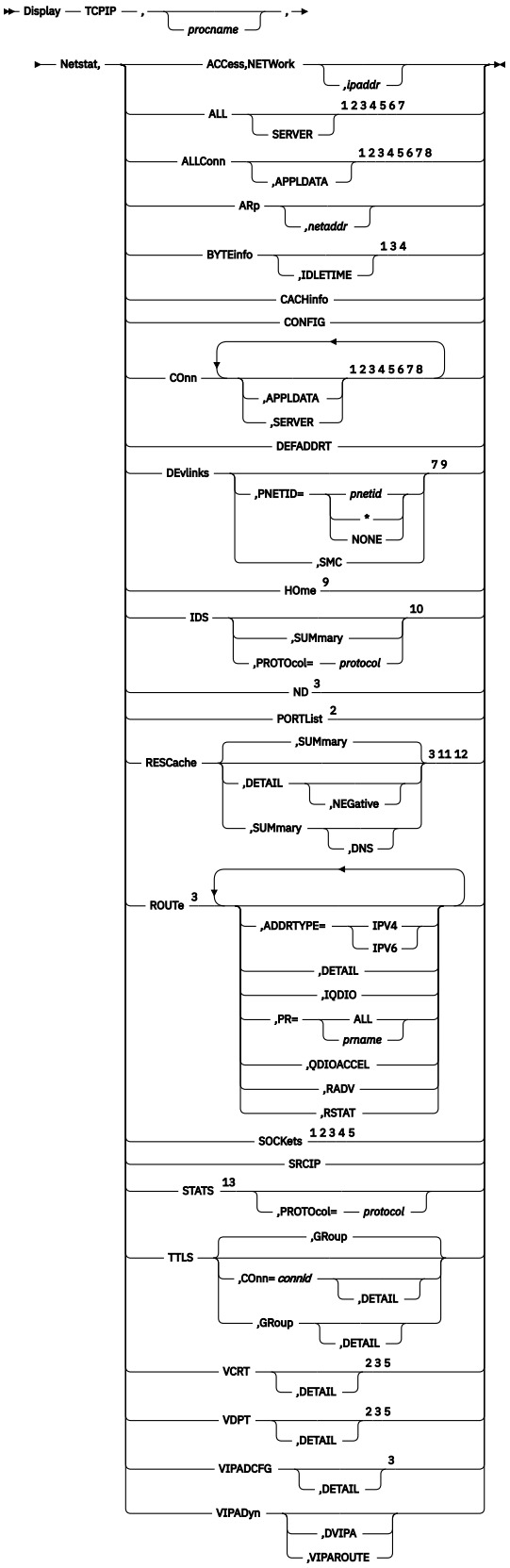


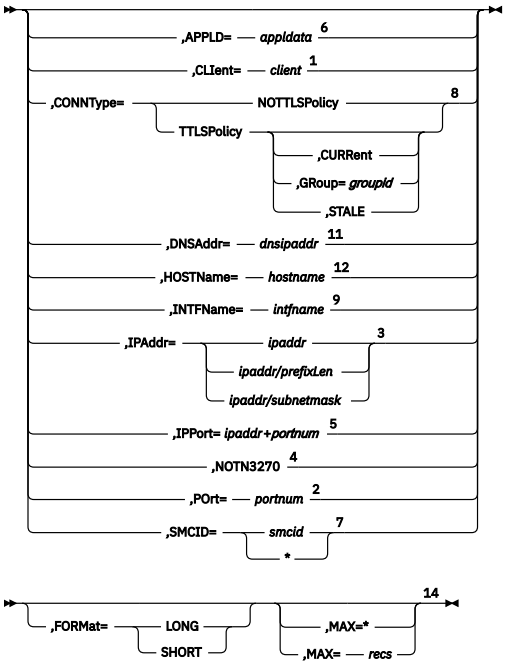
Sysplex Vary command



DISPLAY TCPIP NETSTAT

Request NETSTAT information:





Notes:

[1] The CLIent filter is valid only with ALL, ALLConn, BYTEinfo, COnn, and SOCKets.

[2] The POrt filter is valid only with ALL, ALLConn, COnn, PORTList, SOCKets, VCRT, and VDPT.

[3] The IPAddr filter is valid only with ALL, ALLConn, BYTEinfo, COnn, ND, RESCache, ROUTe, SOCKets, VCRT, VDPT, and VIPADCFG.

[4] The NOTN3270 filter is valid only with ALL, ALLConn, BYTEinfo, COnn, and SOCKets.

[5] The IPPort filter is valid only with ALL, ALLConn, COnn, SOCKets, VCRT, and VDPT.

[6] The APPLD filter is valid only with ALL, ALLConn, and COnn.

[7] The SMCID filter is valid only with ALL, ALLConn, COnn, and DEvlinks.

[8] The CONNType filter is valid only with ALLConn and COnn.

[9] The INTFName filter is valid only with DEvlinks and HOme.

[10] The valid protocol values are TCP and UDP.

[11] The DNSAddr select string is valid only with RESCache.

[12] The HOSTName select string is valid only with RESCache.

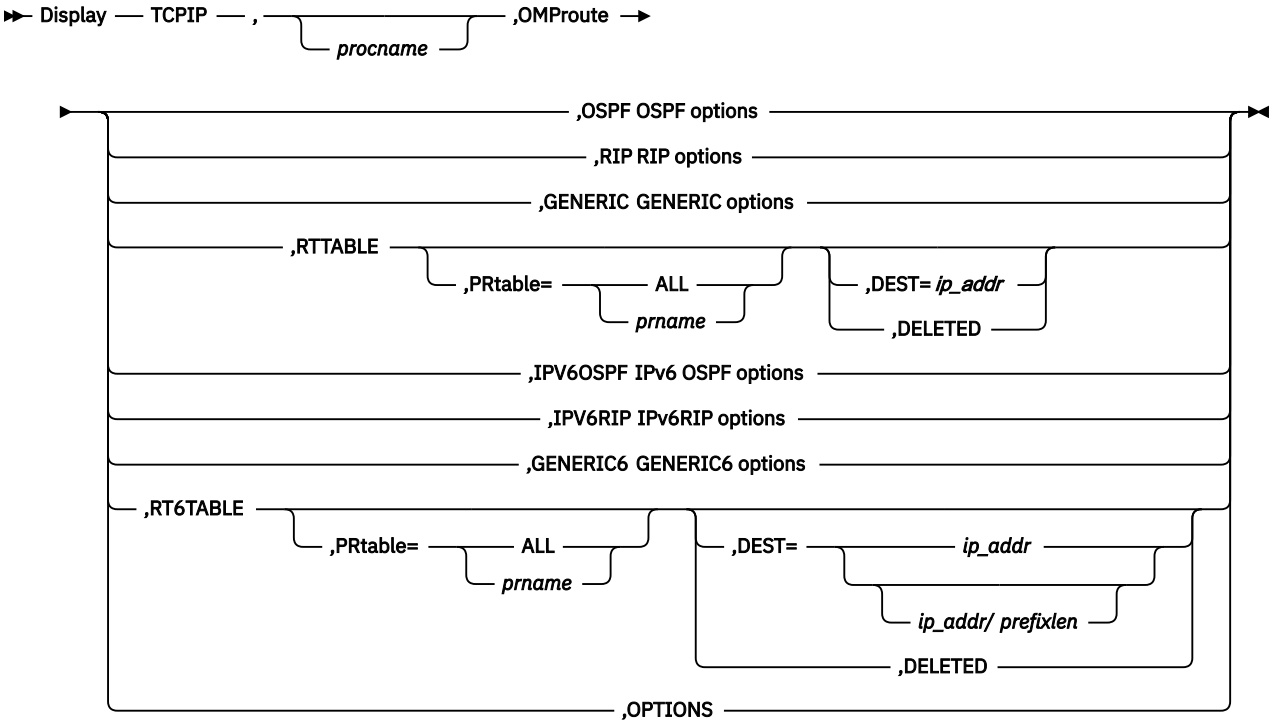
[13] The valid protocol values are IP, ICMP, TCP, and UDP.

[14] If the MAX parameter is not specified on the command, the default value for the MAX parameter is the value of the MAXRECS parameter on the GLOBALCONFIG profile statement.

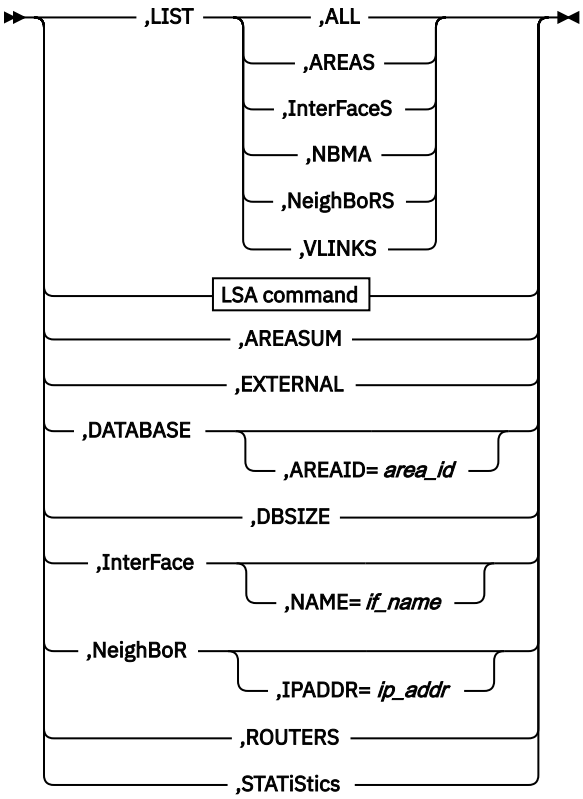
Note: The minimum abbreviation for each parameter is shown in uppercase letters.

DISPLAY TCPIP OMPROUTE

Display OMPROUTE configuration and state information:

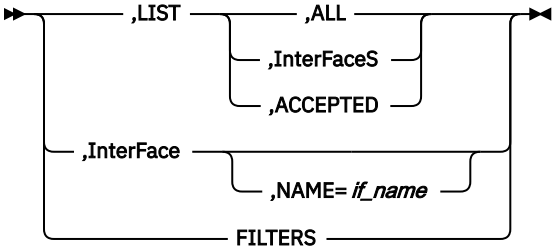


OSPF options

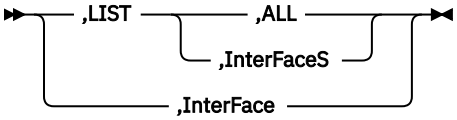


LSA command

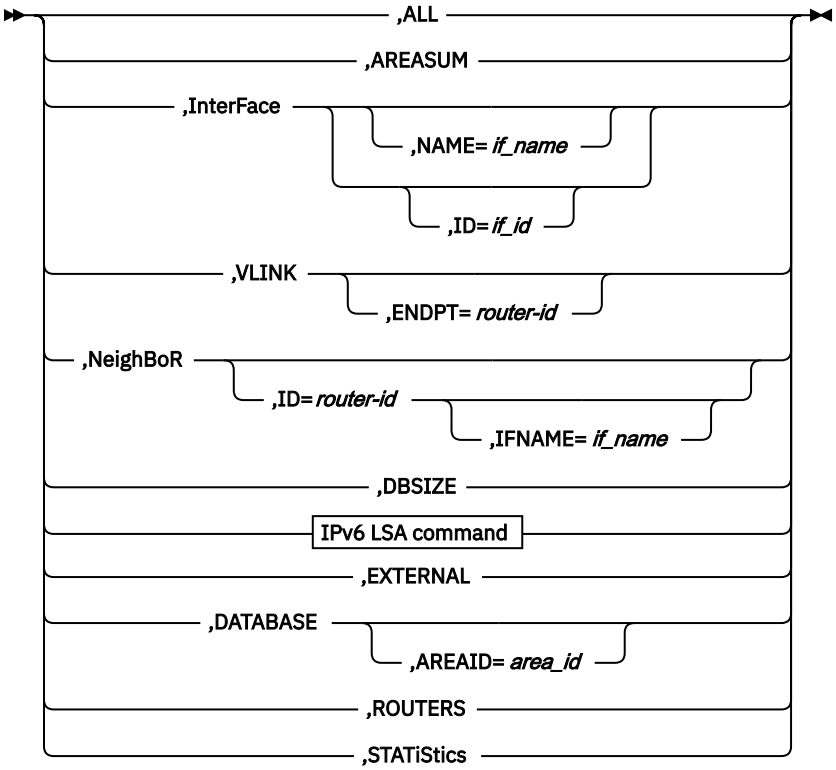
RIP options



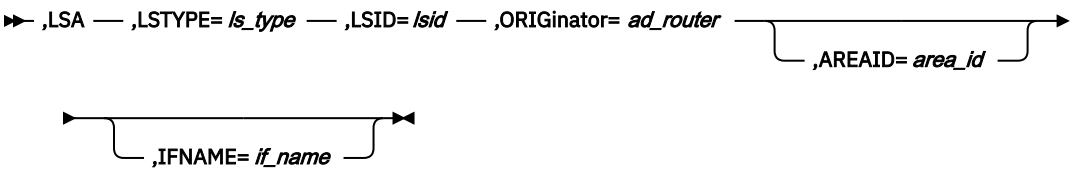
GENERIC options



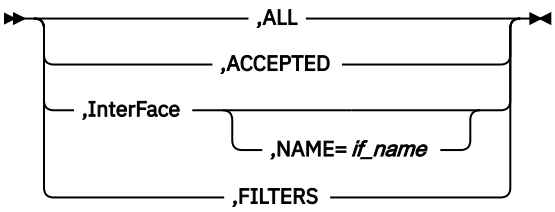
IPv6 OSPF options



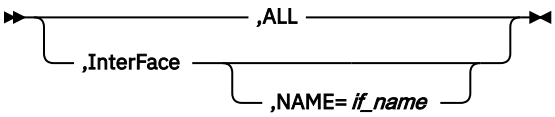
IPv6 LSA command



IPv6RIP options

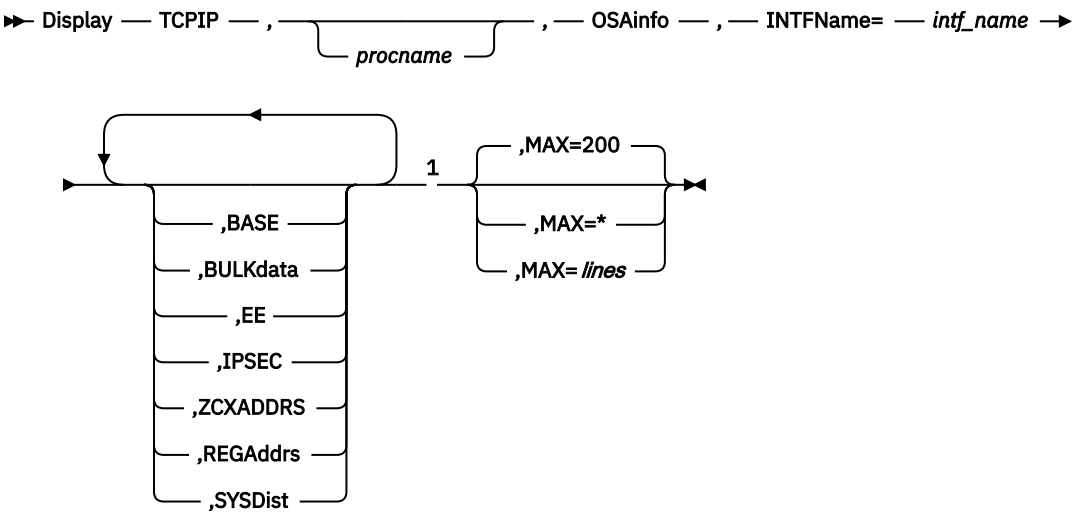


GENERIC6 options



DISPLAY TCPIP OSAINFO

Request OSA information:



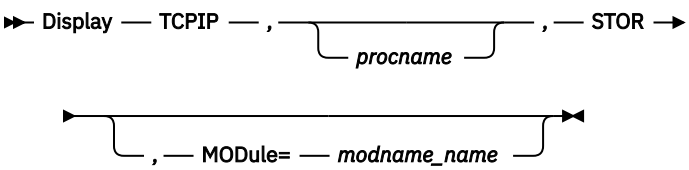
Notes:

[1] If no modifiers are specified, all sections for which information exists are displayed.

Rule: You must specify the parameters in the order shown in the syntax diagram.

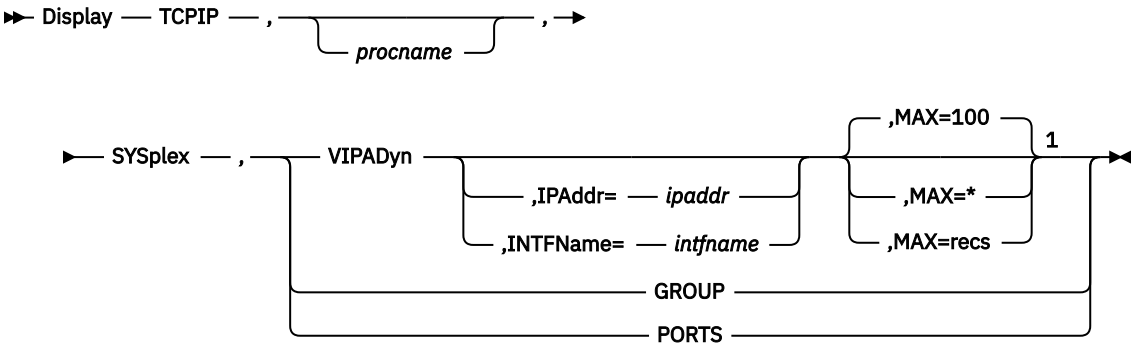
DISPLAY TCPIP STOR

Display TCP/IP storage usage information or the service level of a TCP/IP module:



DISPLAY TCPIP SYSPLEX

Request SYSPLEX information:

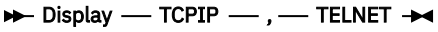


Notes:

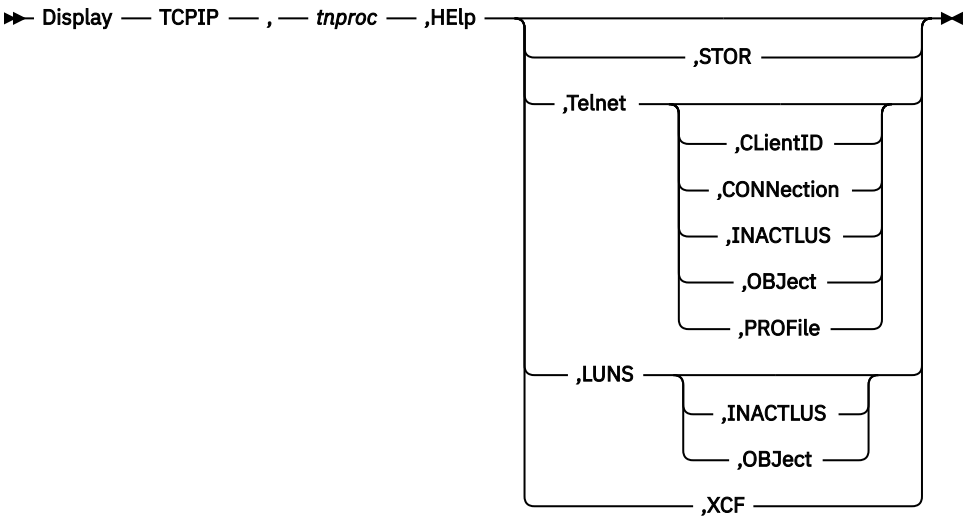
[1] MAX limits the number of records displayed to the MVS operator's console.

DISPLAY TCPIP TELNET

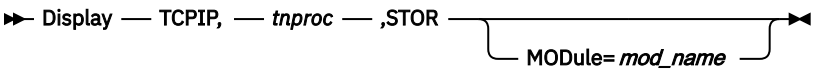
This is the format of the DISPLAY command used to display the status of the current TN3270E Telnet server images.



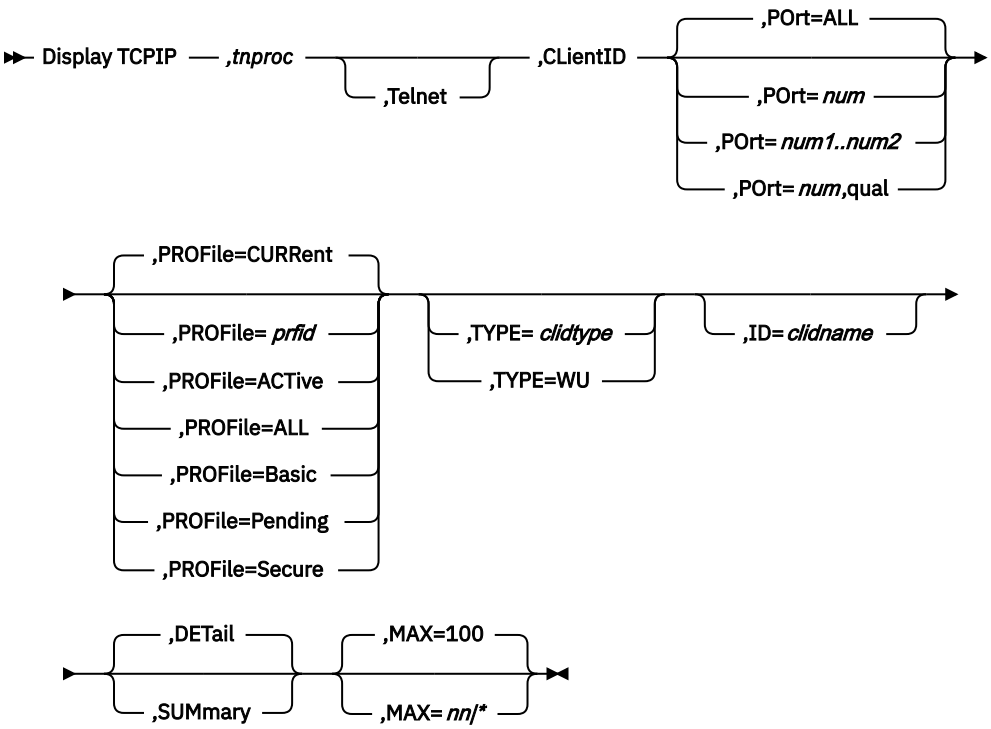
HELP display command:



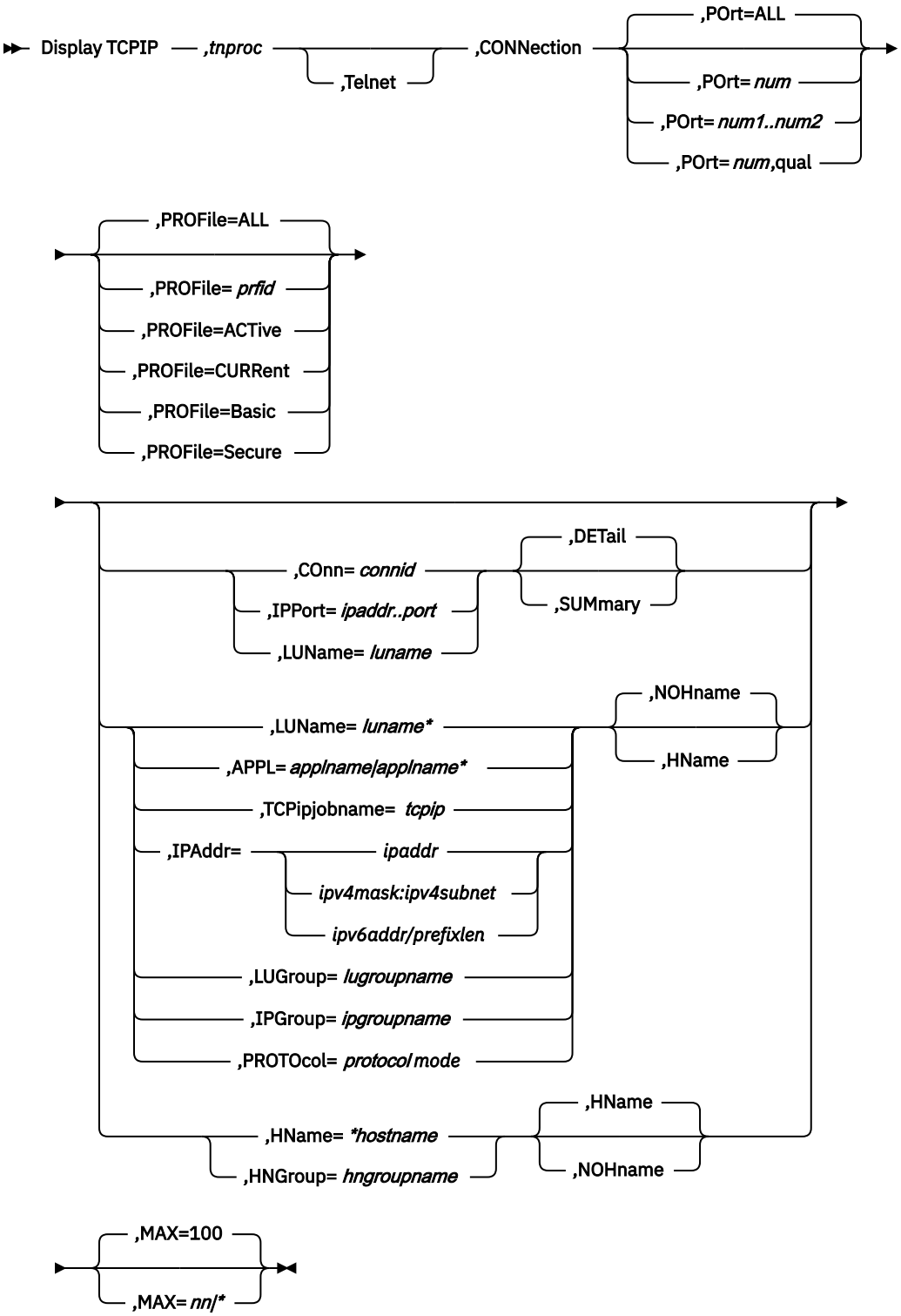
STOR display command:



CLIENTID display command:

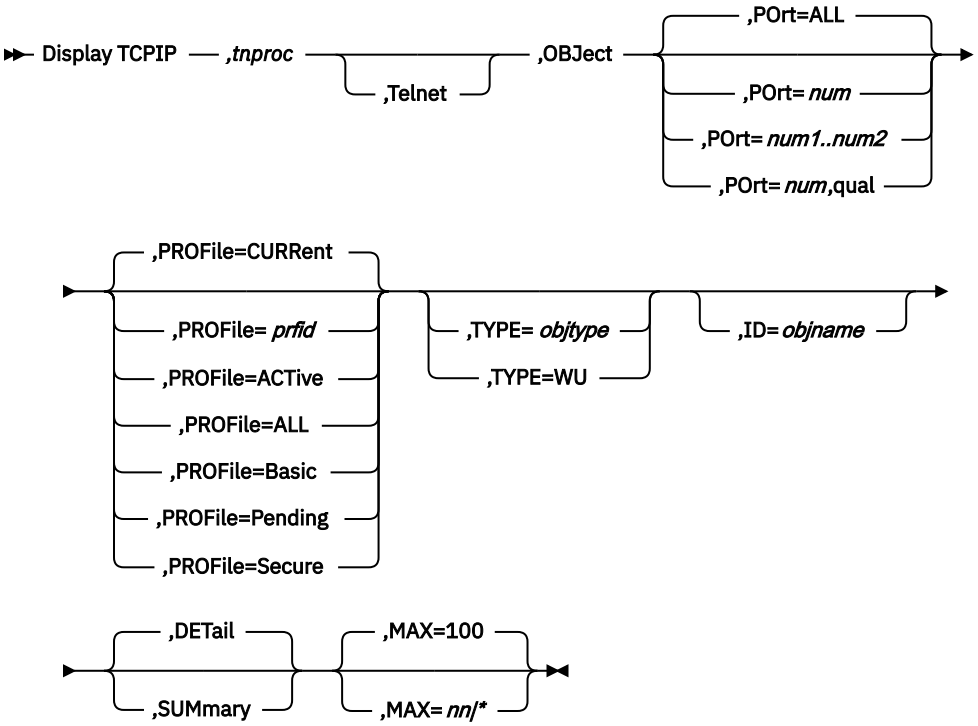


CONNECTION display command:

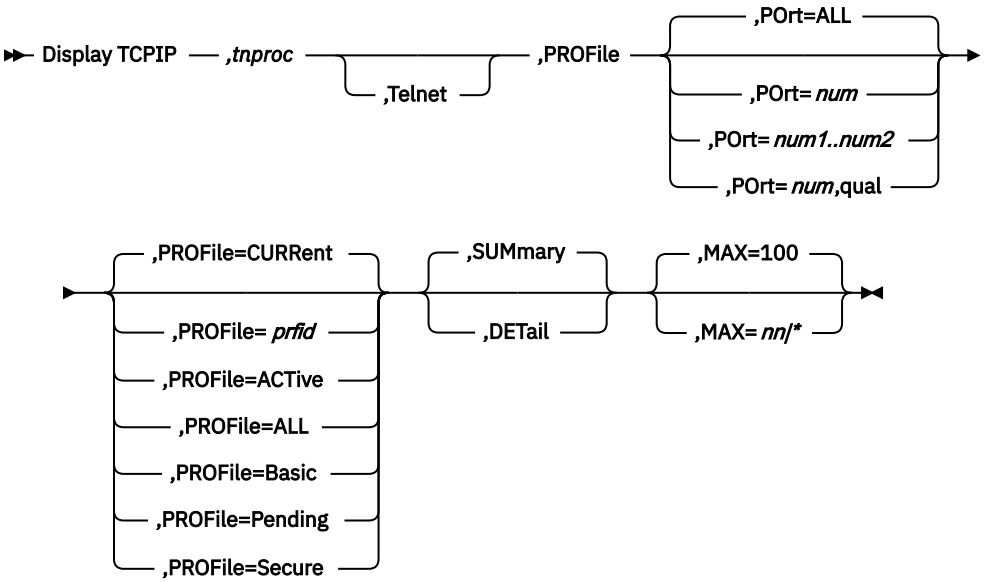


INACTLUS display command:

OBJECT display command:

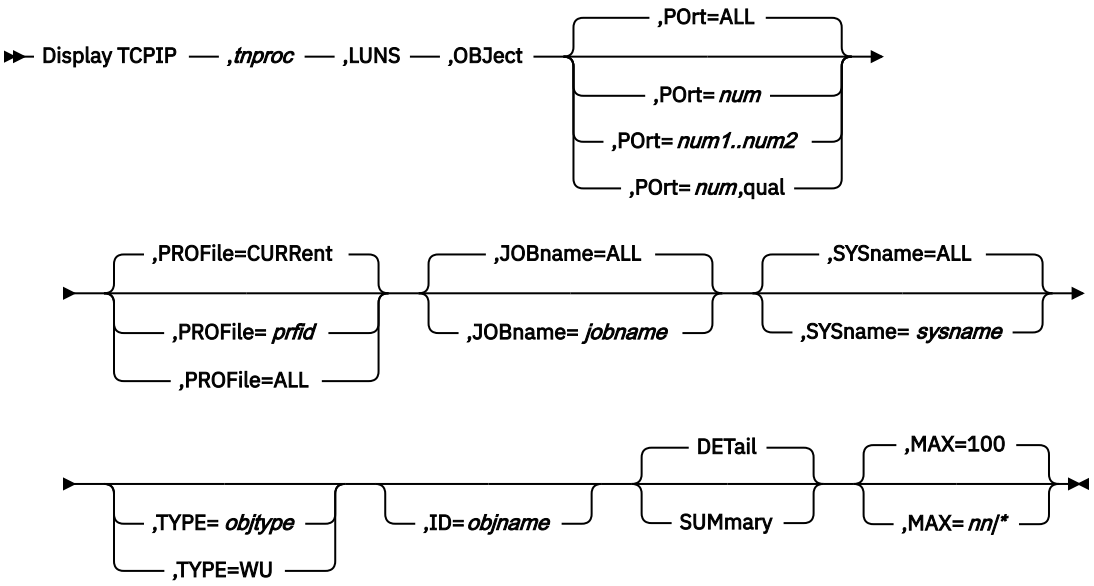


PROFILE display command:

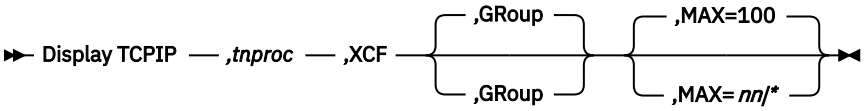


LUNS INACTLUS display command:

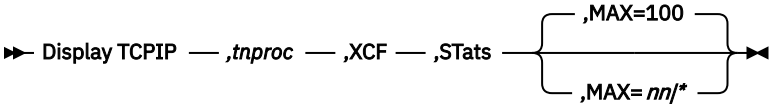
LUNS OBJect display command:



XCF GRoup display command:

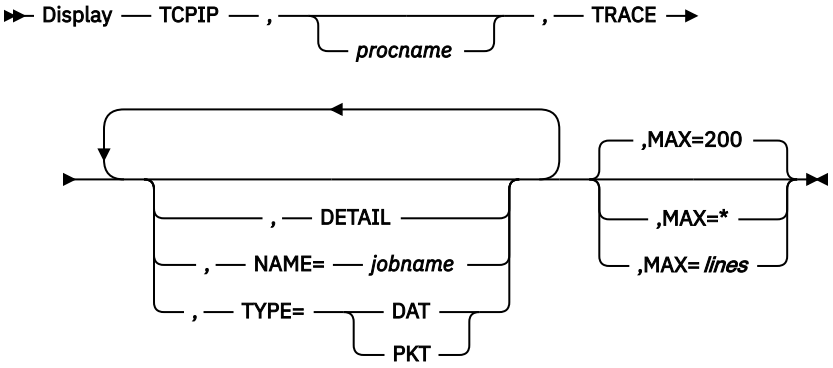


XCF STats display command:



DISPLAY TCPIP TRACE

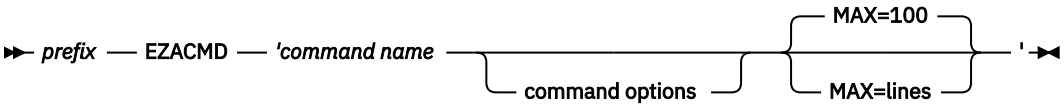
Display information about network management applications that are using the real-time application-controlled TCP/IP trace network management interface (NMI) to obtain real-time network management data from the TCP/IP stack. See Real-time application-controlled TCP/IP trace NMI in the z/OS Communications Server: IP Programmer's Guide and Reference for more information about this NMI.



EZACMD command

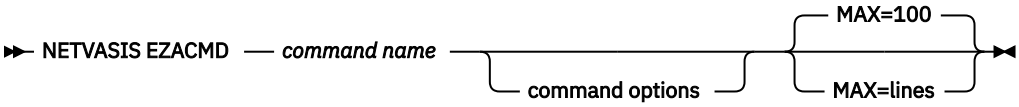
Issue commands from the operator console, TSO, or IBM® Tivoli® NetView® for z/OS.

Operator console syntax



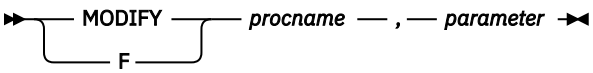
TSO syntax

NetView syntax



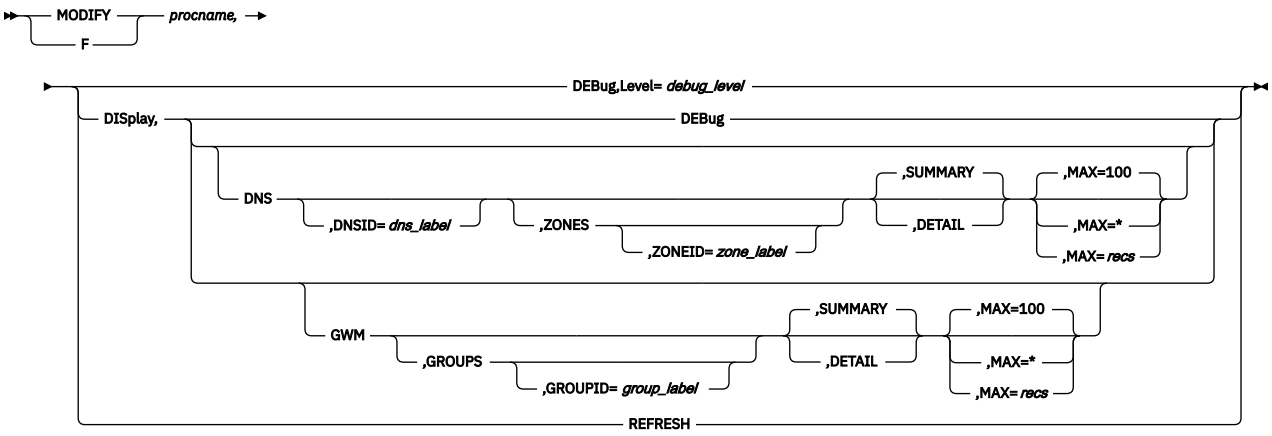
MODIFY TCPIP command

Dynamically change characteristics of an active task:



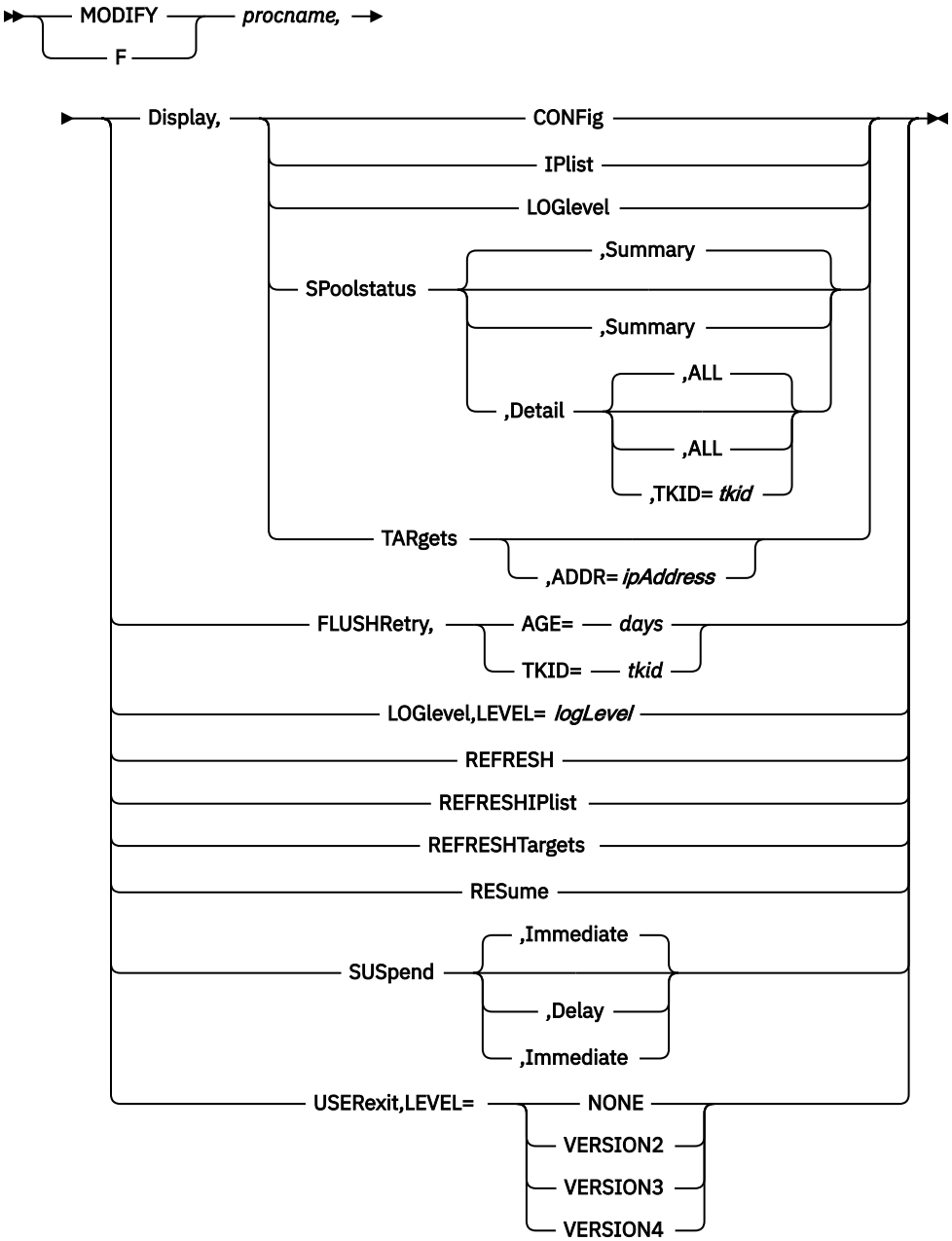
Automated domain name registration application (EZBADNR)

Control the automated domain name registration application (EZBADNR) from the operator's console using the MODIFY command:



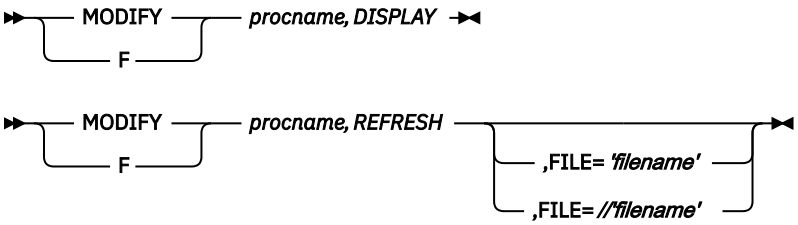
CSSMTP application

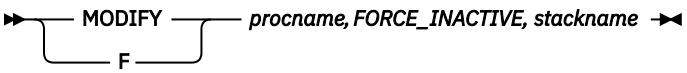
Control and monitor the Communication Server Simple Mail Transfer Protocol (CSSMTP) application:



Defense Manager daemon

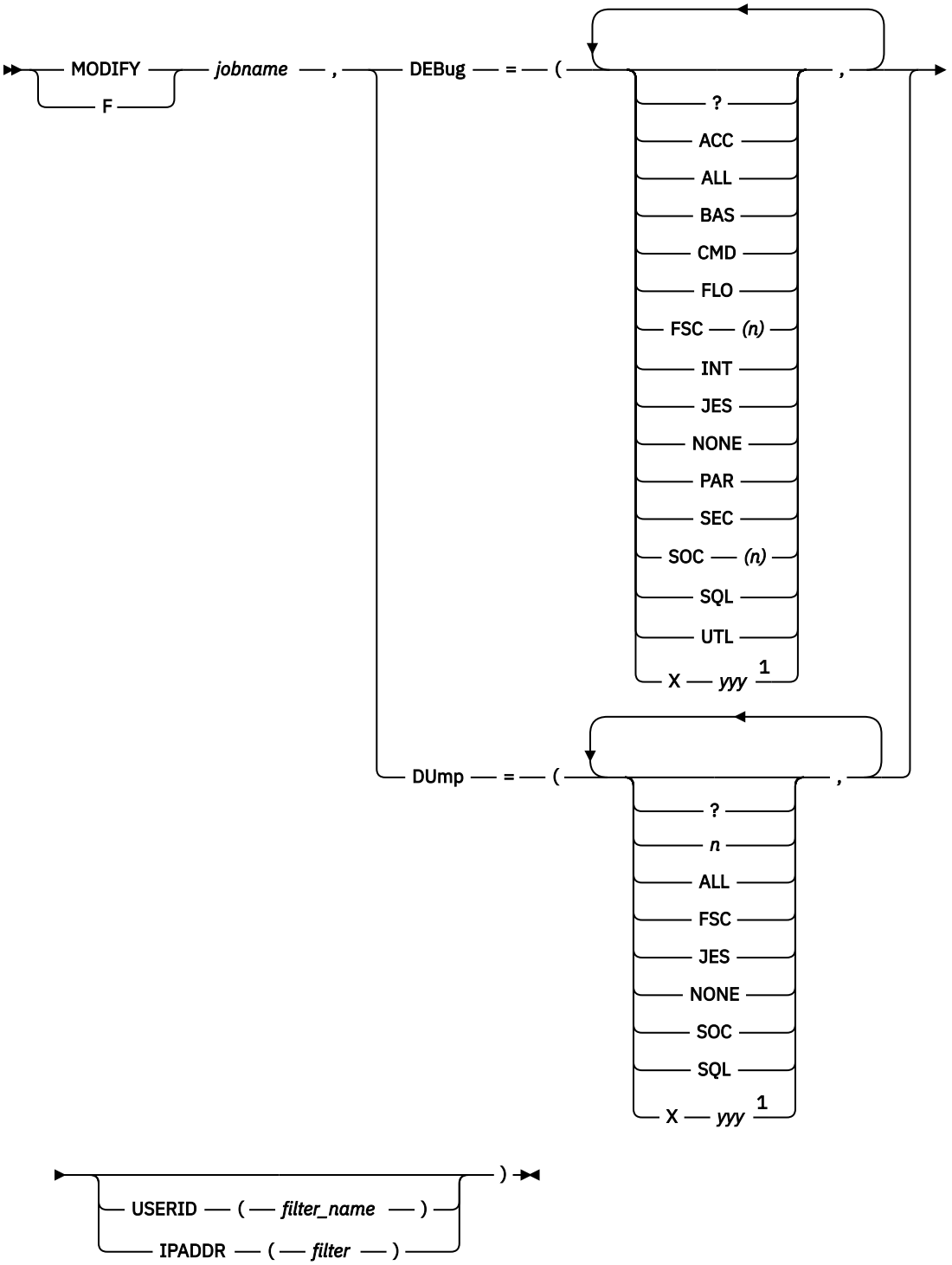
Control Defense Manager daemon (DMD) functions:





FTP server

Start and stop tracing after initialization is complete:

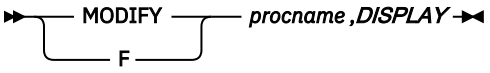


Notes:

[1] Prepend any option *yyy* with X to turn off that trace.

IKE server

Control IKE server functions:

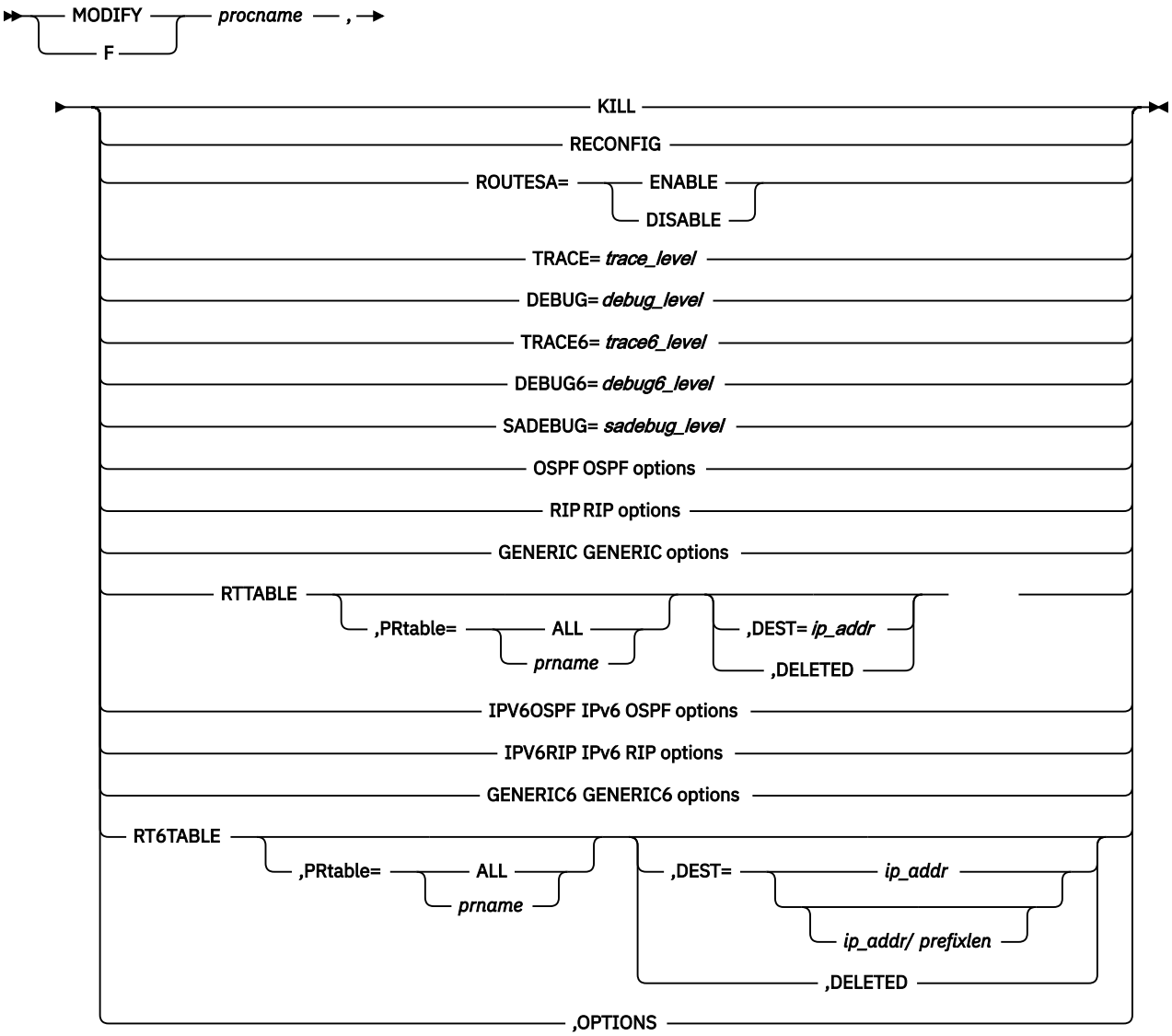


Network security services server

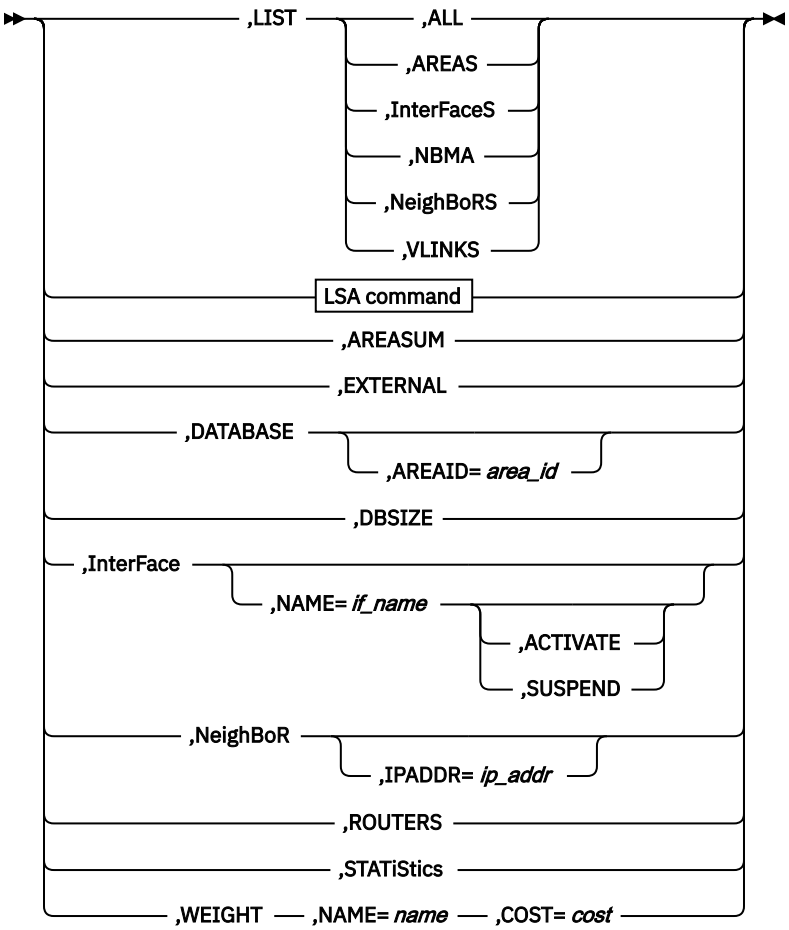
Control the network security services (NSS) server functions:

OMPROUTE

Control OMPROUTE from the operator's console:

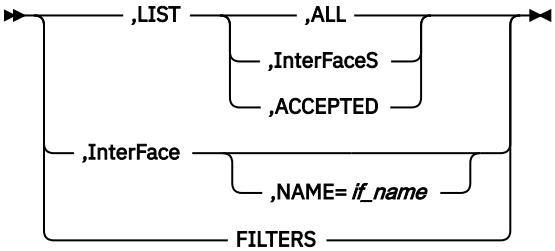


OSPF options

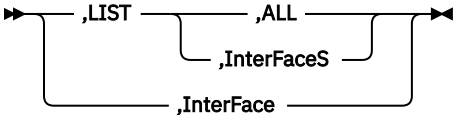


LSA command

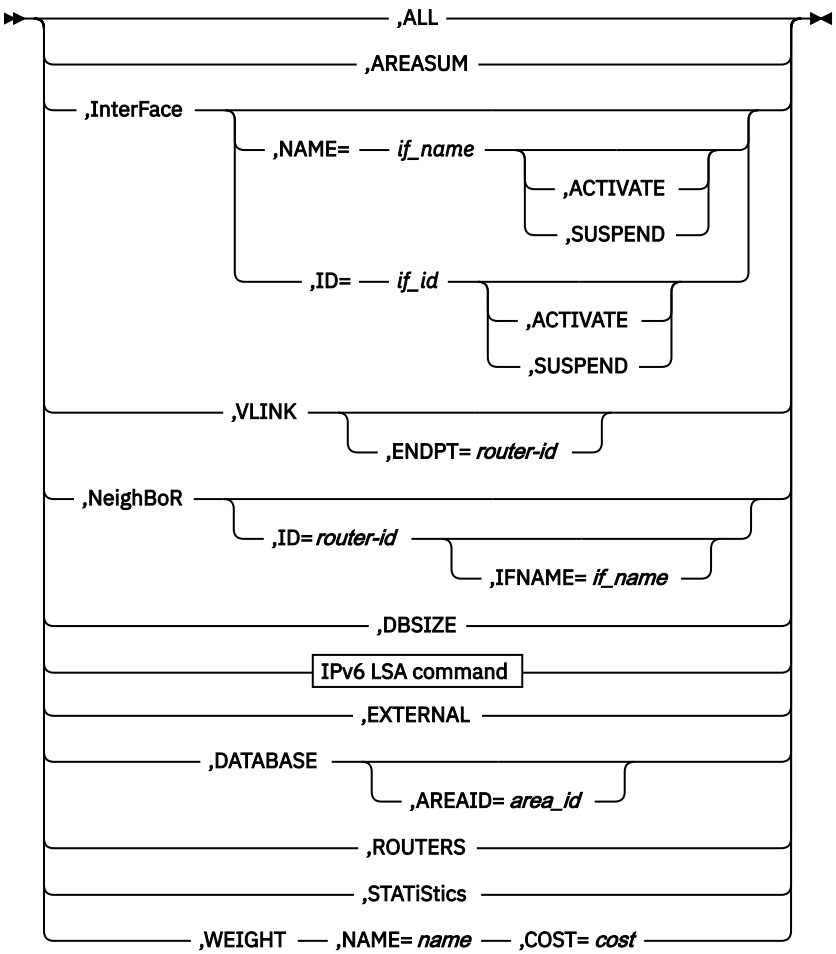
RIP options



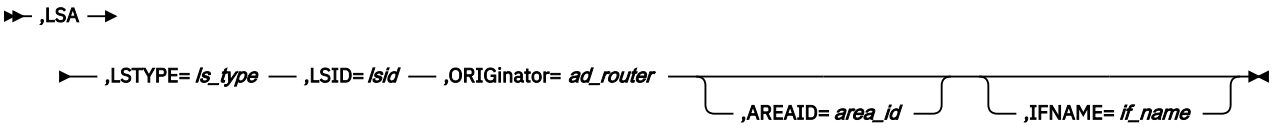
GENERIC options



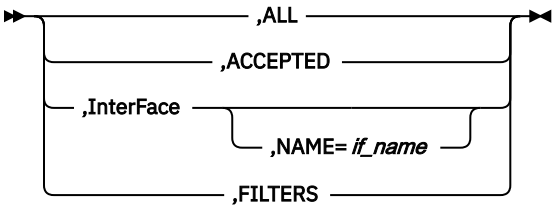
IPv6 OSPF options



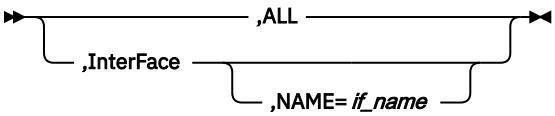
IPv6 LSA command



IPv6 RIP options

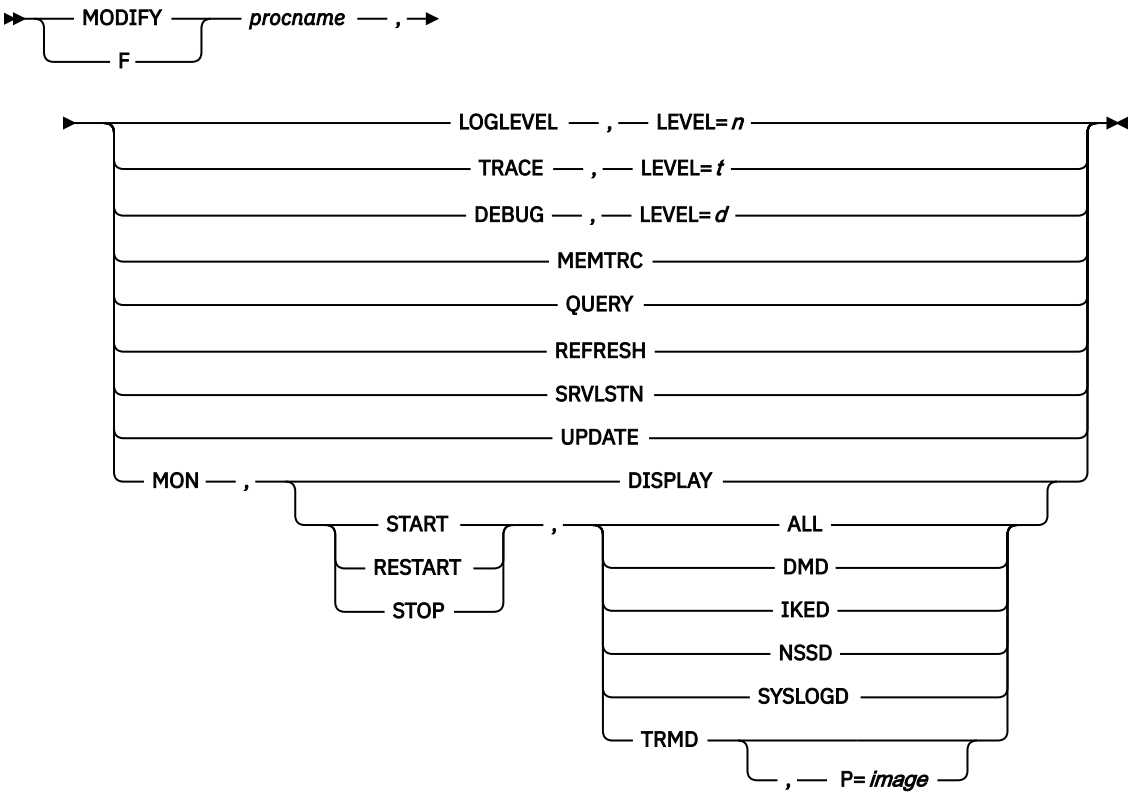


GENERIC6 options



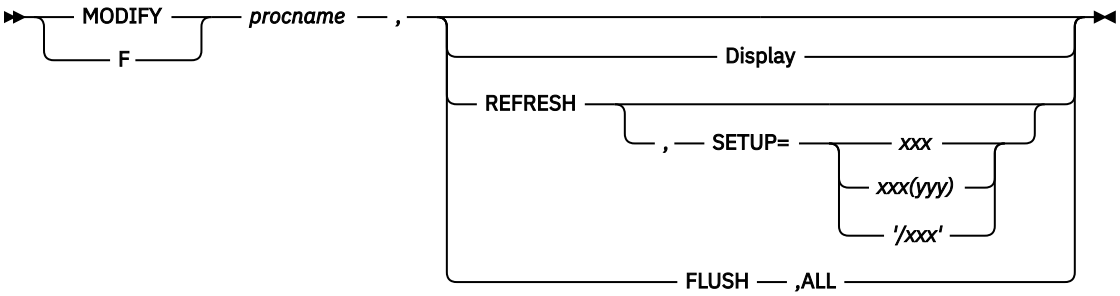
Policy Agent

Control the Policy Agent functions from the operator's console using the MODIFY command:



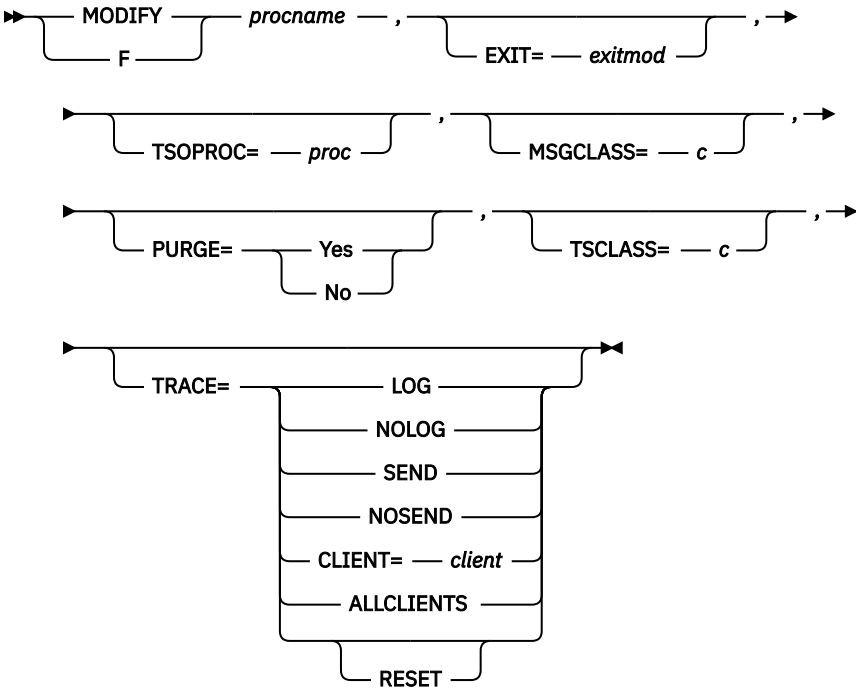
Resolver address space

Request the resolver address space to display or refresh its setup information:



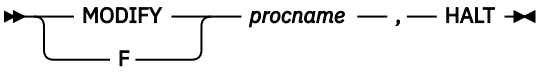
REXEC server

Change the parameters on the Remote Execution server:



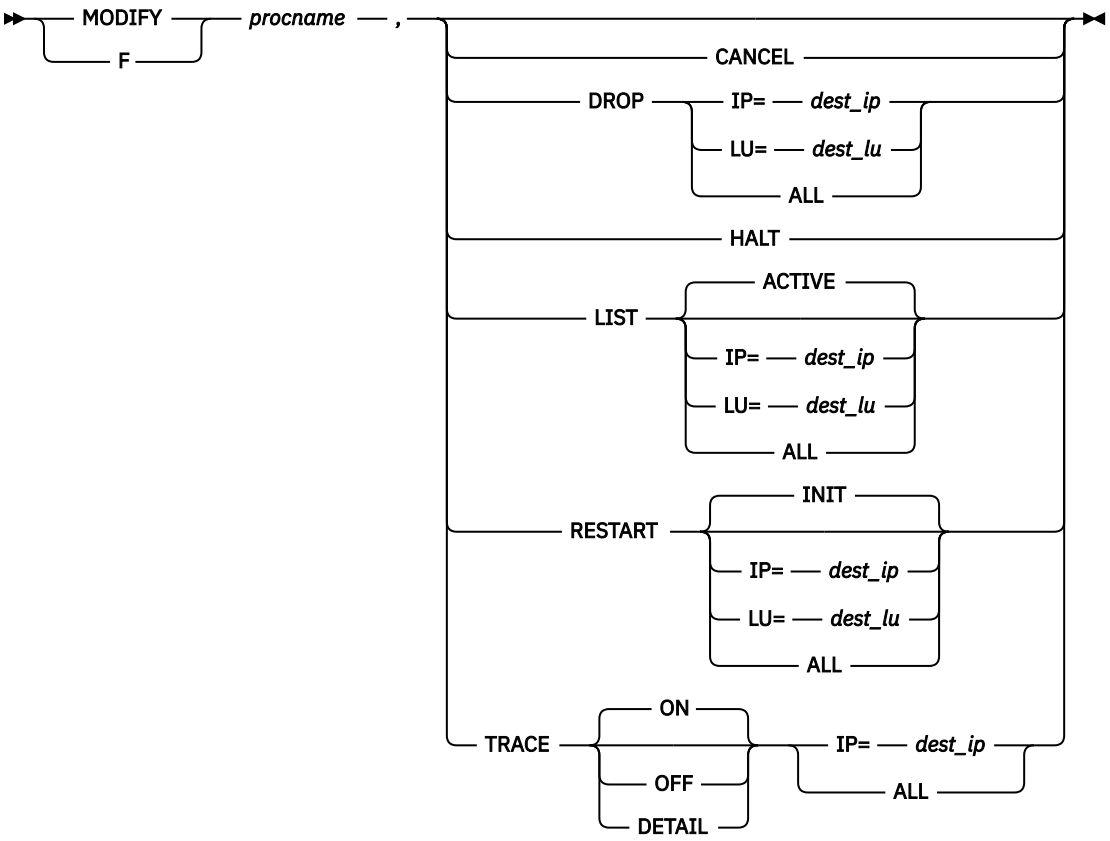
SNALINK LU0 server

Halt the SNALINK LU0 interface:



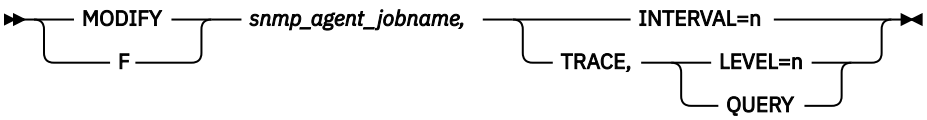
SNALINK LU6.2 server

Stop or restart the SNALINK LU6.2 interface and control tracing:



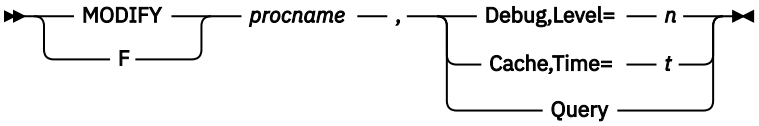
SNMP agent

Modify some SNMP agent initialization parameters:



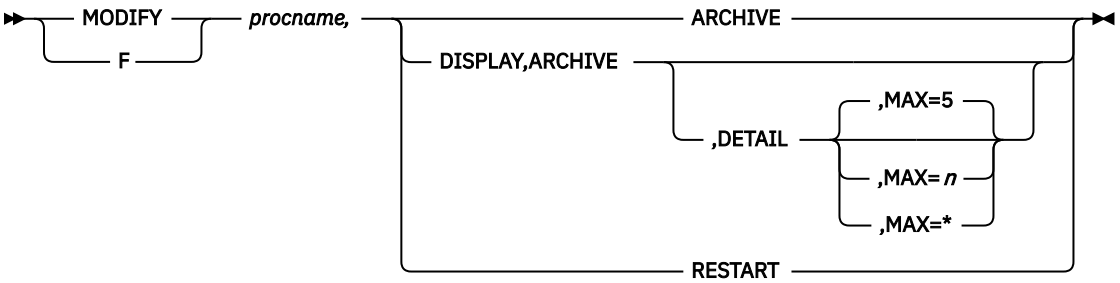
SNMP network SLAPM2 subagent

Control the Network SLAPM2 subagent functions from the operator's console using the MODIFY command:



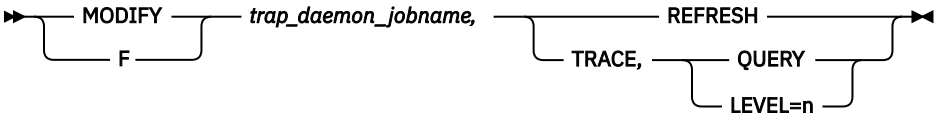
Syslog daemon

Control syslog daemon functions:



TRAPFWD

Modify the trap forwarder daemon:

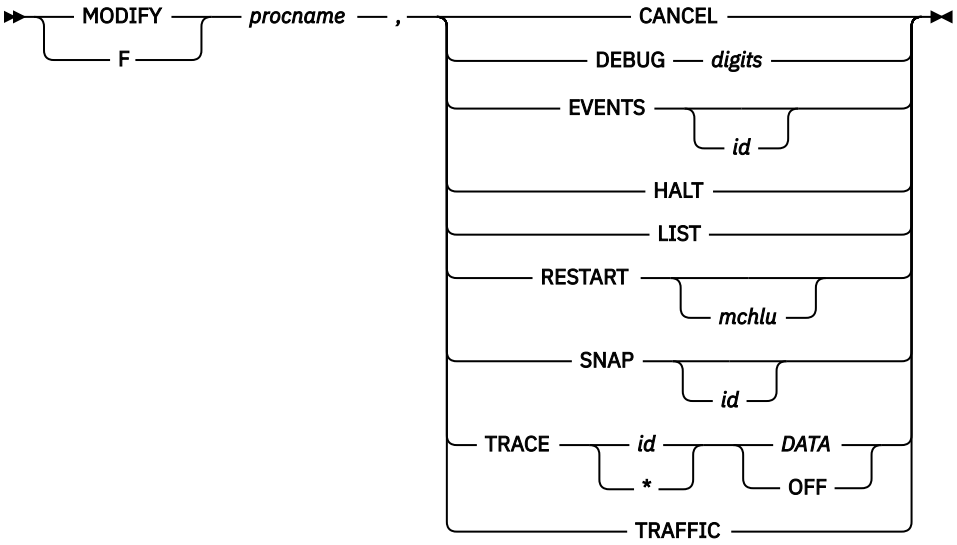


VMCF and TNF

Display the names of current users of VMCF and TNF and remove names from the name lists:

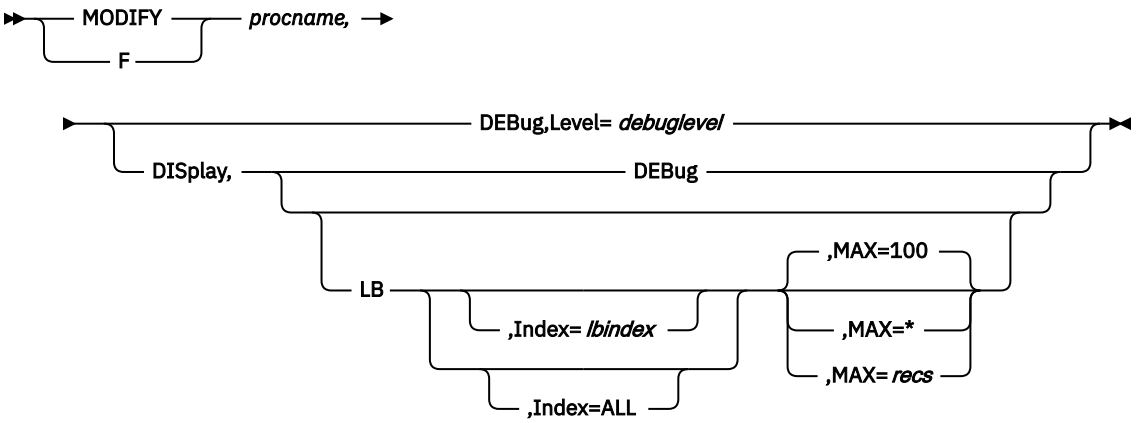
X.25 NPSI server

Pass parameters to the X.25 NPSI server:



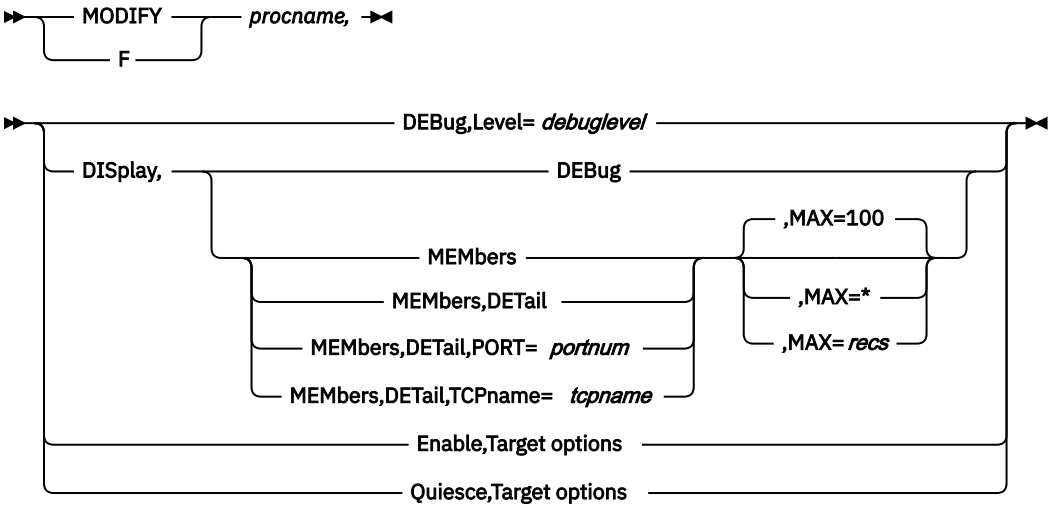
z/OS Load Balancing Advisor

Control the Load Balancing Advisor from the operator's console using the MODIFY command:

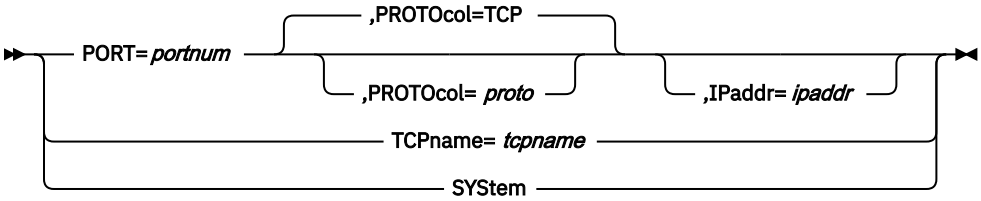


z/OS Load Balancing Agent

Control the Load Balancing Agent from the operator's console using the MODIFY command:



Target options

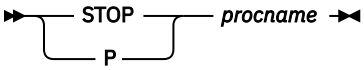


START TCPIP

Dynamically start a TCP/IP server or address space (including the TCP/IP address space):

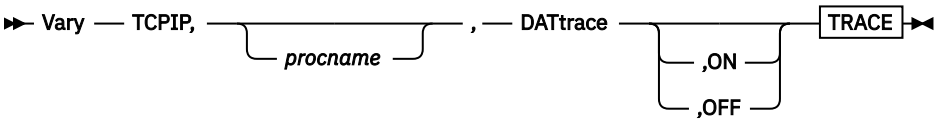
STOP TCPIP

Stop a TCP/IP server or address space (including the TCP/IP address space) that is in execution:

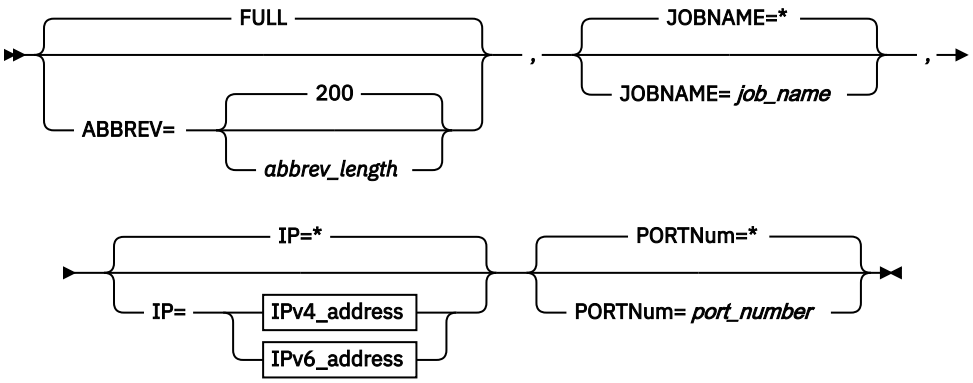


VARY TCPIP DATTRACE

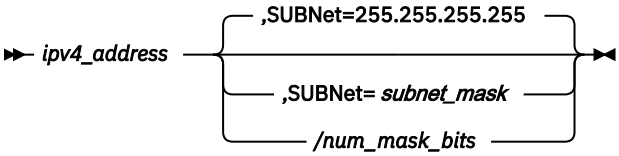
Trace socket data (transforms) into and out of the physical file structure (PFS):



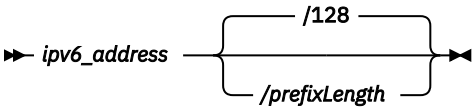
TRACE



IPv4_address

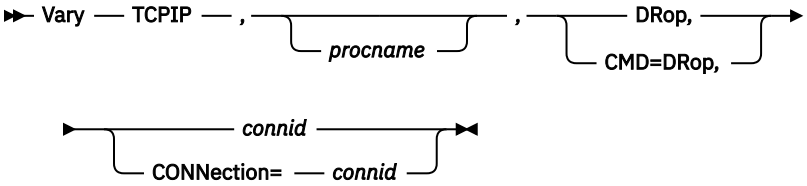


IPv6_address

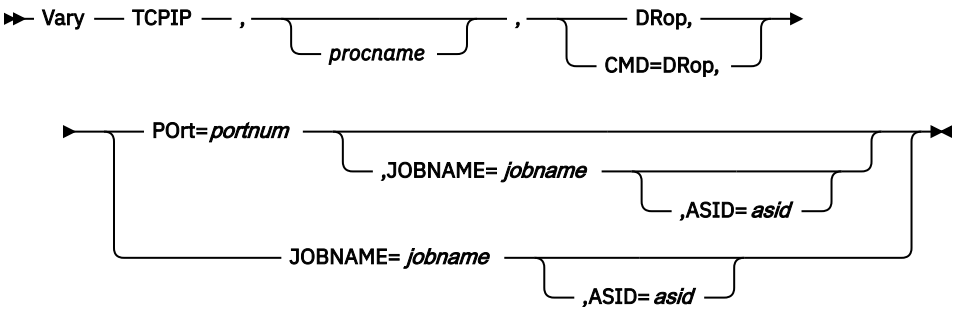


VARY TCPIP DROP

Drop a single connection:

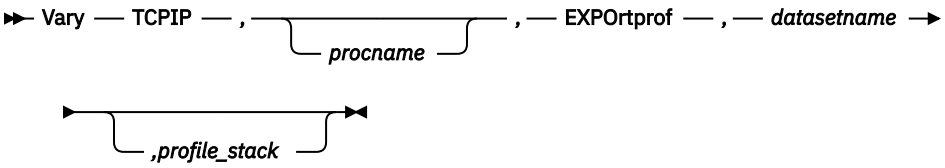


Drop all TCP connections associated with a TCP/IP server:



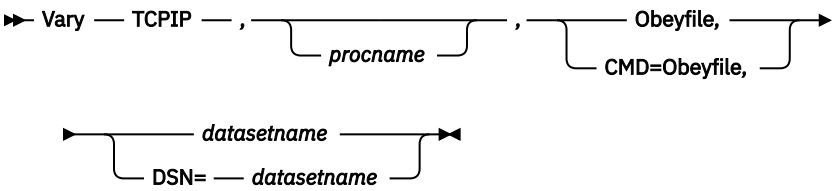
VARY TCPIP EXPORTPROF

Export a TCP/IP stack profile for use with the IBM Configuration Assistant for z/OS Communications Server:



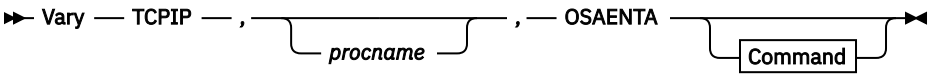
VARY TCPIP OBEYFILE

Change the TCP/IP configuration:

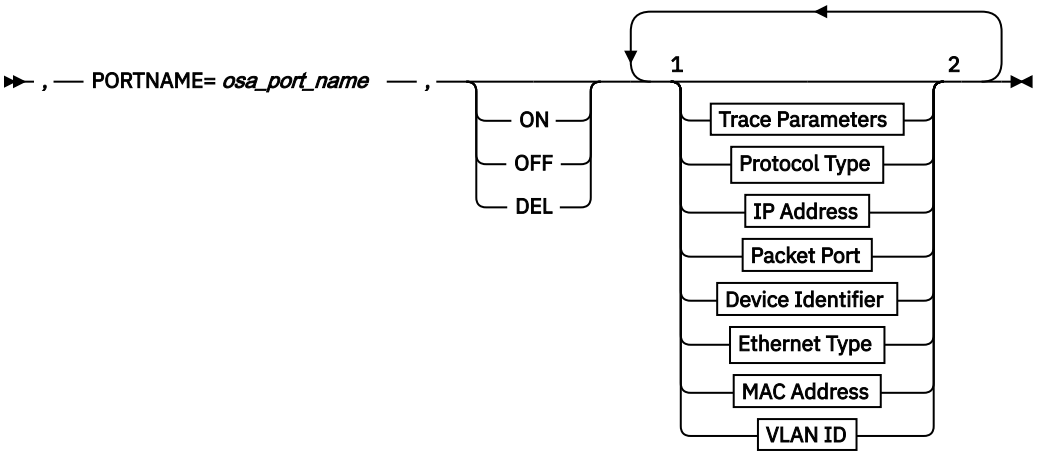


VARY TCPIP OSAENTA

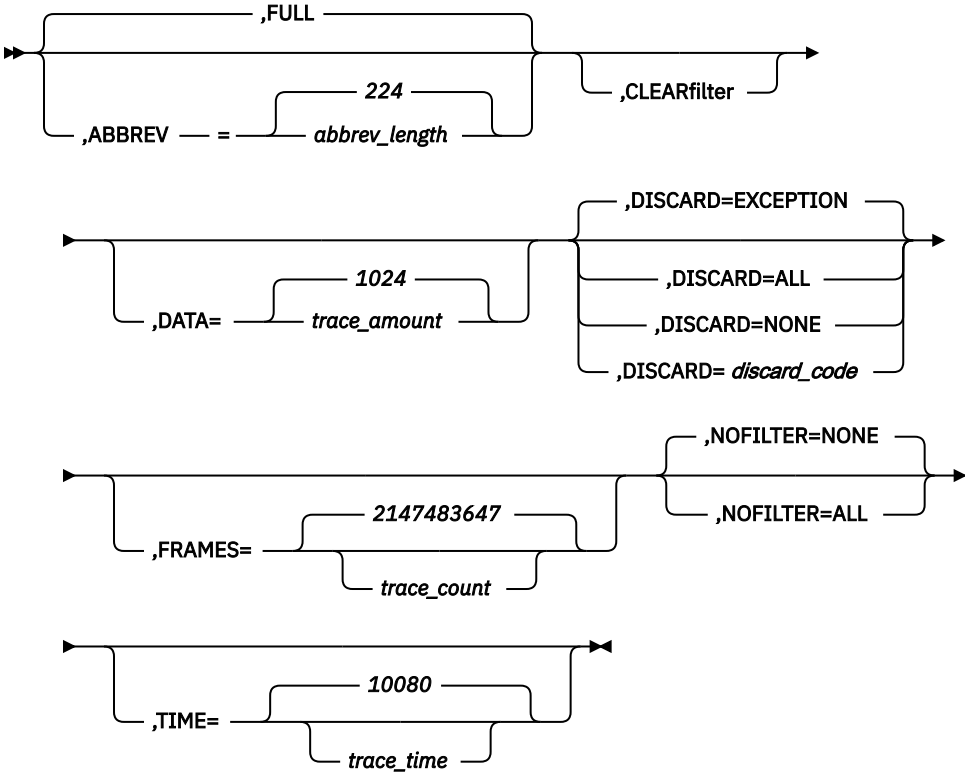
Set up OSAENTA tracing:



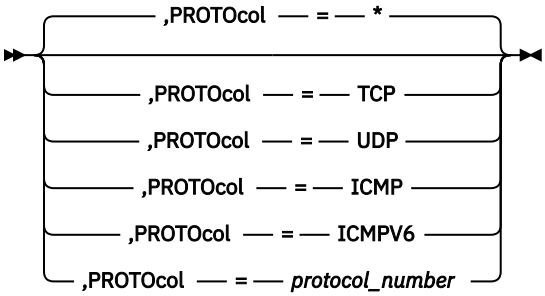
Command



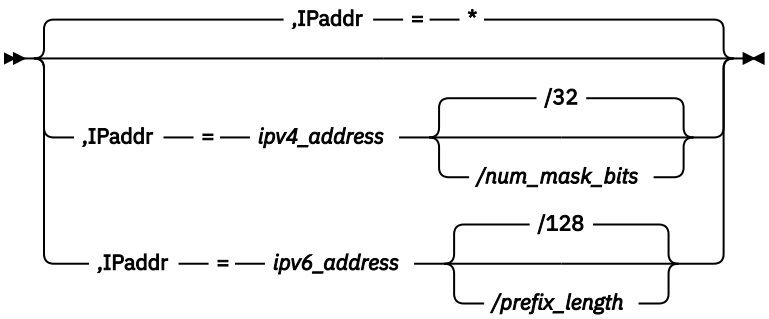
Trace Parameters



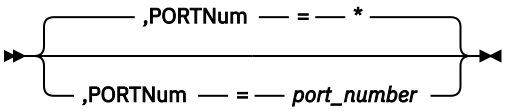
Protocol Type



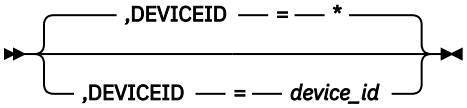
IP Address



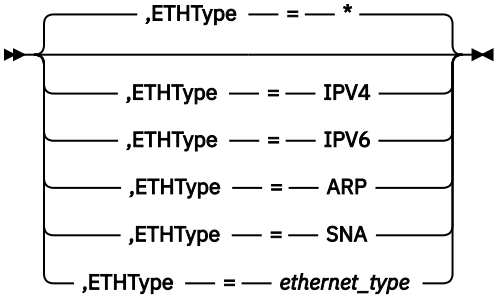
Packet Port



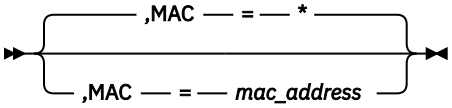
Device Identifier



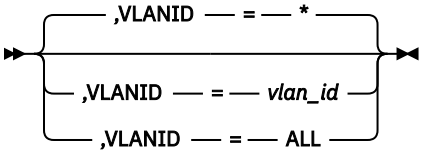
Ethernet Type



MAC Address



VLAN ID



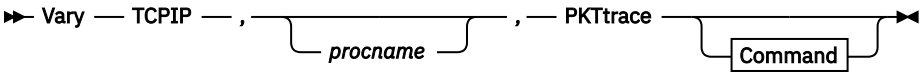
Notes:

[1] Each option can be specified only once. The order of options is not important.

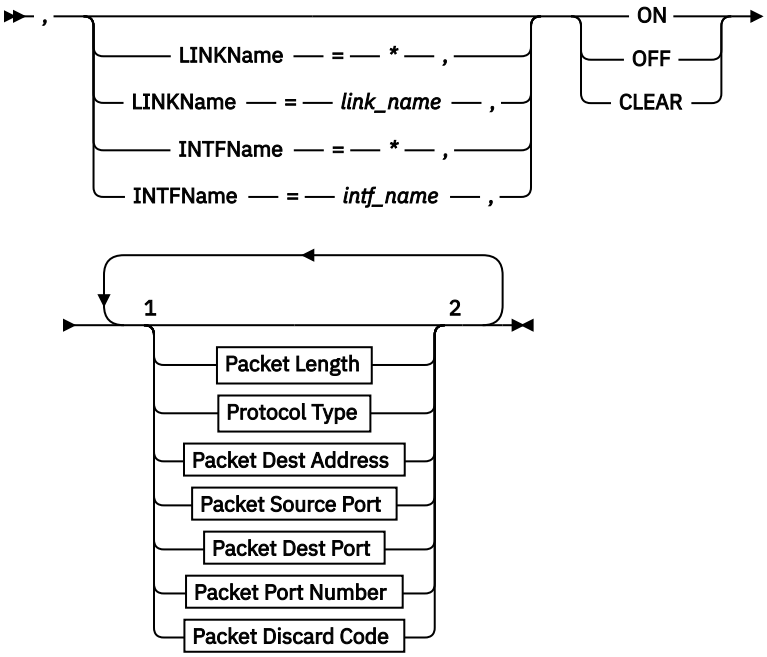
[2] You must also issue the MVS TRACE command for component SYSTCPOT to activate the OSAENTA trace. See the z/OS Communications Server: IP Diagnosis Guide for details.

VARY TCPIP PKTTRACE

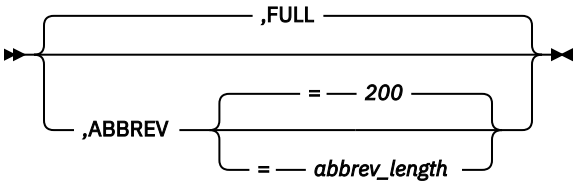
Set up packet tracing:



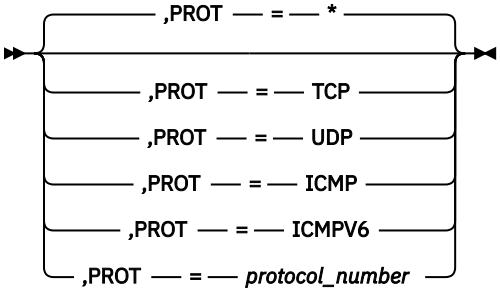
Command



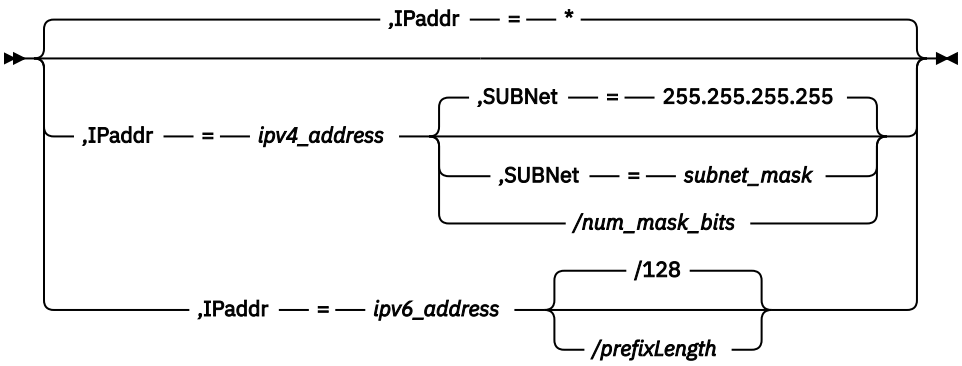
Packet Length



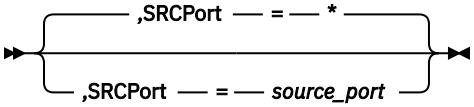
Protocol Type



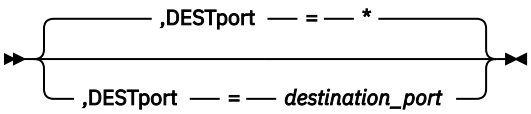
Packet Dest Address



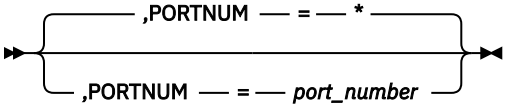
Packet Source Port



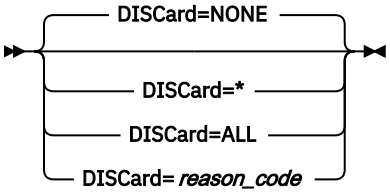
Packet Dest Port



Packet Port Number



Packet Discard Code



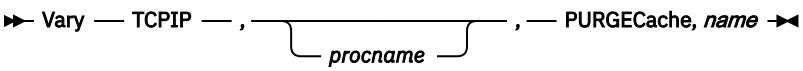
Notes:

[1] Each option can be specified only once. The order of options is not important.

[2] The MVS TRACE command must also be issued for component SYSTCPDA to activate the packet trace. See the z/OS Communications Server: IP Diagnosis Guide for details.

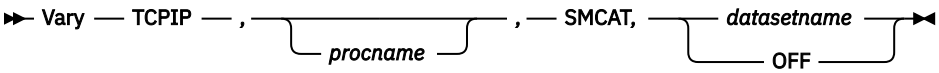
VARY TCPIP PURGECACHE

Delete the ARP cache entries for a link or neighbor cache entries for an interface:



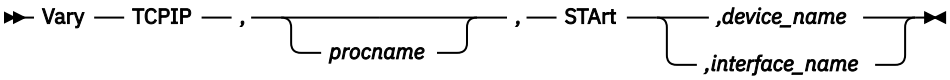
VARY TCPIP SMCAT

Use the VARY TCPIP,,SMCAT command to control the SMC Applicability Tool (SMCAT).



VARY TCPIP START

Start a TCP/IP device or interface:



VARY TCPIP STOP

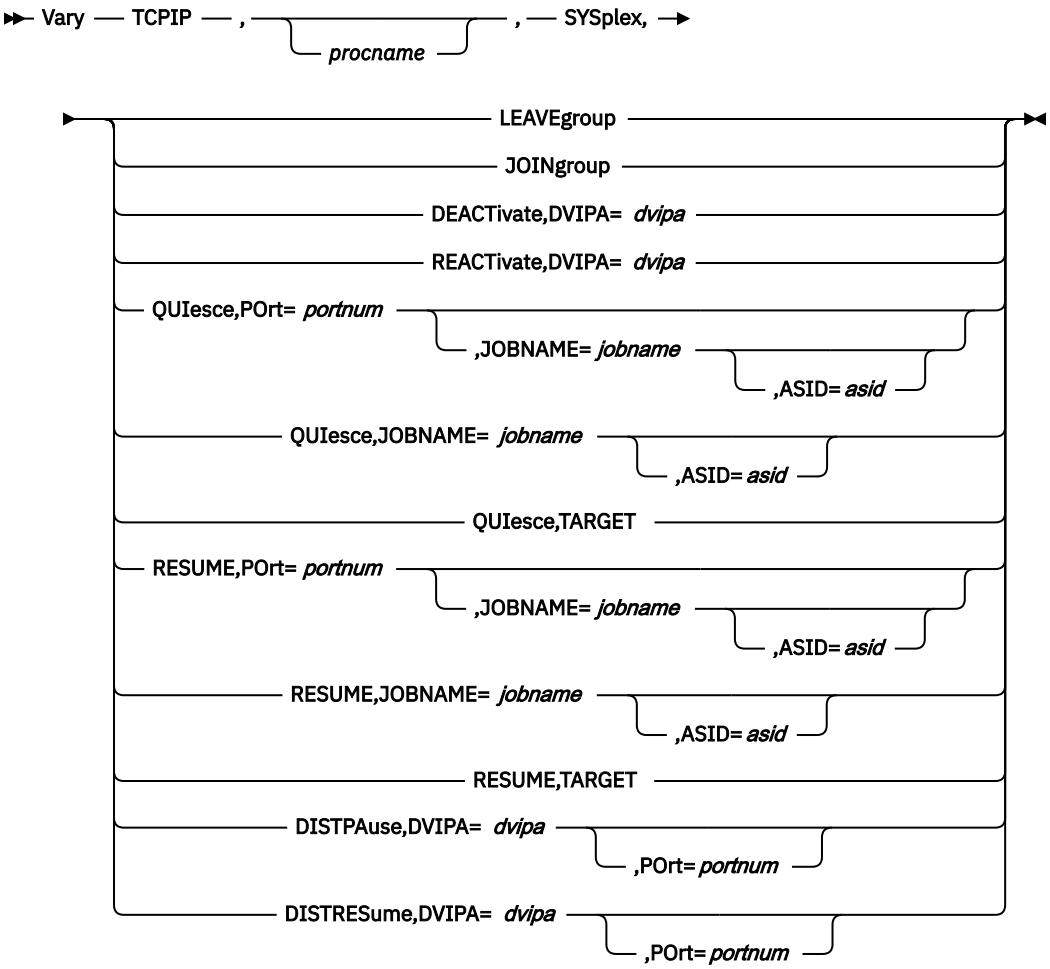
Stop a TCP/IP device or interface:

VARY TCPIP SYNTAXCHECK

Check the syntax of TCP/IP configuration statements:

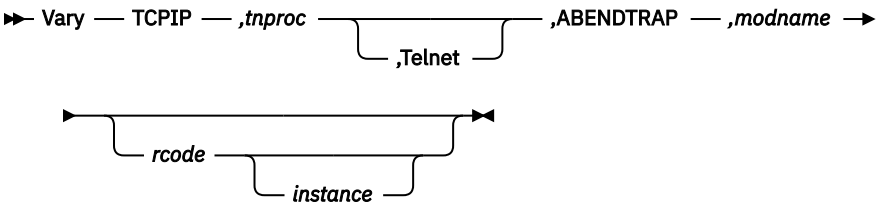
VARY TCPIP SYSPLEX

Change the TCP/IP stack's sysplex configuration:



VARY TCPIP TELNET

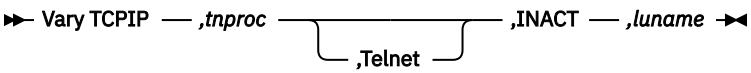
Obtain abend dumps based on a return code being set in a given module:



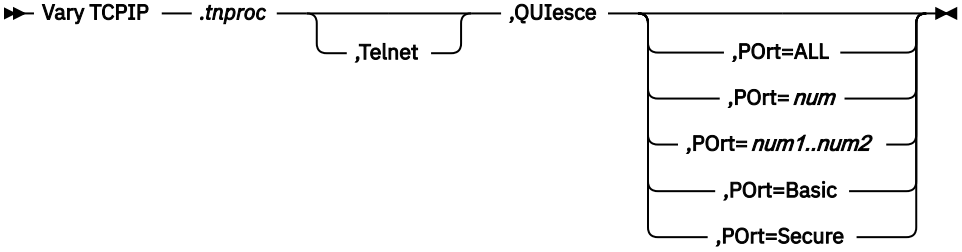
Disable Telnet traces:

Activate a Telnet LU:

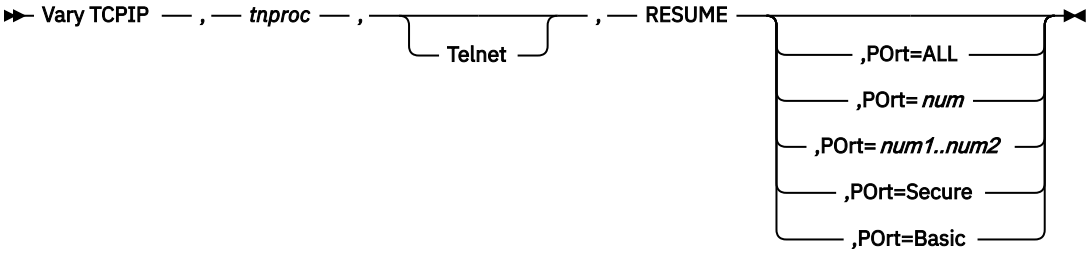
Deactivate a Telnet LU:



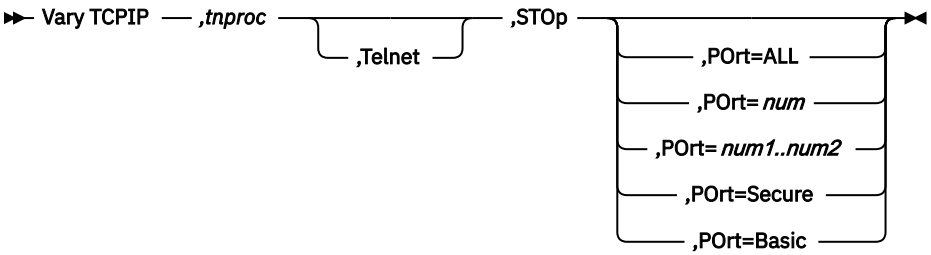
Quiesce a Telnet port:



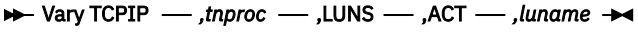
Resume a Telnet port:



Stop a Telnet port:

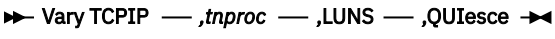


Activate a LUNS LU:

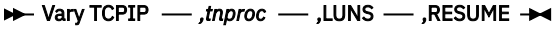


Deactivate a LUNS LU:

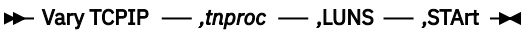
Quiesce a LUNS:



Resume a LUNS:



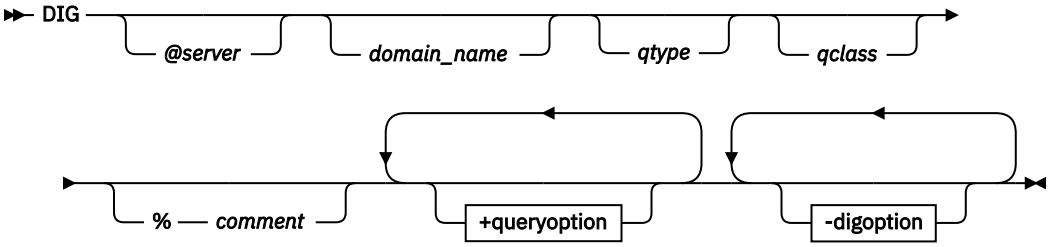
Start a LUNS:



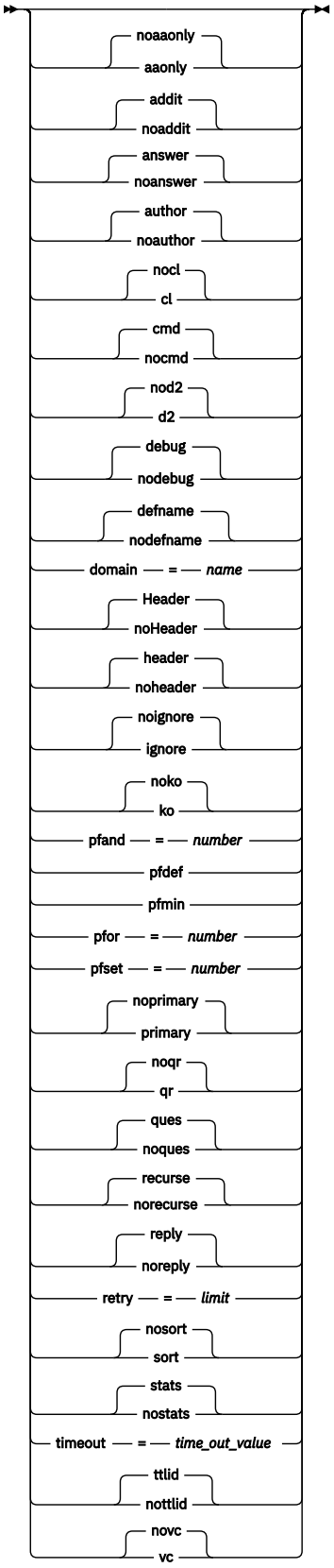
TSO commands

DIG command

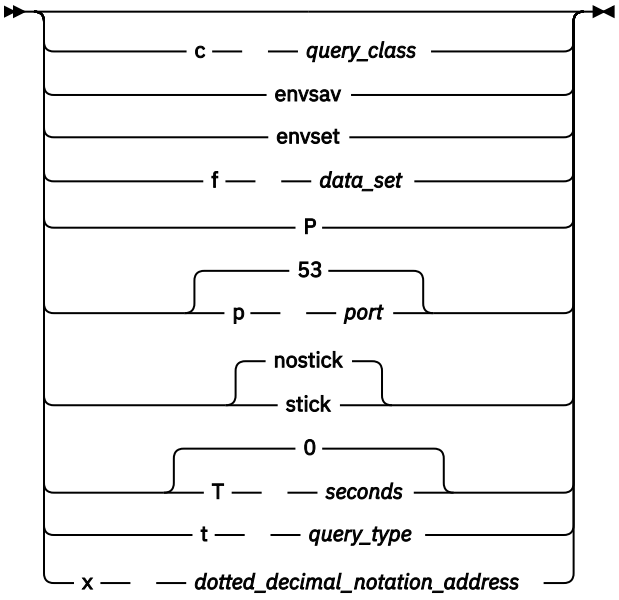
Query name servers



+queryoption

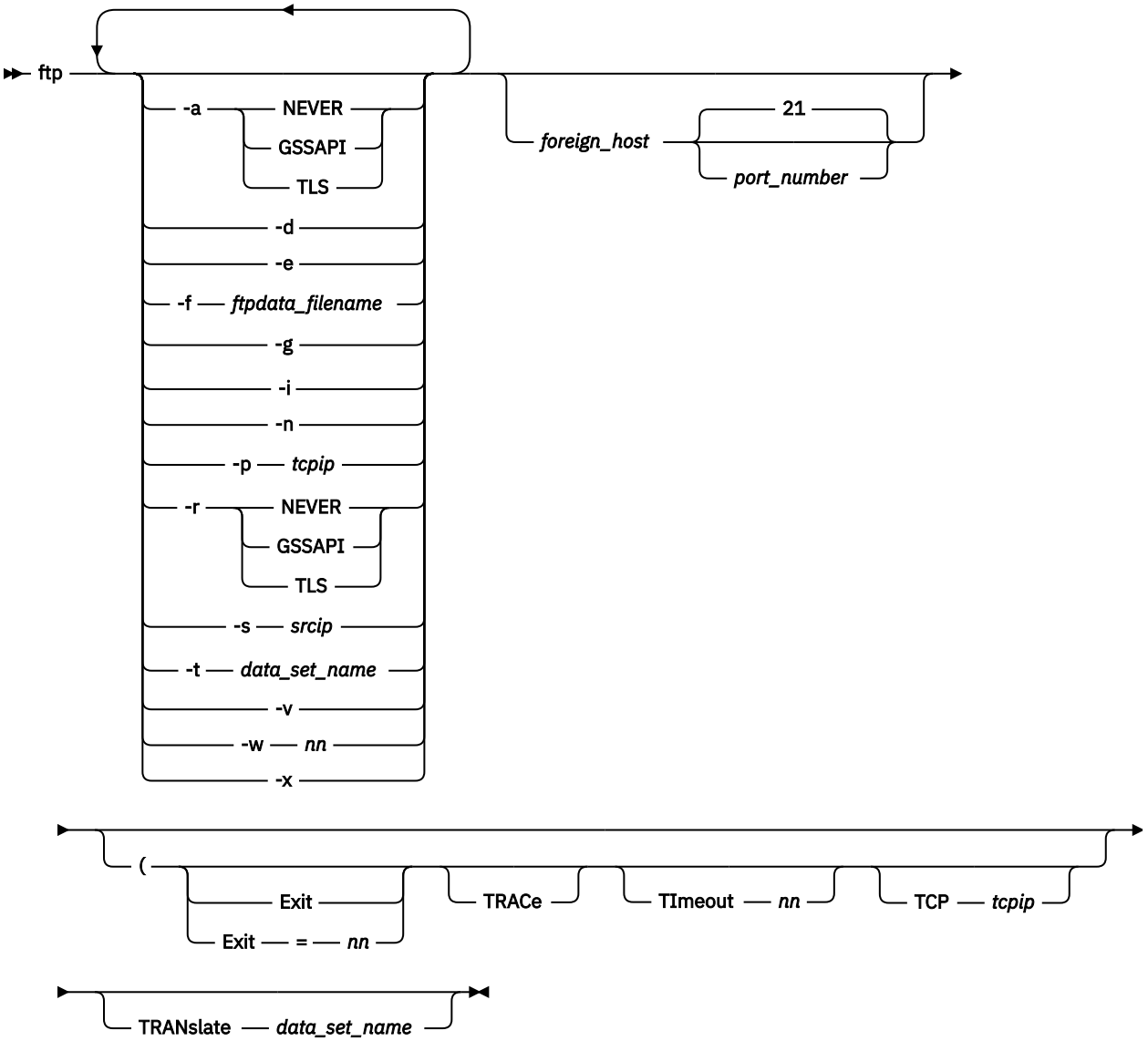

noaaonly
aaonly
addit
noaddit
answer
noanswer
author
noauthor
nocl
cl
cmd
nocmd
nod2
d2
debug
nodebug
defname
nodefname
domain = name
Header
noHeader
header
noheader
noignore
ignore
noko
ko
pfand = number
pfdef
pfmin
pfor = number
pfset = number
noprimary
primary
noqr
qr
ques
noques
recurse
norecurse
reply
noreply
retry = limit
nosort
sort
stats
nostats
timeout = time_out_value
ttlid
nottlid
novc
vc

-digoption


c
query_class
envsav
envset
f
data_set
P
53
p
port
nostick
stick
0
T
seconds
t
query_type
x
dotted_decimal_notation_address

FTP command

Enter the FTP environment



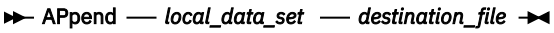
The following sections describe the syntax for FTP subcommands. You must be in the FTP environment to use the FTP subcommands.

ACCT subcommand

Supply account information

APPEND subcommand

Append a local data set



ASCII subcommand

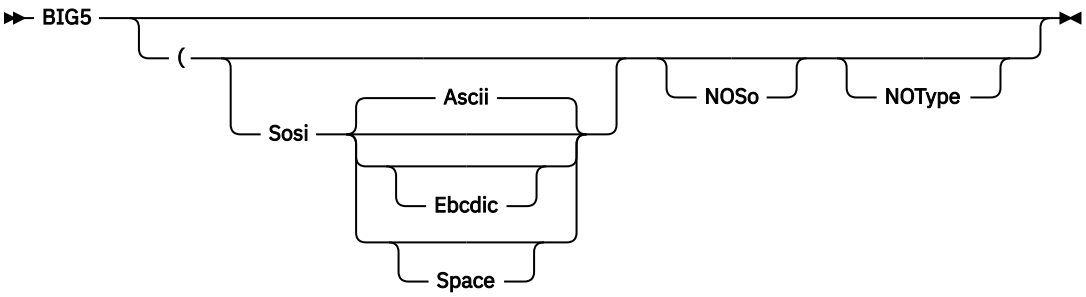
Change the data transfer type to ASCII

AUth subcommand

Negotiate a security mechanism for the session

BIG5 subcommand

Change the data transfer type to BIG5:



BINARY subcommand

Change the data transfer type to Image

BLOCK subcommand

Set the block data transfer mode

CCC subcommand

Change control connection protection to clear

CD subcommand

Change the directory on the remote host:

CDUP subcommand

Change to the parent of the working directory:

CLEAR subcommand

Change control connection protection to clear:

CLOSE subcommand

Disconnect from a remote host:

COMPRESS subcommand

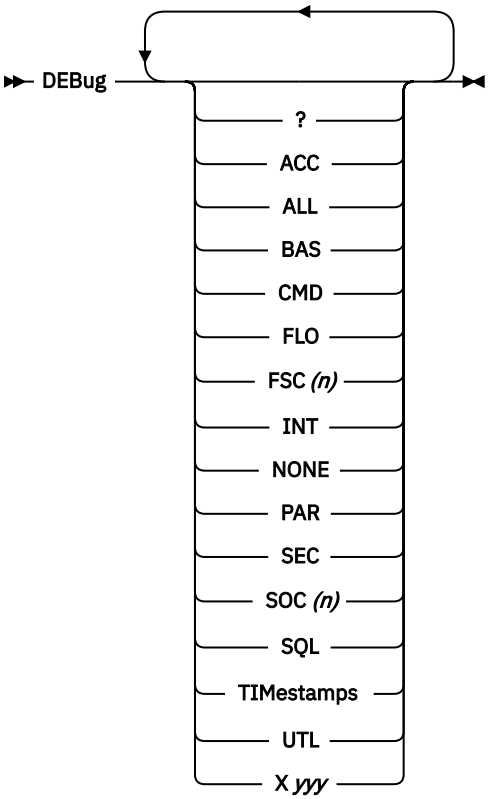
Set the compressed data transfer mode:

CPROTECT subcommand

Change or display control connection protection:

DEBUG subcommand

Set internal debug options:



DELETE subcommand

Delete files:

DELIMIT subcommand

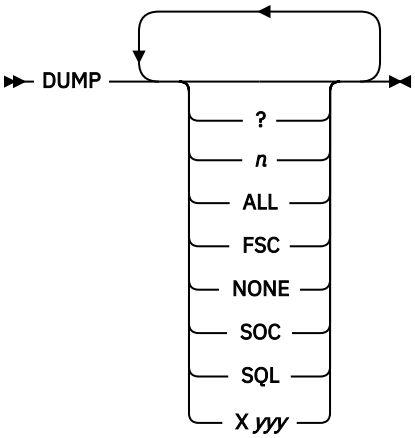
Display the file name delimiter:

DIR subcommand

Obtain a list of directory entries:

DUMP subcommand

Sets the internal extended trace options:

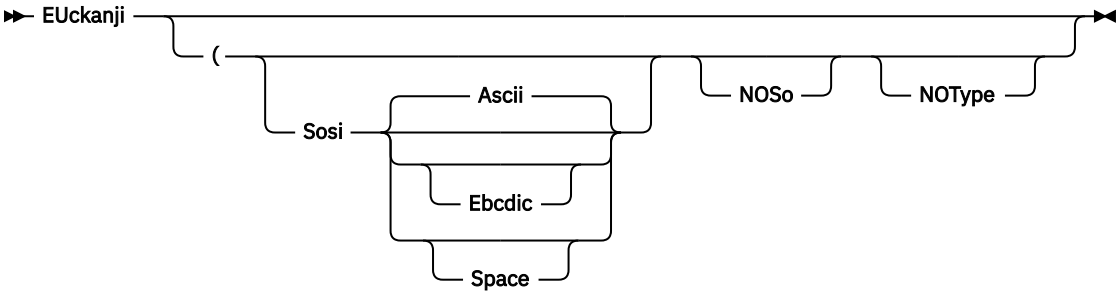


EBCDIC subcommand

Change the data transfer type to EBCDIC:

EUCKANJI subcommand

Change the data transfer type to EUCKANJI:



FEATURE subcommand

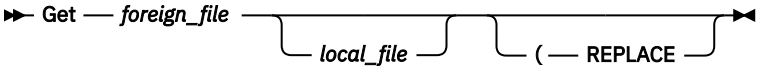
Ask the server which features and extensions it supports:

FILE subcommand

Set the file structure to file

GET subcommand

Copy files:

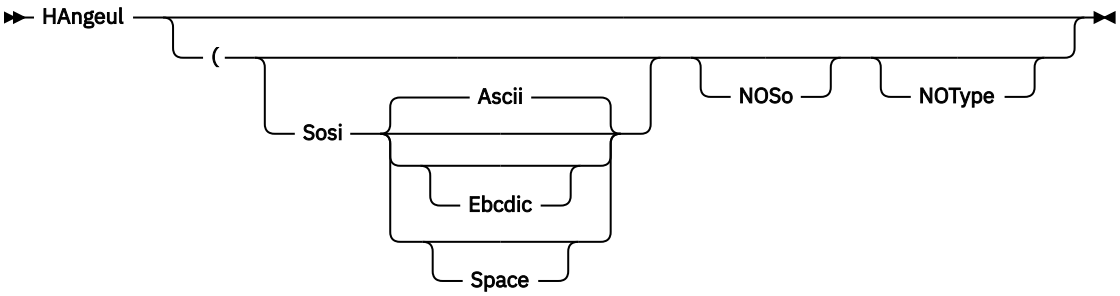


GLOB subcommand

Toggle expansion of metacharacters

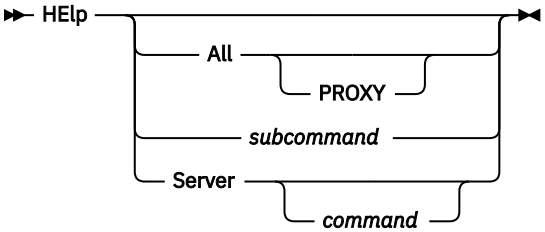
HANGEUL subcommand

Change the data transfer type to HANGEUL:



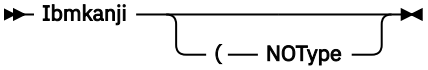
HELP and ? subcommands

Display help information:



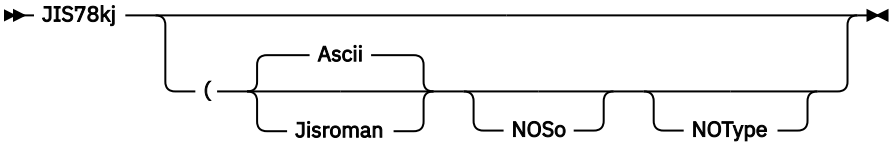
IBMKANJI subcommand

Change the data transfer type to IBMKANJI:



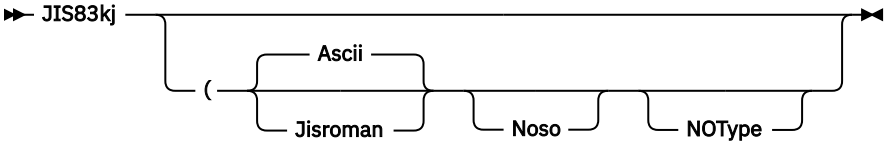
JIS78KJ subcommand

Change the data transfer type to JIS78KJ:



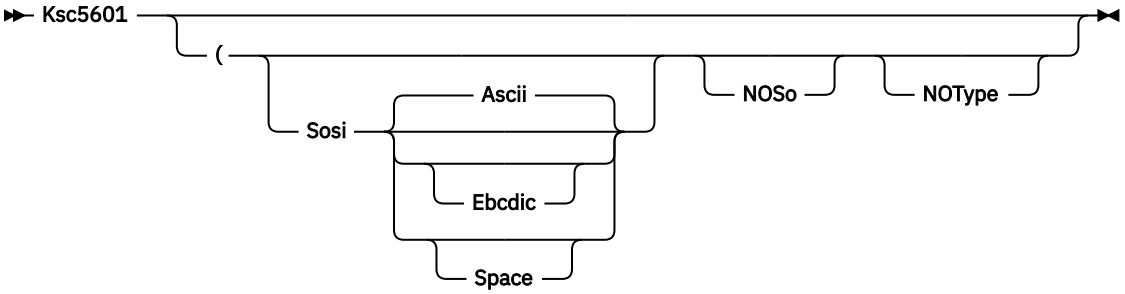
JIS83KJ subcommand

Change the data transfer type to JIS83KJ:



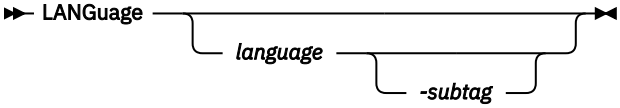
KSC5601 subcommand

Change the data transfer type to KSC-5601:



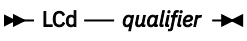
LANGuage subcommand

Request server replies in another language, or reset language to the default:



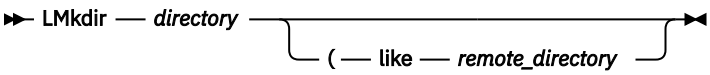
LCD subcommand

Change the local working directory



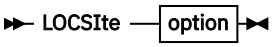
LMKDIR subcommand

Create a directory on the local host

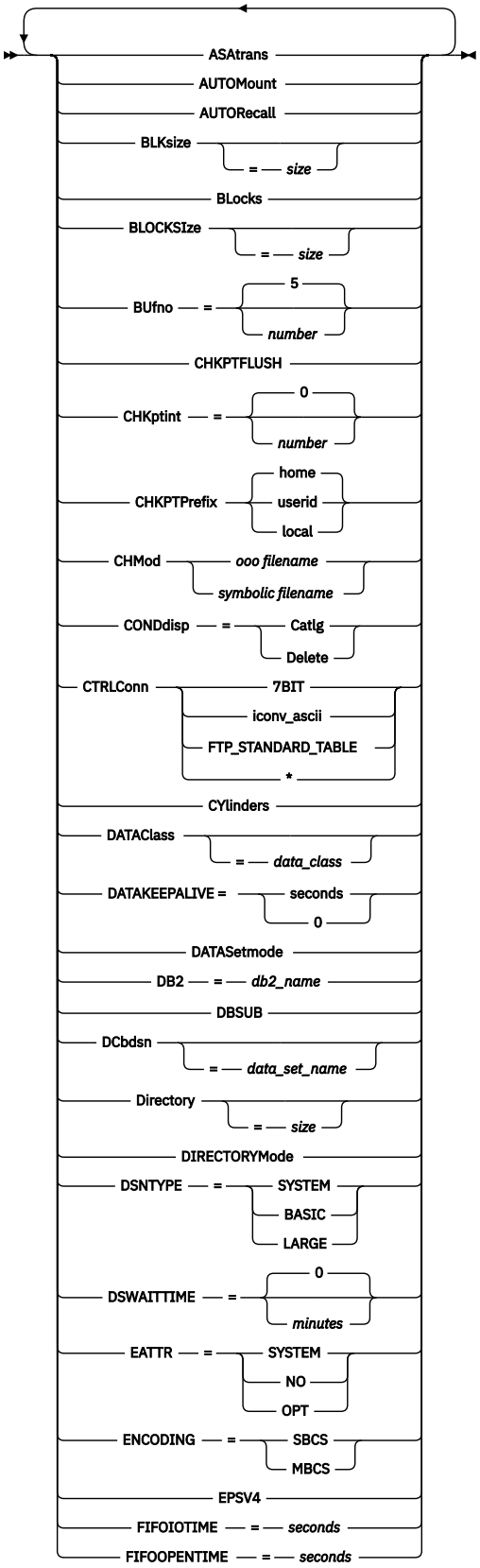


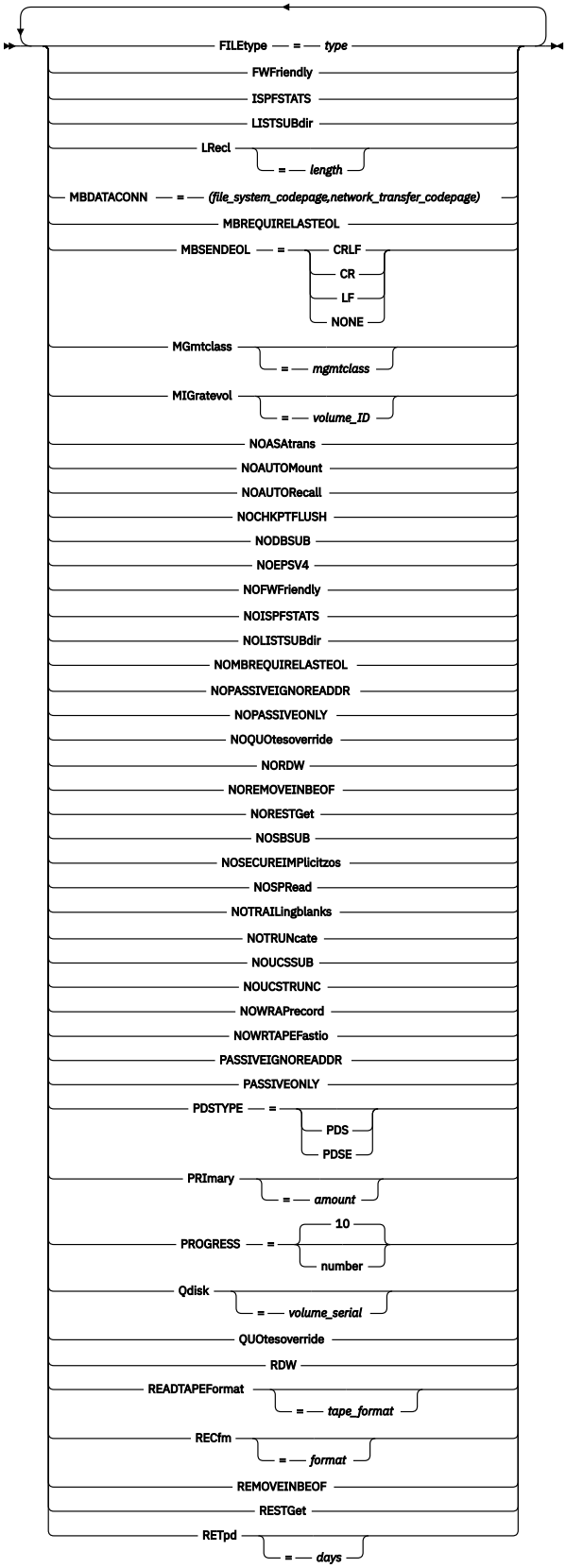
LOCSITE subcommand

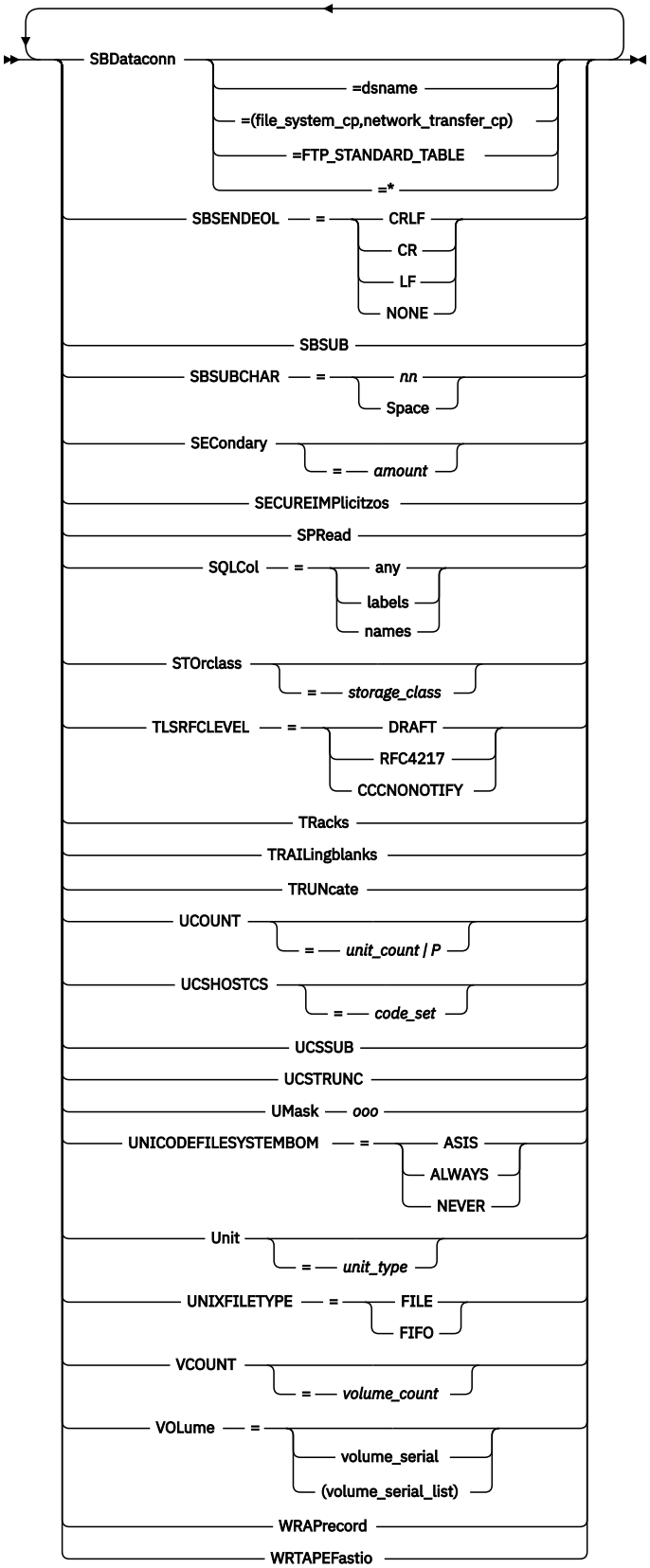
Specify site information to the local host:



options

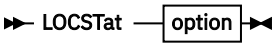

ASAtrans
AUTOMount
AUTORecall
BLKsize
= size
BLocks
BLOCKSIze
= size
BUfno = 5 number
CHKPTFLUSH
CHKptint = 0 number
CHKPTPrefix home userid local
CHMod ooo filename symbolic filename
CONDdisp = Catlg Delete
CTRLConn 7BIT iconv_ascii FTP_STANDARD_TABLE *
CYlinders
DATAClass
= data_class
DATAKEEPALIVE = seconds 0
DATASetmode
DB2 = db2_name
DBSUB
DCbdsn
= data_set_name
Directory
= size
DIRECTORYMode
DSNTYPE = SYSTEM BASIC LARGE
DSWAITTIME = 0 minutes
EATTR = SYSTEM NO OPT
ENCODING = SBCS MBCS
EPSV4
FIFOIOTIME = seconds
FIFOOPENTIME = seconds


FILEtype = type
FWFriendly
ISPFSTATS
LISTSUBdir
LRecl
= length
MBDATACONN = (file_system_codepage,network_transfer_codepage)
MBREQUIRELASTEOL
MBSENDEOL = CRLF
CR
LF
NONE
MGmtclass
= mgmtclass
MIGratevol
= volume_ID
NOASAtrans
NOAUTOMount
NOAUTORecall
NOCHKPTFLUSH
NODBSUB
NOEPSV4
NOFWFriendly
NOISPFSTATS
NOLISTSUBdir
NOMBREQUIRELASTEOL
NOPASSIVEIGNOREADDR
NOPASSIVEONLY
NOQUOtesoverride
NORDW
NOREMOVEINBEOF
NORESTGet
NOSBSUB
NOSECUREIMPlicitzos
NOSPRead
NOTRAILingblanks
NOTRUNcate
NOUCSSUB
NOUCSTRUNC
NOWRAPrecord
NOWRTAPEFastio
PASSIVEIGNOREADDR
PASSIVEONLY
PDSTYPE = PDS
PDSE
PRImary
= amount
PROGRESS = 10
number
Qdisk
= volume_serial
QUOtesoverride
RDW
READTAPEFormat
= tape_format
RECfm
= format
REMOVEINBEOF
RESTGet
RETpd
= days

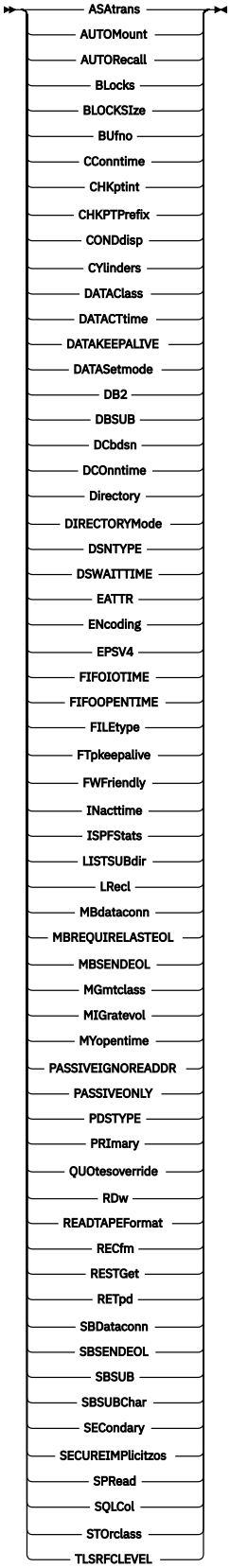

SBDataconn
=dsname
=(file_system_cp,network_transfer_cp)
=FTP_STANDARD_TABLE
=*
SBSENDEOL = CRLF
CR
LF
NONE
SBSUB
SBSUBCHAR = nn
Space
SECondary
= amount
SECUREIMPlicitzos
SPRead
SQLCol = any
labels
names
STOrclass
= storage_class
TLSRFCLEVEL = DRAFT
RFC4217
CCCNONOTIFY
TRacks
TRAILingblanks
TRUNcate
UCOUNT
= unit_count | P
UCSHOSTCS
= code_set
UCSSUB
UCSTRUNC
UMask ooo
UNICODEFILESYSTEMBOM = ASIS
ALWAYS
NEVER
Unit
= unit_type
UNIXFILETYPE = FILE
FIFO
VCOUNT
= volume_count
VOLume = volume_serial
(volume_serial_list)
WRAPrecord
WRTAPEFastio

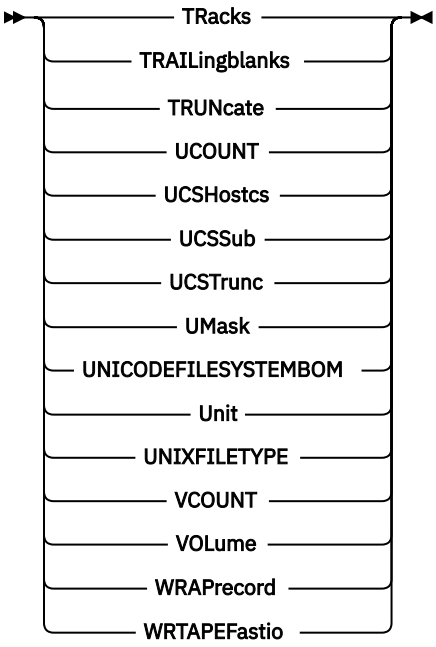
LOCSTAT subcommand

Display local status information:



options


ASAtrans
AUTOMount
AUTORecall
BLocks
BLOCKSIze
BUfno
CConntime
CHKptint
CHKPTPrefix
CONDdisp
CYlinders
DATAClass
DATACTtime
DATAKEEPALIVE
DATASetmode
DB2
DBSUB
DCbdsn
DCOnntime
Directory
DIRECTORYMode
DSNTYPE
DSWAITTIME
EATTR
ENcoding
EPSV4
FIFOIOTIME
FIFOOPENTIME
FILEtype
FTpkeepalive
FWFriendly
INacttime
ISPFStats
LISTSUBdir
LRecl
MBdataconn
MBREQUIRELASTEOL
MBSENDEOL
MGmtclass
MIGratevol
MYopentime
PASSIVEIGNOREADDR
PASSIVEONLY
PDSTYPE
PRImary
QUOtesoverride
RDw
READTAPEFormat
RECfm
RESTGet
RETpd
SBDataconn
SBSENDEOL
SBSUB
SBSUBChar
SECondary
SECUREIMPlicitzos
SPRead
SQLCol
STOrclass
TLSRFCLEVEL



LPWD subcommand

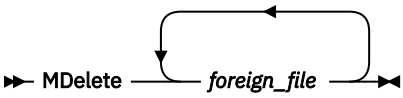
Display the current working-level qualifier:

LS subcommand

Obtain a list of file names:

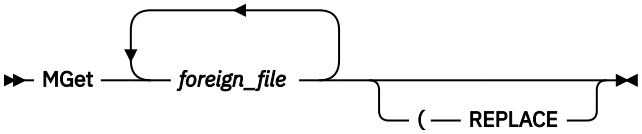
MDELETE subcommand

Delete multiple files:



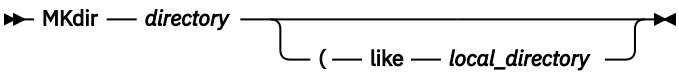
MGET subcommand

Copy multiple files:



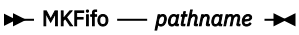
MKDIR subcommand

Create a directory on the remote host:



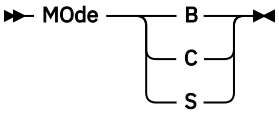
MKFIFO subcommand

Create a named pipe on the remote host:



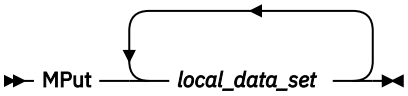
MODE subcommand

Set the data transfer mode:



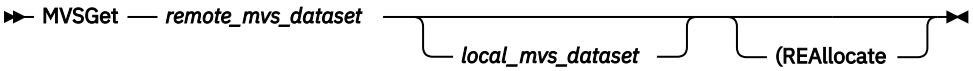
MPUT subcommand

Copy multiple data sets to the remote host:



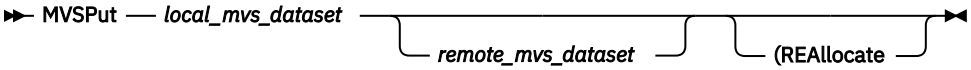
MVSGET subcommand

Copy remote data set into local data set with remote data set attributes.



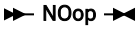
MVSPUT subcommand

Copy local data set into remote data set with local data set attributes.



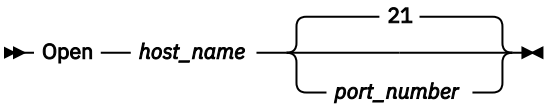
NOOP subcommand

Test the connection:



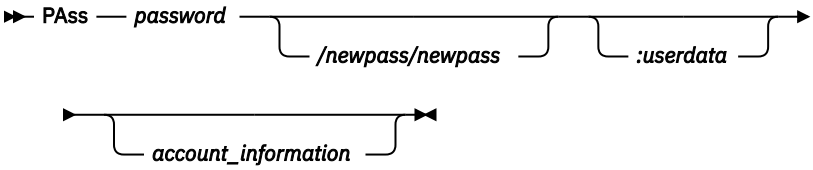
OPEN subcommand

Connect to the FTP server:



PASS subcommand

Supply a password:



PRIVATE subcommand

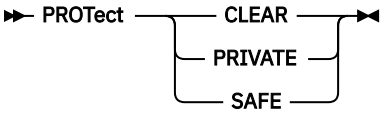
Change data connection protection to private:

PROMPT subcommand

Toggle interactive prompting for M* commands:

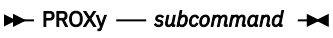
PROTECT subcommand

Change or display data connection protection:



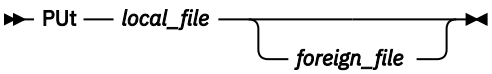
PROXY subcommand

Execute FTP subcommand on secondary control connections:



PUT subcommand

Copy data sets to the remote host:

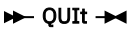


PWD subcommand

Display the current working directory:

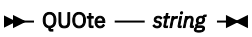
QUIT subcommand

Leave the FTP environment:



QUOTE subcommand

Send an uninterpreted string of data:

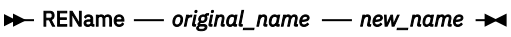


RECORD subcommand

Set the file structure to record:

RENAME subcommand

Rename files:

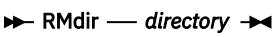


RESTART subcommand

Restart a checkpointed data transfer:

RMDIR subcommand

Remove a directory on the remote host:

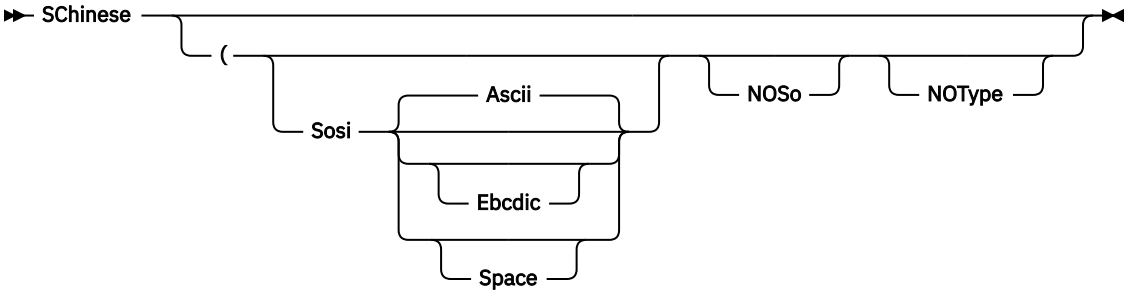


SAFE subcommand

Change data connection protection to safe:

SCHINESE subcommand

Change the data transfer type to SCHINESE:



SENDPORT subcommand

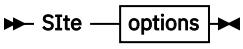
Toggle the sending of port information:

SENDSITE subcommand

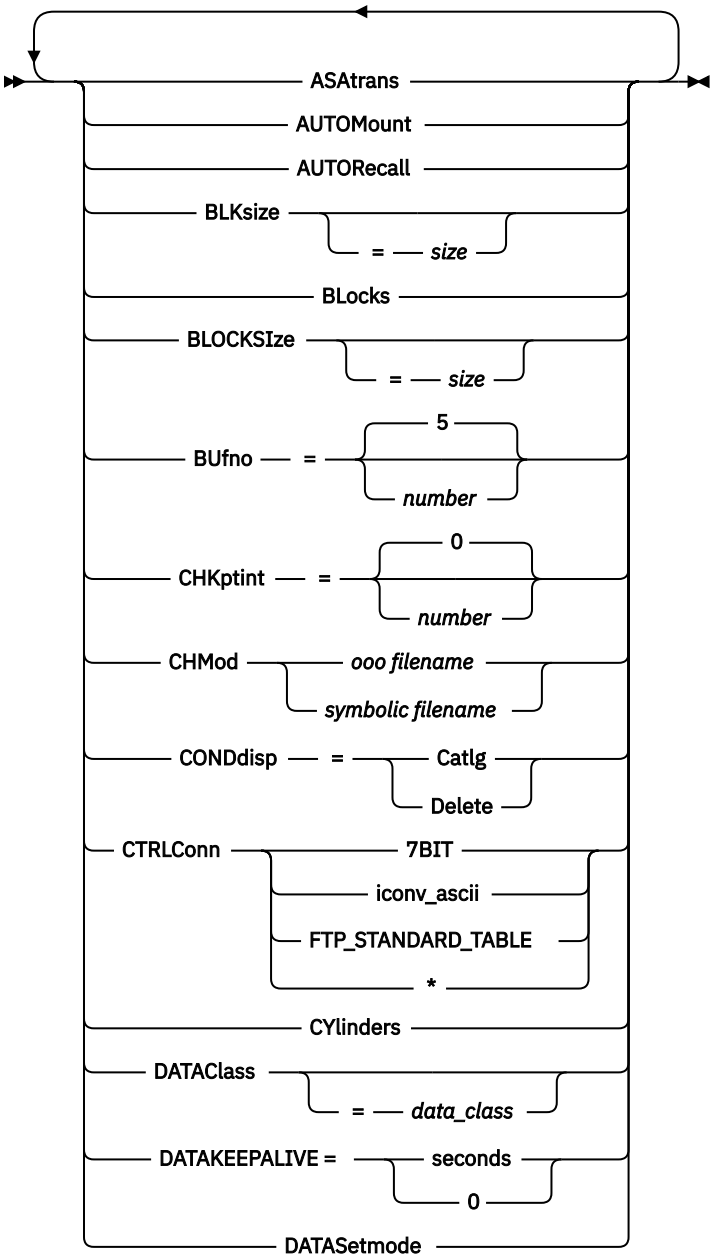
Toggle the sending of site information:

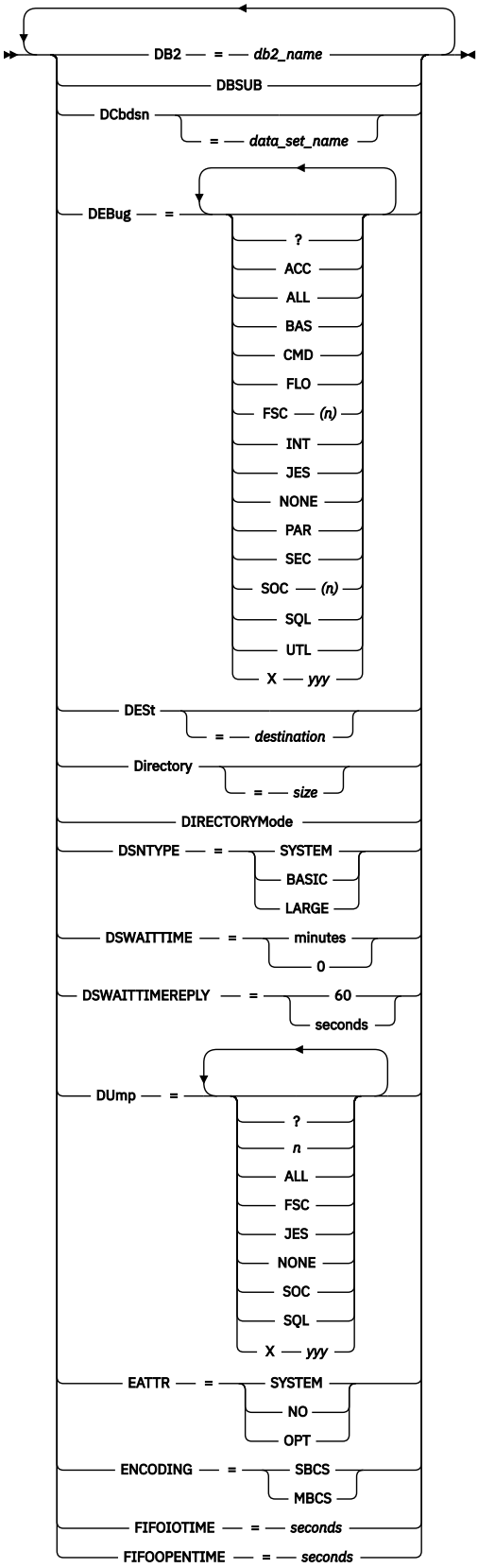
SITE subcommand

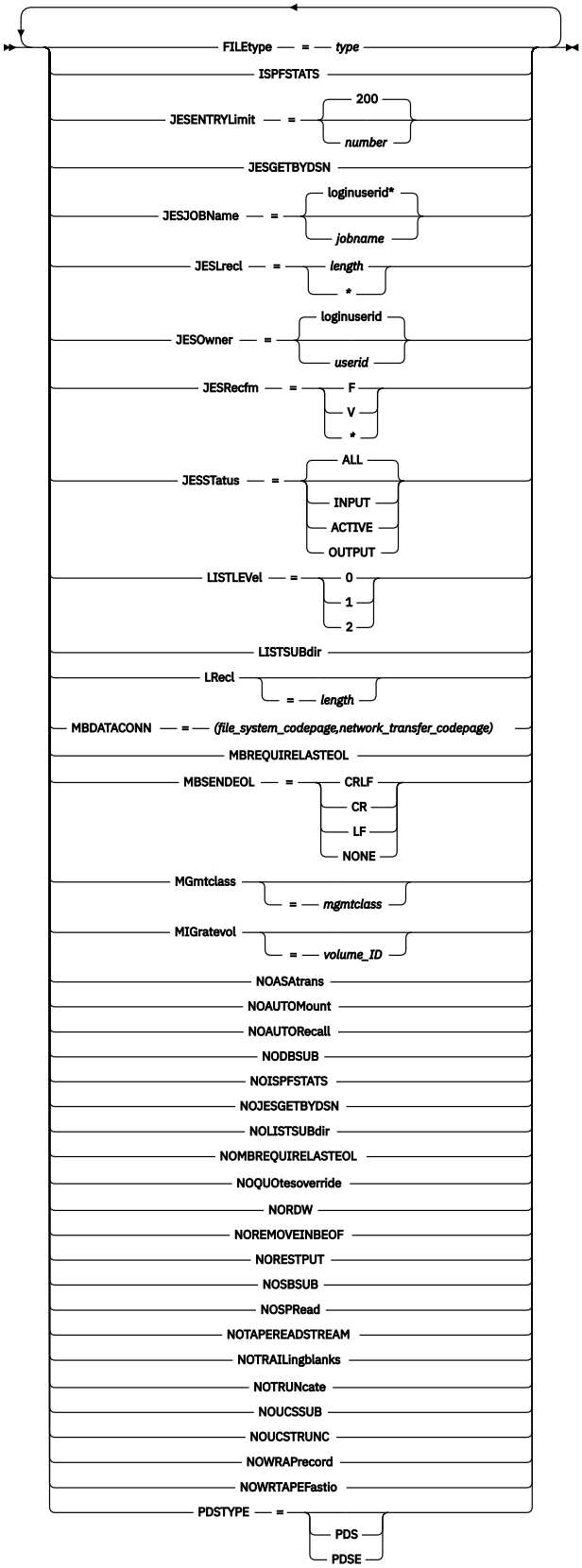
Send site specific information to a host:

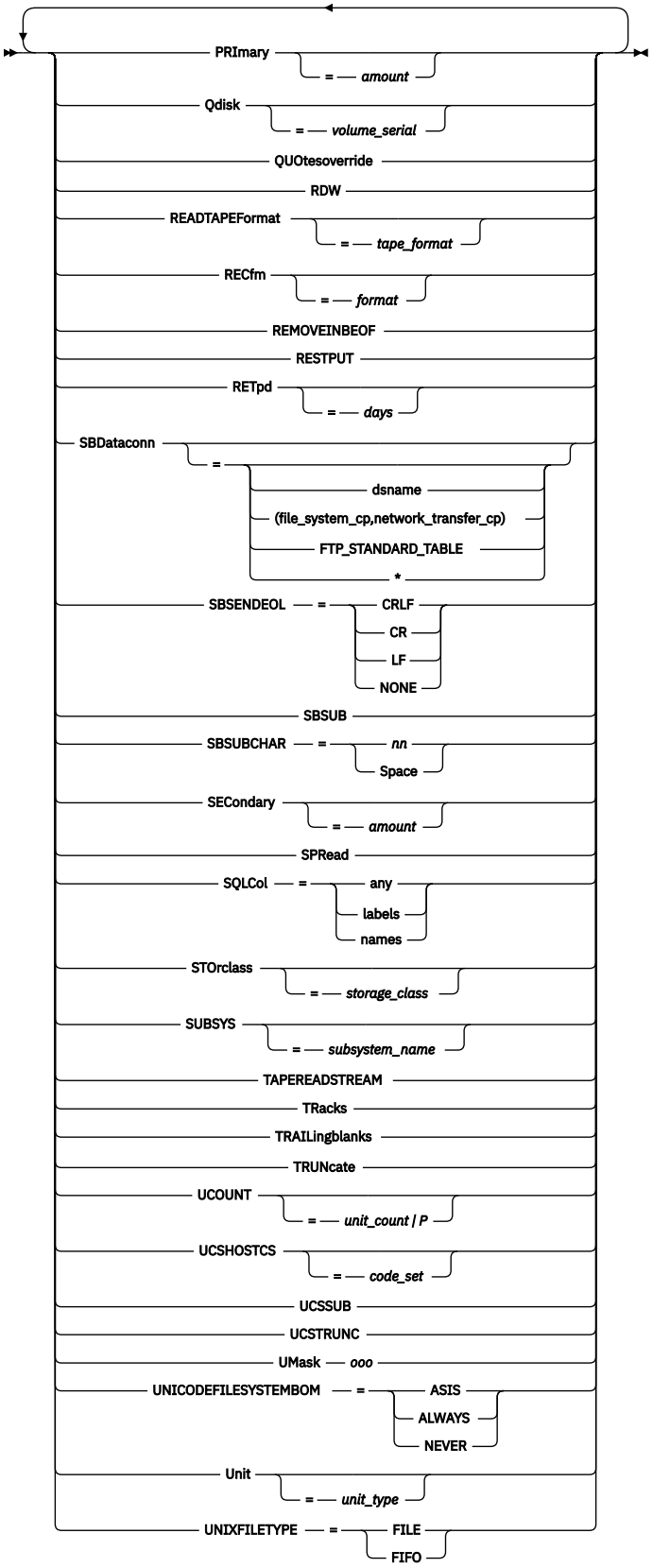


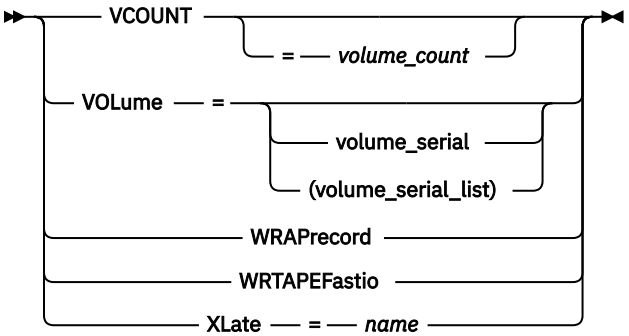
options


ASAtrans
AUTOMount
AUTORecall
BLKsize
= size
BLocks
BLOCKSIze
= size
BUfno = 5 number
CHKptint = 0 number
CHMod ooo filename symbolic filename
CONDdisp = Catlg Delete
CTRLConn 7BIT iconv_ascii FTP_STANDARD_TABLE *
CYlinders
DATAClass
= data_class
DATAKEEPALIVE = seconds 0
DATASetmode


DB2 = db2_name
DBSUB
DCbdsn
= data_set_name
DEBug = ?
ACC
ALL
BAS
CMD
FLO
FSC (n)
INT
JES
NONE
PAR
SEC
SOC (n)
SQL
UTL
X yyy
DESt
= destination
Directory
= size
DIRECTORYMode
DSNTYPE = SYSTEM
BASIC
LARGE
DSWAITTIME = minutes
0
DSWAITTIMEREPLY = 60
seconds
DUmp = ?
n
ALL
FSC
JES
NONE
SOC
SQL
X yyy
EATTR = SYSTEM
NO
OPT
ENCODING = SBCS
MBCS
FIFOIOTIME = seconds
FIFOOPENTIME = seconds

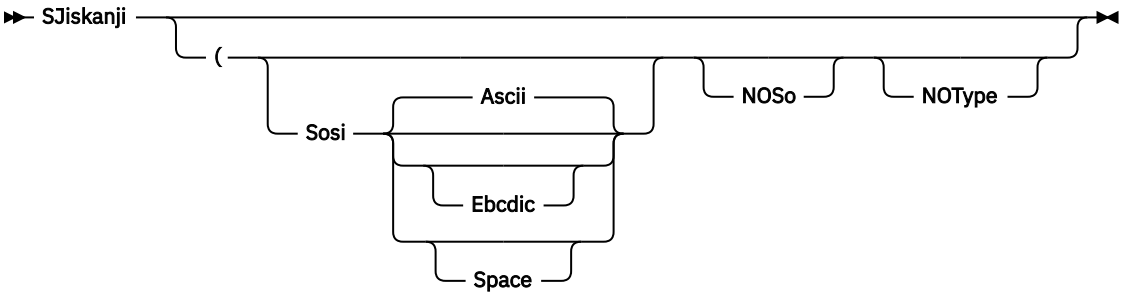

FILEtype = type
ISPFSTATS
JESENTRYLimit = 200 number
JESGETBYDSN
JESJOBName = loginuserid* jobname
JESLrecl = length *
JESOwner = loginuserid userid
JESRecfm = F V *
JESSTatus = ALL INPUT ACTIVE OUTPUT
LISTLEVel = 0 1 2
LISTSUBdir
LRecl = length
MBDATACONN = (file_system_codepage,network_transfer_codepage)
MBREQUIRELASTEOL
MBSENDEOL = CRLF CR LF NONE
MGmtclass = mgmtclass
MIGratevol = volume_ID
NOASAtrans
NOAUTOMount
NOAUTORecall
NODBSUB
NOISPFSTATS
NOJESGETBYDSN
NOLISTSUBdir
NOMBREQUIRELASTEOL
NOQUOtesoverride
NORDW
NOREMOVEINBEOF
NORESTPUT
NOSBSUB
NOSPRead
NOTAPEREADSTREAM
NOTRAILingblanks
NOTRUNcate
NOUCSSUB
NOUCSTRUNC
NOWRAPrecord
NOWRTAPEFastio
PDSTYPE = PDS PDSE


PRImary
= amount
Qdisk
= volume_serial
QUOtesoverride
RDW
READTAPEFormat
= tape_format
RECfm
= format
REMOVEINBEOF
RESTPUT
RETpd
= days
SBDataconn
=
dsname
(file_system_cp,network_transfer_cp)
FTP_STANDARD_TABLE
*
SBSENDEOL = CRLF
CR
LF
NONE
SBSUB
SBSUBCHAR = nn
Space
SECondary
= amount
SPRead
SQLCol = any
labels
names
STOrclass
= storage_class
SUBSYS
= subsystem_name
TAPEREADSTREAM
TRacks
TRAILingblanks
TRUNcate
UCOUNT
= unit_count | P
UCSHOSTCS
= code_set
UCSSUB
UCSTRUNC
UMask ooo
UNICODEFILESYSTEMBOM = ASIS
ALWAYS
NEVER
Unit
= unit_type
UNIXFILETYPE = FILE
FIFO



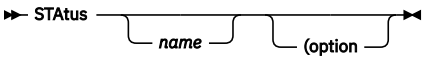
SJISKANJI subcommand

Change the data transfer type to SJISKANJI:

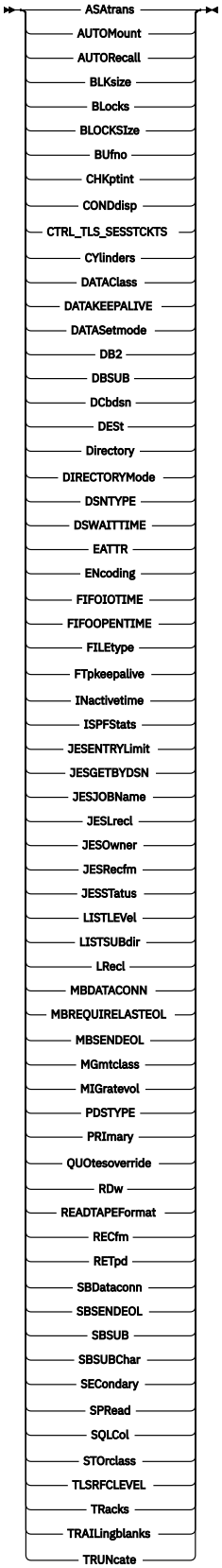


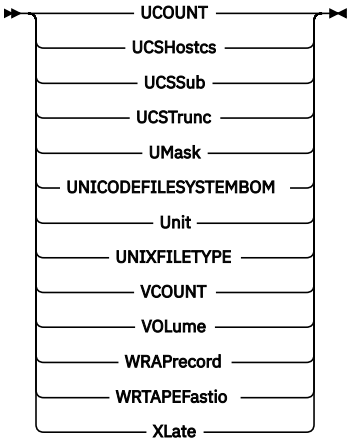
STATUS subcommand

Retrieve status information from a remote host:



options


ASAtrans
AUTOMount
AUTORecall
BLKsize
BLocks
BLOCKSIze
BUfno
CHKptint
CONDdisp
CTRL_TLS_SESSTCKTS
CYlinders
DATAClass
DATAKEEPALIVE
DATASetmode
DB2
DBSUB
DCbdsn
DESt
Directory
DIRECTORYMode
DSNTYPE
DSWAITTIME
EATTR
ENcoding
FIFOIOTIME
FIFOOPENTIME
FILEtype
FTpkeepalive
INactivetime
ISPFStats
JESENTRYLimit
JESGETBYDSN
JESJOBName
JESLrecl
JESOwner
JESRecfm
JESSTatus
LISTLEVel
LISTSUBdir
LRecl
MBDATACONN
MBREQUIRELASTEOL
MBSENDEOL
MGmtclass
MIGratevol
PDSTYPE
PRImary
QUOtesoverride
RDw
READTAPEFormat
RECfm
RETpd
SBDataconn
SBSENDEOL
SBSUB
SBSUBChar
SECondary
SPRead
SQLCol
STOrclass
TLSRFCLEVEL
TRacks
TRAILingblanks
TRUNcate

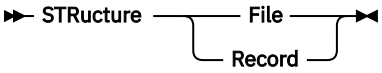


STREAM subcommand

Set the stream data transfer mode:

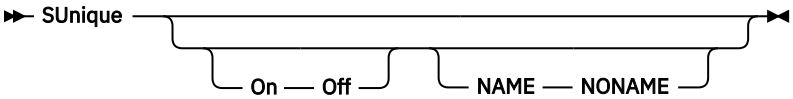
STRUCTURE subcommand

Set the file structure:



SUNIQUE subcommand

Toggle the storage method:

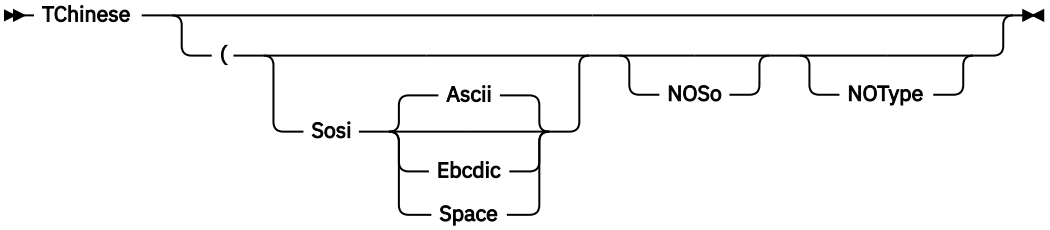


SYSTEM subcommand

Display the operating system name:

TCHINESE subcommand

Change the data transfer type to TCHINESE:

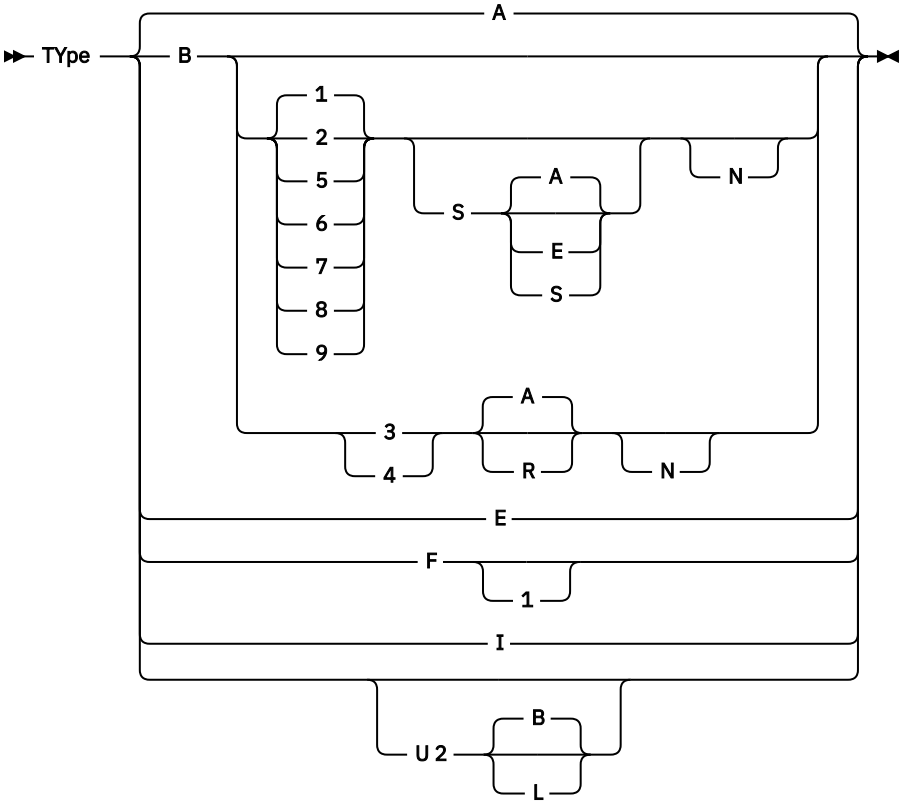


TSO subcommand

Use TSO commands:

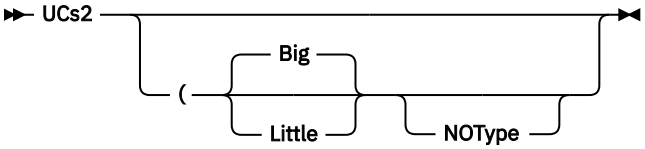
TYPE subcommand

Set the data transfer type:



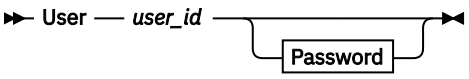
UCS2 subcommand

Change data transfer type to unicode UCS-2:

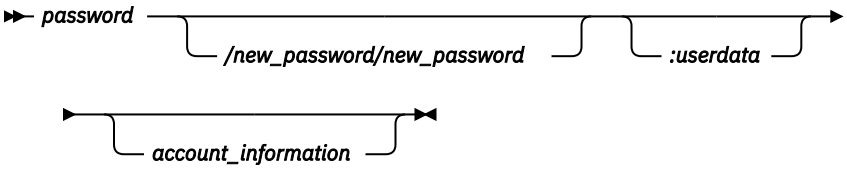


USER subcommand

Identify yourself to a host or change your TSO user ID password:

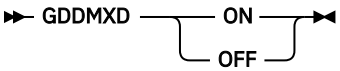


Where Password is



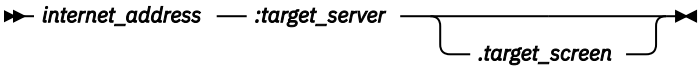
GDDMXD command

Invoke the GDDMXD CLIST command:



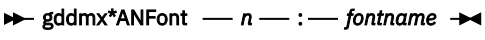
The following sections describe the syntax for GDDMXD command options.

Identifying the target display option



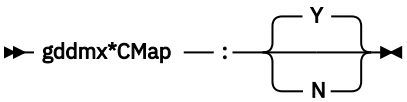
ANFontn option

Specify the X Window System font used for characters in the alphanumeric presentation space:



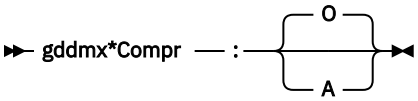
CMap option

Specify whether the default color map is loaded or bypassed:



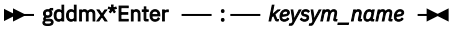
Compr option

Control the technique used to compress bit-mapped data:



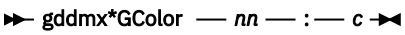
Enter option

Override the default key mapping for enter:



GColornn option

Specify a color name:

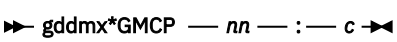


Geometry option

Specify the size and location of the initial GDDMXD graphics presentation space:

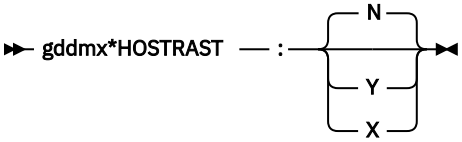
GMCPnn option

Override GDDM® multicolor patterns with workstation color names:



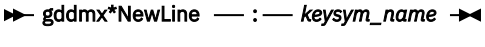
HostRast option

Perform Raster image processing at the System/370 host:



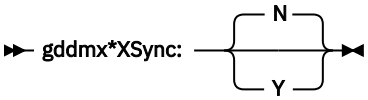
NewLine option

Override the default key mapping for NewLine:



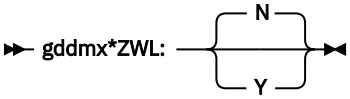
XSync option

Request that the X Window System process one request at a time:



ZWL option

Tell GDDMXD/MVS to draw all lines using 0-width lines:

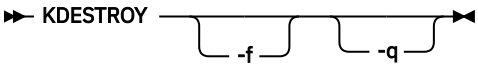


HOMETEST command

Verify your host name and address configuration:

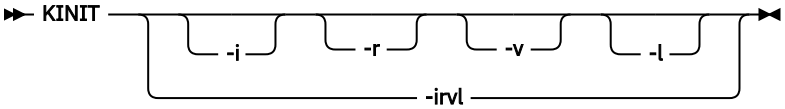
KDESTROY command

Delete Kerberos ticket data sets:



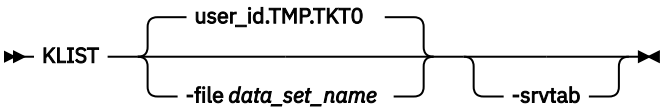
KINIT command

Connect to the Kerberos system:



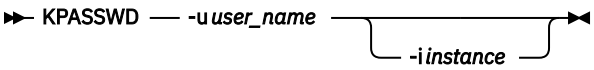
KLIST command

Display your current tickets:



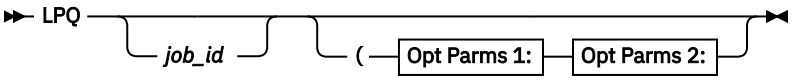
KPASSWD command

Change your password:

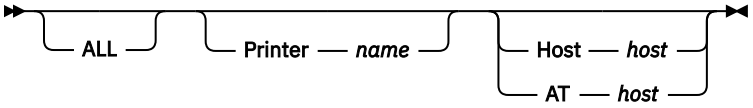


LPQ command

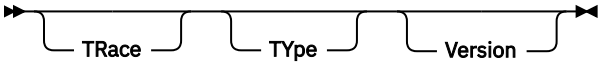
Request a list of the printer queue on a remote printer:



Opt Parms 1:

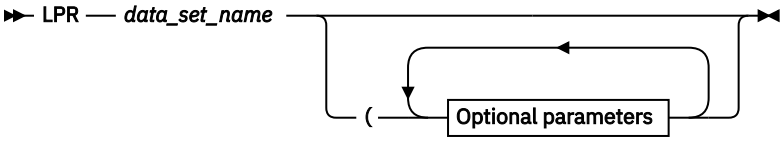


Opt Parms 2:

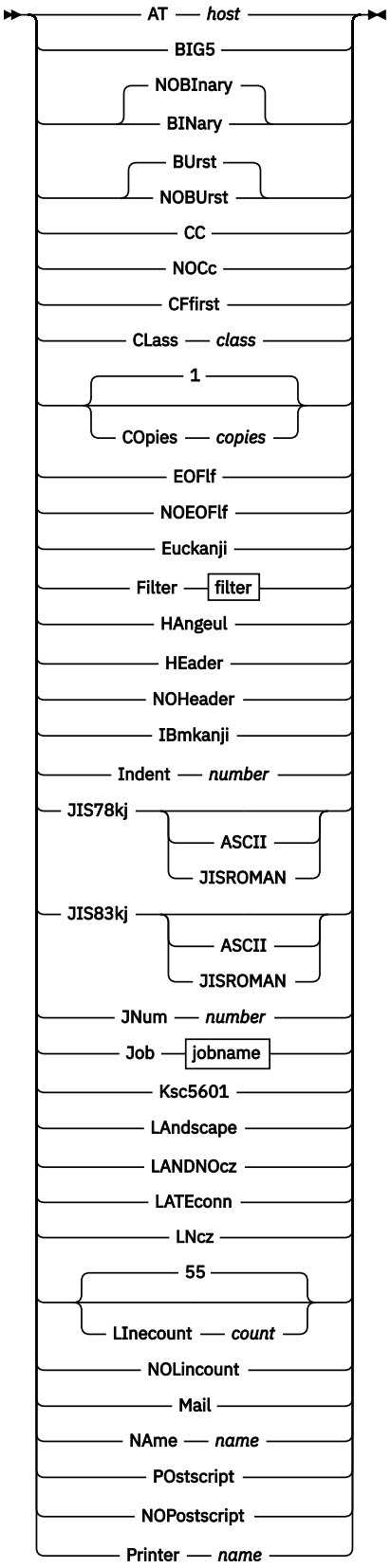


LPR command

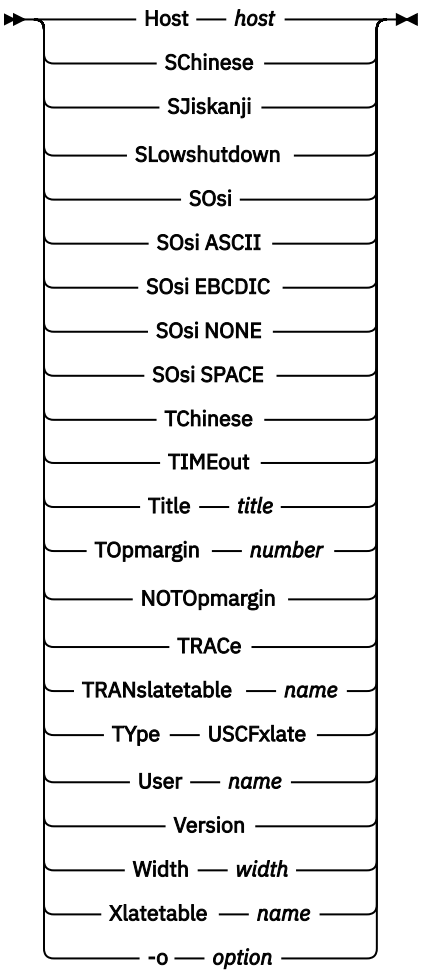
Print to a remote printer:



Optional parameters

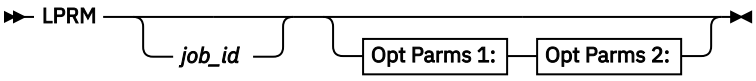


More optional parameters

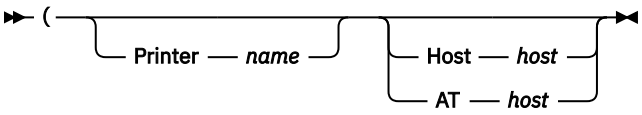


LPRM command

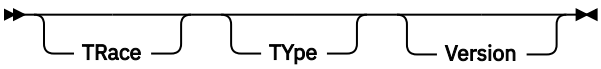
Remove a job from the printer queue on a remote host:



Opt Parms 1:

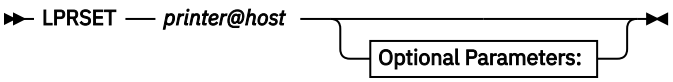


Opt Parms 2:

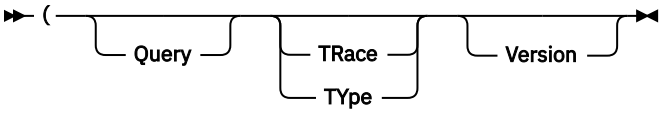


LPRSET command

Set the default printer and host name:

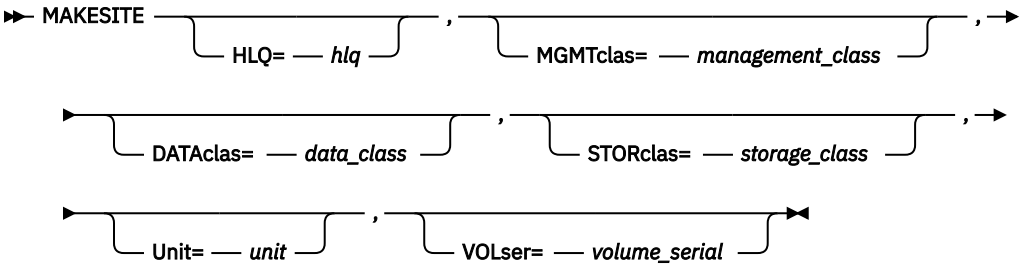


Optional Parameters:



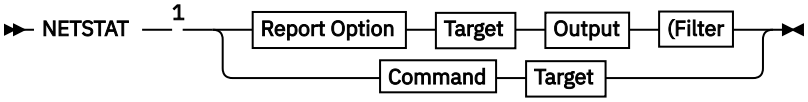
MAKESITE command

Generate new hlq.HOSTS.SITEINFO and hlq.HOSTS.ADDRINFO data sets:

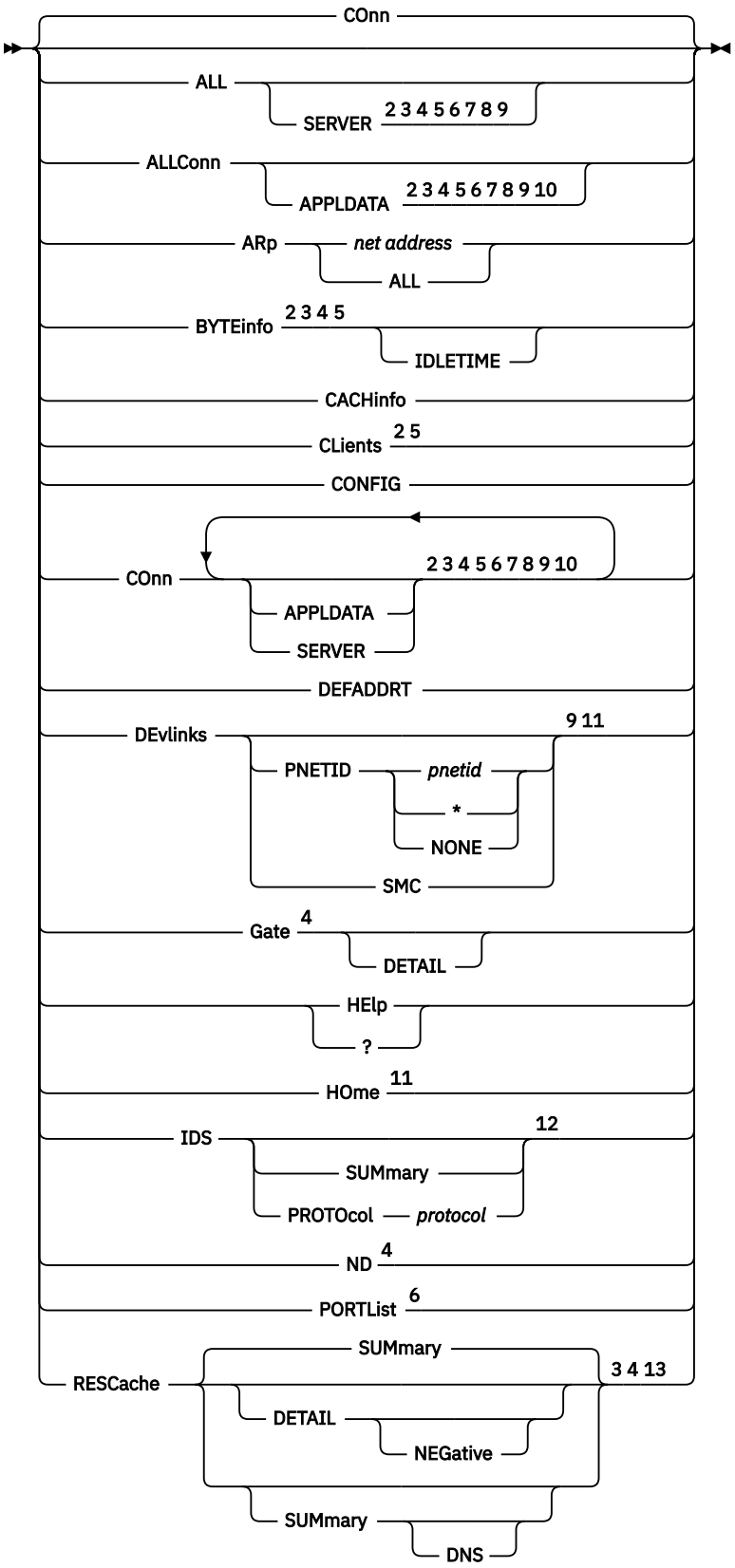


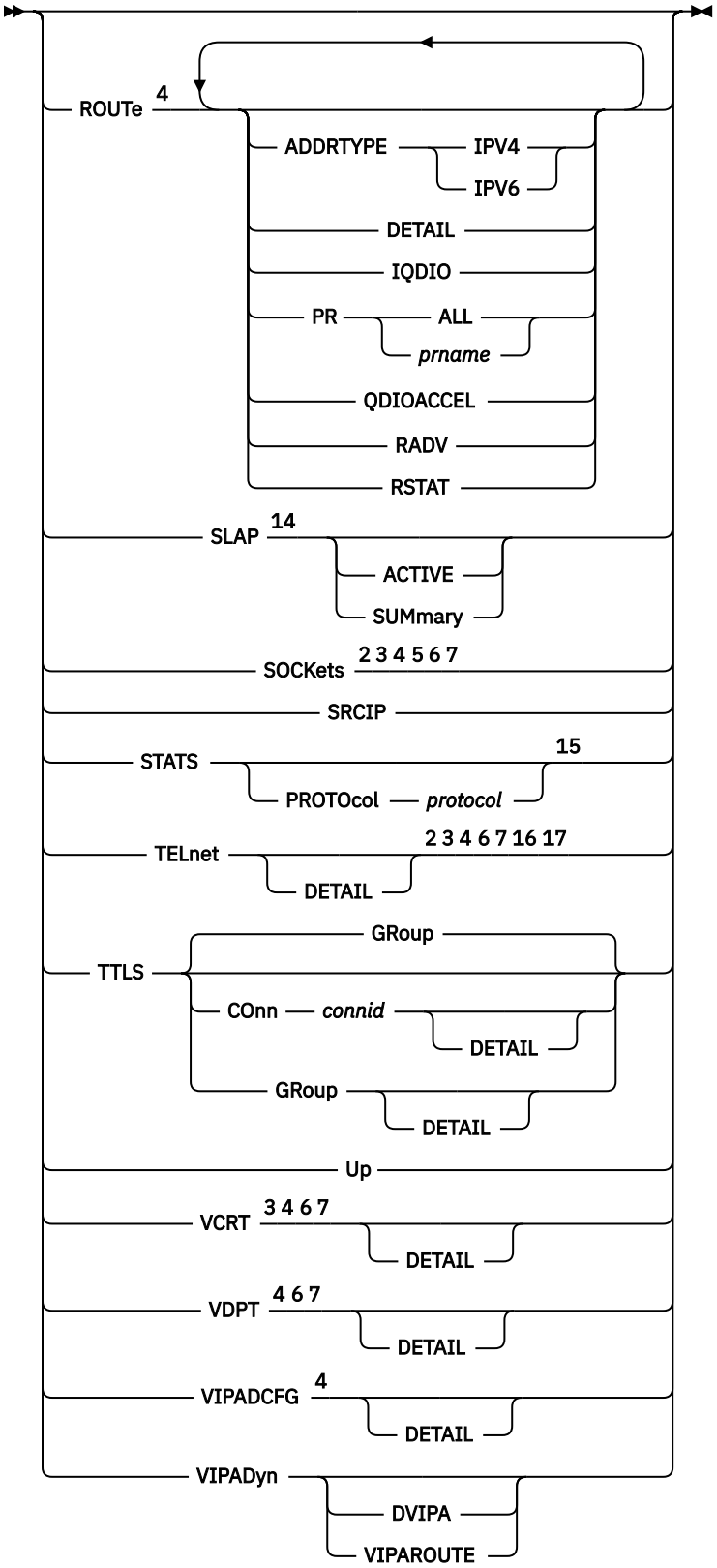
NETSTAT command

Use the TSO NETSTAT command to display the network configuration and status on a local TCP/IP stack:



Report Option


COnn
ALL
SERVER 2 3 4 5 6 7 8 9
ALLConn
APPLDATA 2 3 4 5 6 7 8 9 10
ARp
net address
ALL
BYTEinfo 2 3 4 5
IDLETIME
CACHinfo
CLients 2 5
CONFIG
COnn 2 3 4 5 6 7 8 9 10
APPLDATA
SERVER
DEFADDRT
DEvlinks 9 11
PNETID
pnetid
*
NONE
SMC
Gate 4
DETAIL
HElp
?
HOme 11
IDS 12
SUMmary
PROTOcol
protocol
ND 4
PORTList 6
RESCache
SUMmary
3 4 13
DETAIL
NEGative
SUMmary
DNS



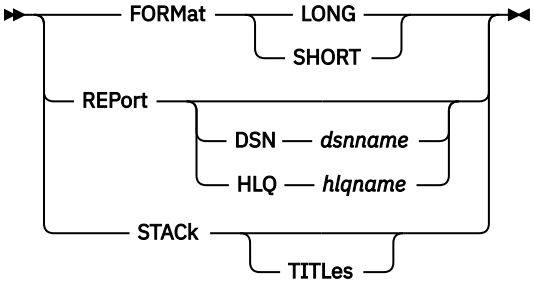
Command

DRop — *n*

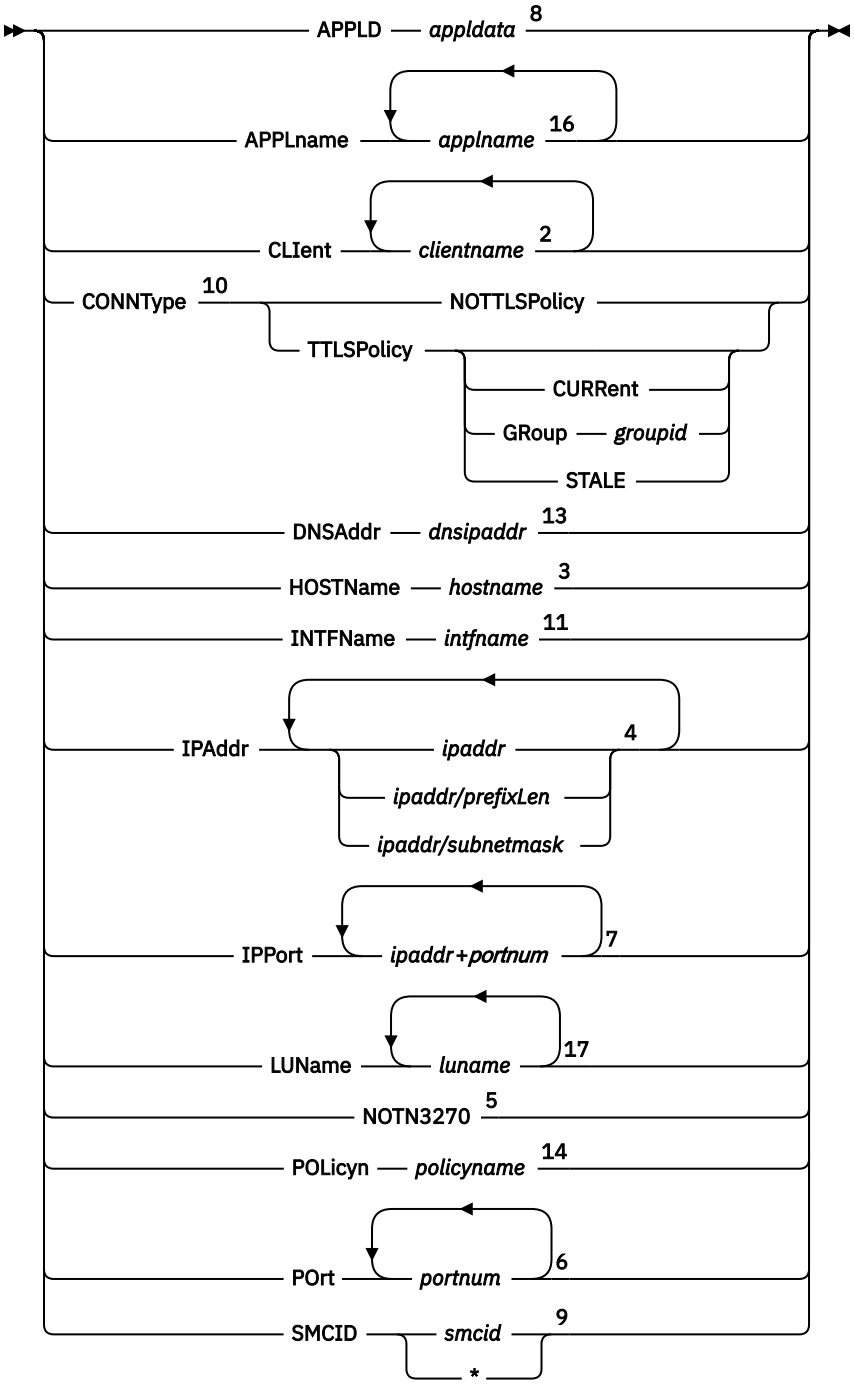
Target

TCp — *tcpname*

Output



Filter

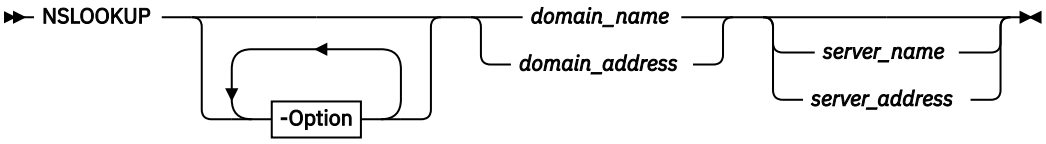


Notes:

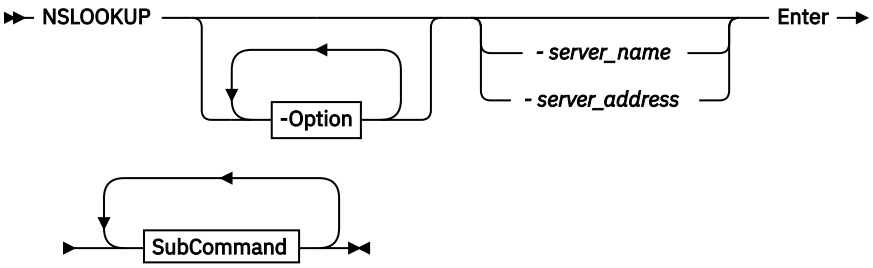
[1] The minimum abbreviation for each parameter is shown in uppercase letters.
[2] The CLIent filter is valid with ALL, ALLConn, BYTEinfo, COnn, CLients, SOCKets, and TELnet.
[3] The HOSTName filter is valid only with ALL, ALLConn, BYTEinfo, COnn, RESCache, SOCKets, TELnet, and VCRT.
[4] The IPAddr filter is valid only with ALL, ALLConn, BYTEinfo, COnn, Gate, ND, RESCache, ROUTe, SOCKets, TELnet, VCRT, and VDPT, and VIPADCFG.
[5] The NOTN3270 filter is valid only with ALL, ALLConn, BYTEinfo, COnn, CLients, and SOCKets.
[6] The POrt filter is valid only with ALL, ALLConn, COnn, PORTList, SOCKets, TELnet, VCRT, and VDPT.
[7] The IPPort filter is valid only with ALL, ALLConn, COnn, SOCKets, TELnet, VCRT, and VDPT.
[8] The APPLD filter is valid only with ALL, ALLConn, and COnn.
[9] The SMCID filter is valid only with ALL, ALLConn, COnn, and DEvlinks.
[10] The CONNType filter is valid only with ALLConn and COnn.
[11] The INTFName filter is valid only with DEvlinks and HOme.
[12] The valid protocol values are TCP and UDP.
[13] The DNSAddr filter is valid only with RESCache.
[14] The POLicyn filter is valid only with SLAP.
[15] The valid protocol values are IP, ICMP, TCP, and UDP.
[16] The APPLname filter is valid only with TELnet.
[17] The LUName filter is valid only with TELnet.

NSLOOKUP command

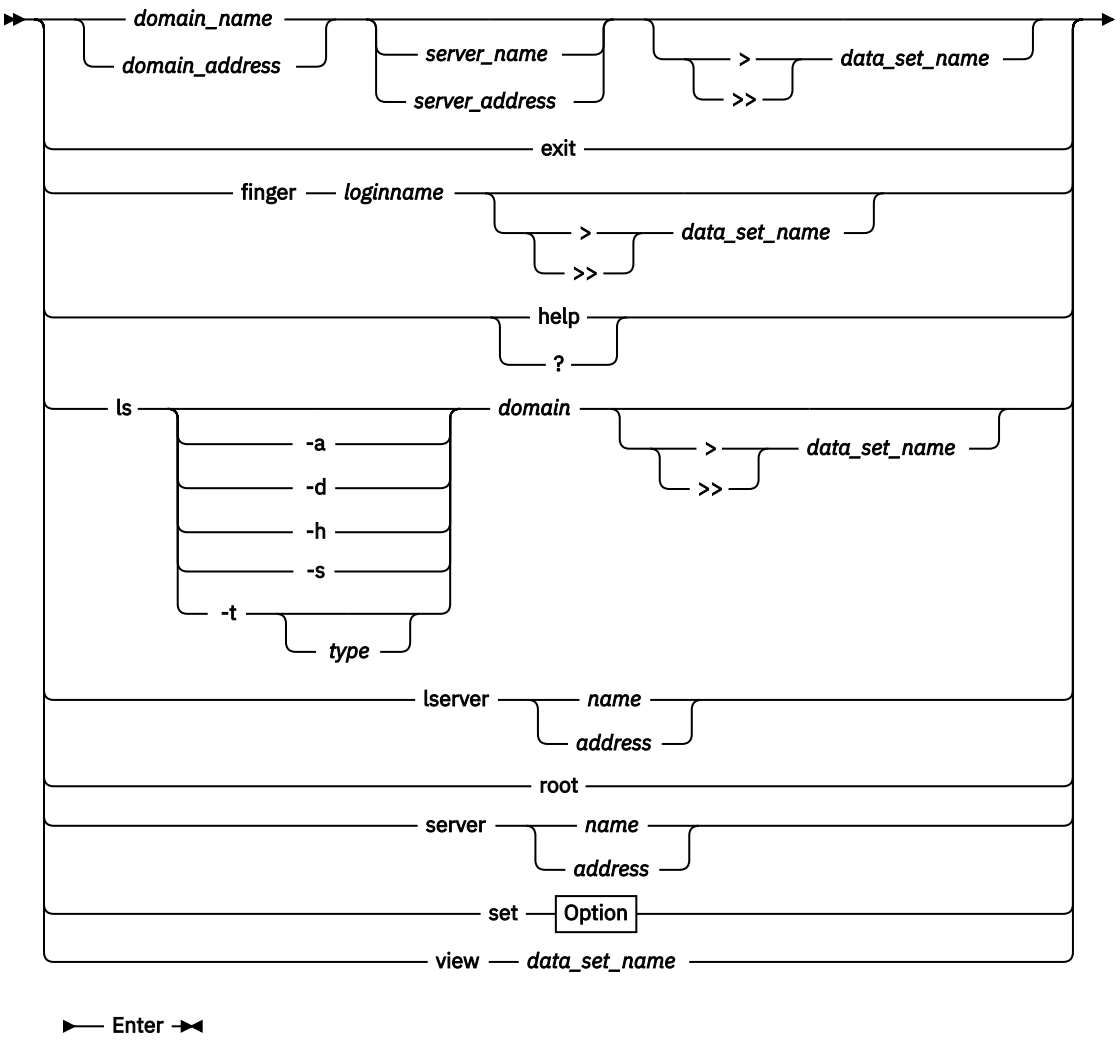
Query a name server in command mode:



Issue queries to name servers in interactive mode:

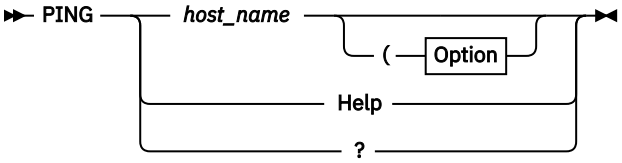


SubCommand

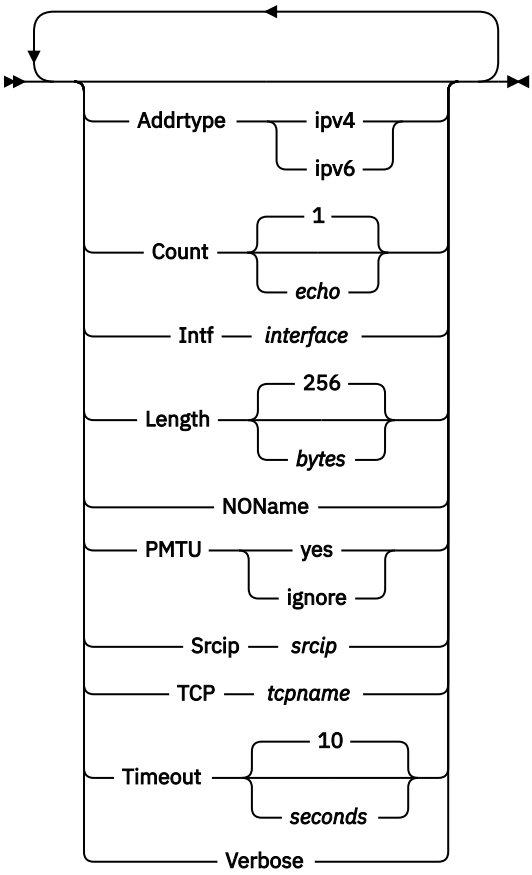


PING command

The PING command sends an echo request to a foreign node (remote host) to determine whether the node is accessible.

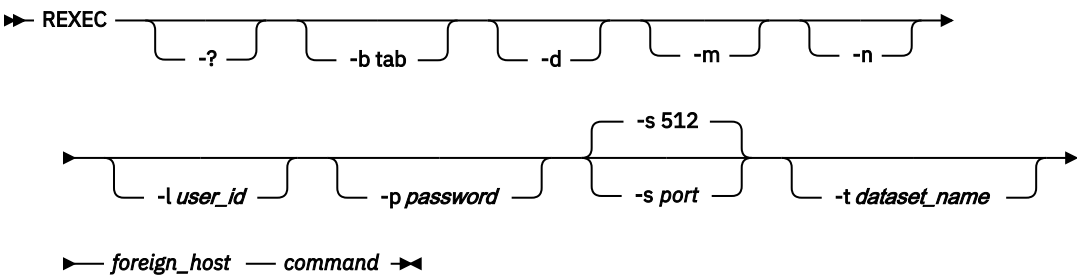


Option



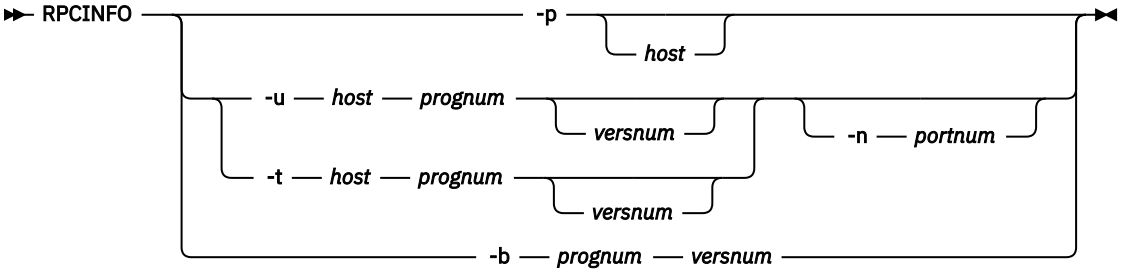
REXEC command

Send a command to the remote host and receive the results on your local host:



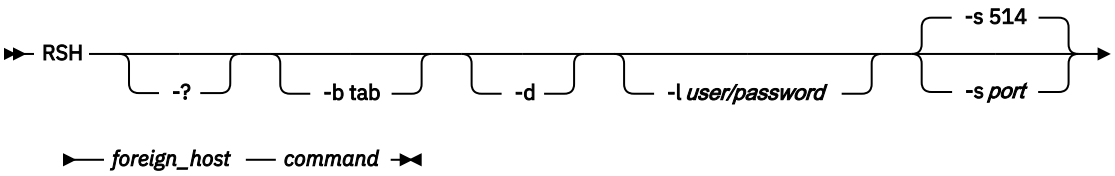
RPCINFO command

Display server information:



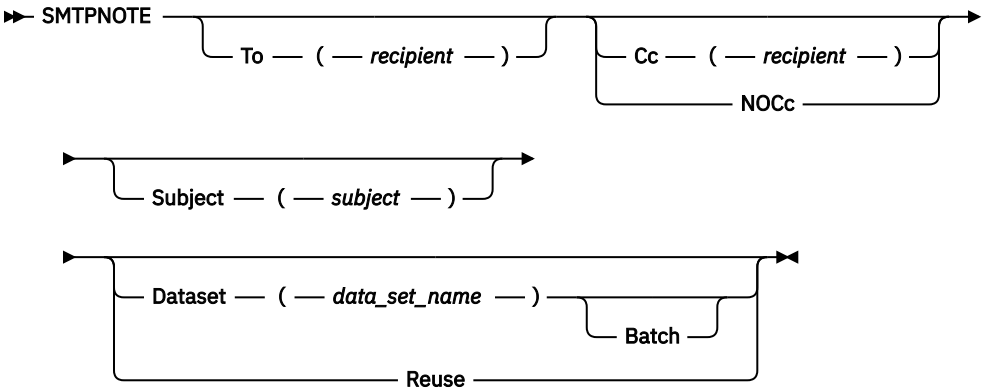
RSH command

Send a command to the remote host and receive the results on your local host:

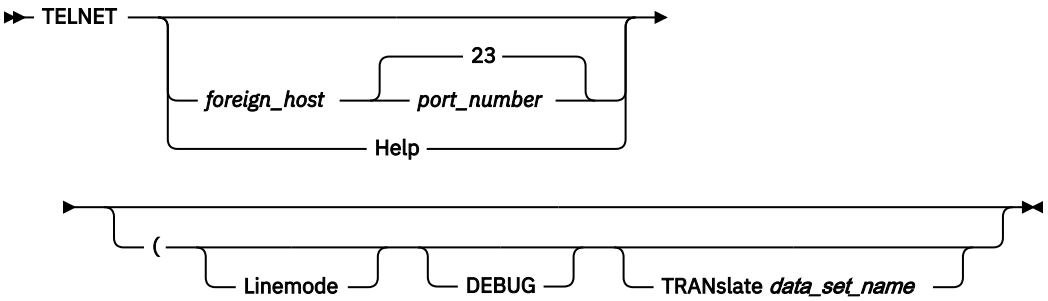


SMTPNOTE command

Send electronic mail to one or more recipients on NJE or TCP networks:



TELNET command



The following sections describe the syntax for TELNET command options:

AO option

Terminate output display:

AYT option

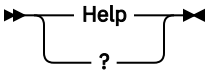
Query the connection:

BRK option

Send the break or attention keystroke to a host:

HELP option

Display help information:



IP option

Interrupt the process:

PA1 option

Send the PA1 keystroke to a host:

QUIT option

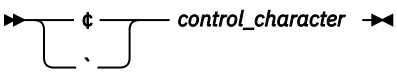
End the telnet session:

SYNCH option

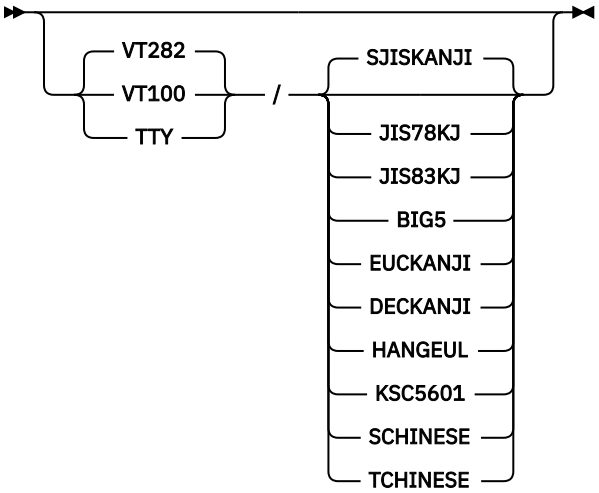
Clear the data path:

¢ and ` options

Send ASCII control characters to a host in line mode:



Terminal and conversion type option

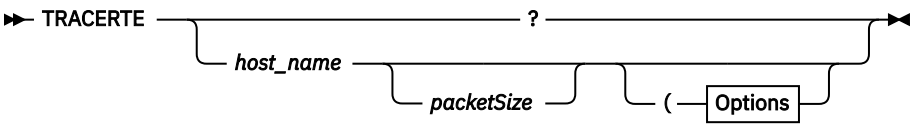


TESTSITE command

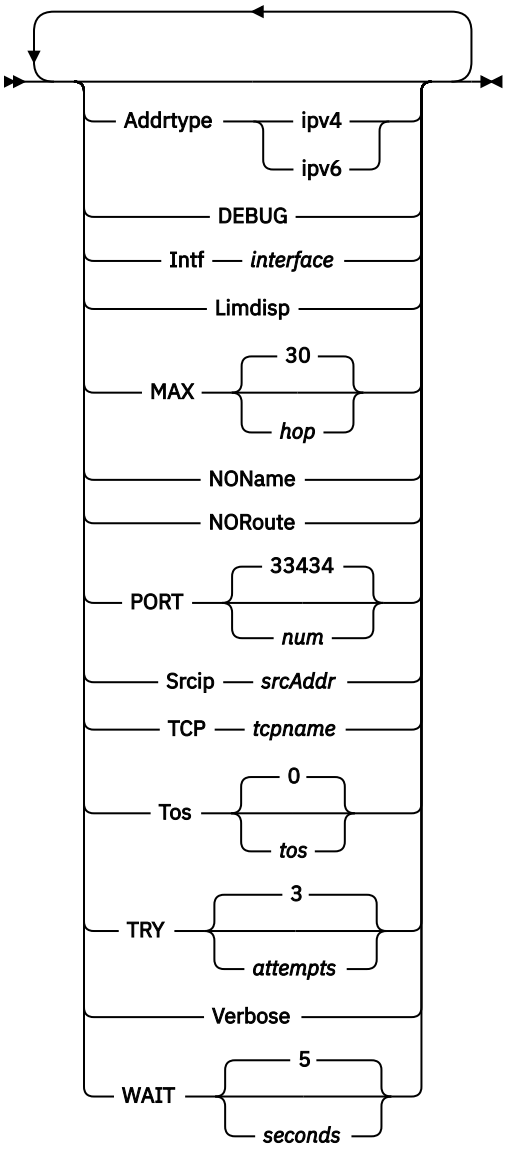
Verify hlq.HOSTS.ADDRINFO and hlq.HOSTS.SITEINFO data sets correctly resolve the name of a host, gateway, or net:

TRACERTE command

Debug network problems:



Options

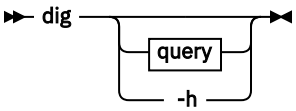


z/OS UNIX commands

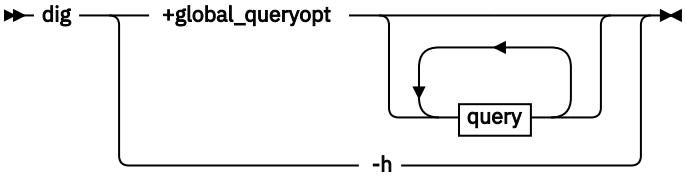
dig command

Gather information from the Domain Name System servers:

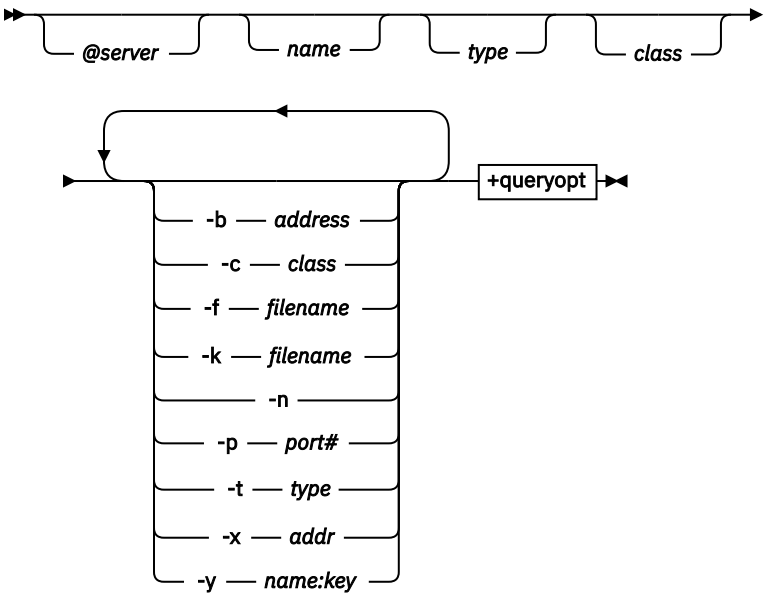
Command Line Mode



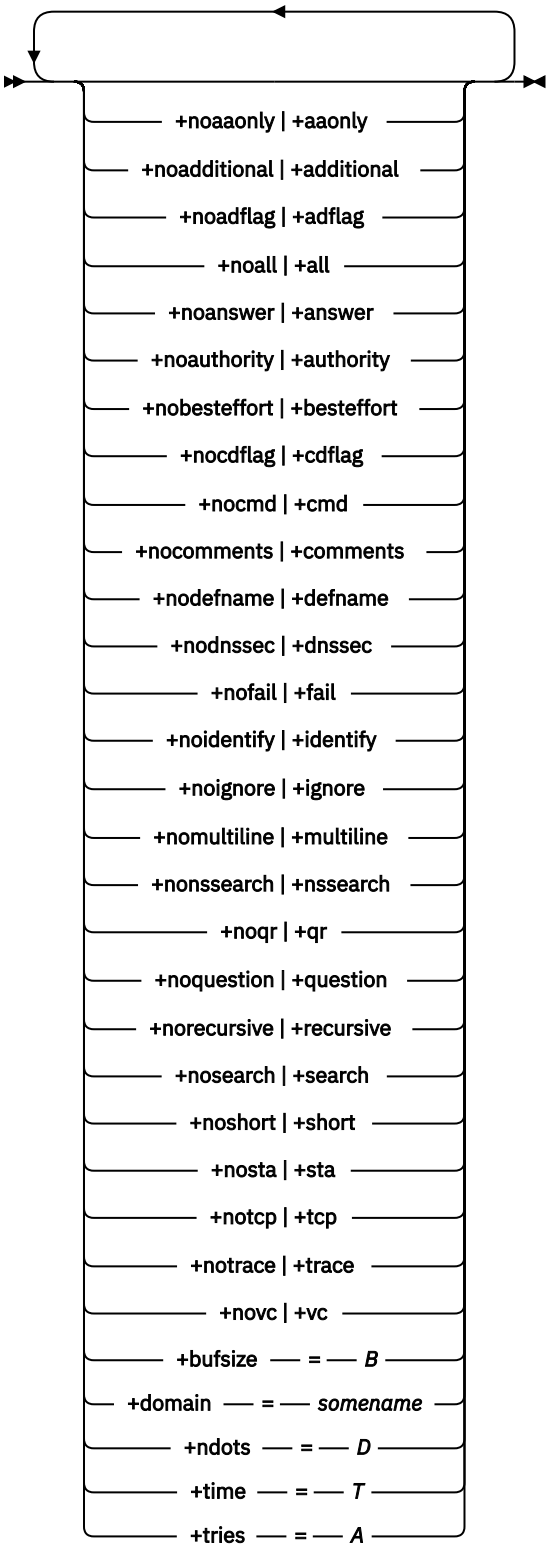
Multiple Query Mode



query

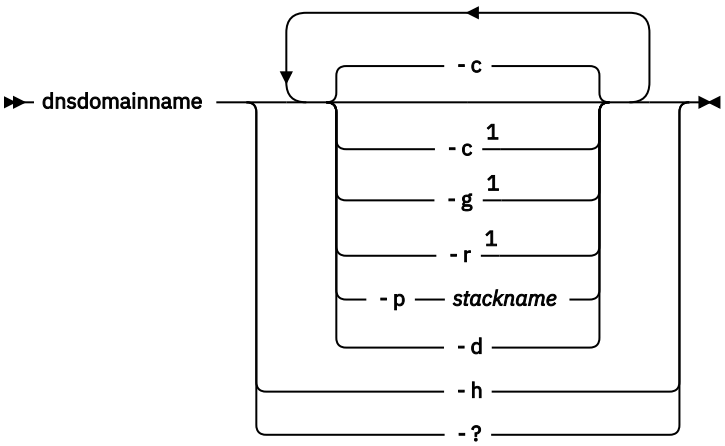


+queryopt or +global_queryopt


+noaaonly | +aaonly
+noadditional | +additional
+noadflag | +adflag
+noall | +all
+noanswer | +answer
+noauthority | +authority
+nobesteffort | +besteffort
+nocdflag | +cdflag
+nocmd | +cmd
+nocomments | +comments
+nodefname | +defname
+nodnssec | +dnssec
+nofail | +fail
+noidentify | +identify
+noignore | +ignore
+nomultiline | +multiline
+nonssearch | +nssearch
+noqr | +qr
+noquestion | +question
+norecursive | +recursive
+nosearch | +search
+noshort | +short
+nosta | +sta
+notcp | +tcp
+notrace | +trace
+novc | +vc
+bufsize = B
+domain = somename
+ndots = D
+time = T
+tries = A

dnsdomainname command

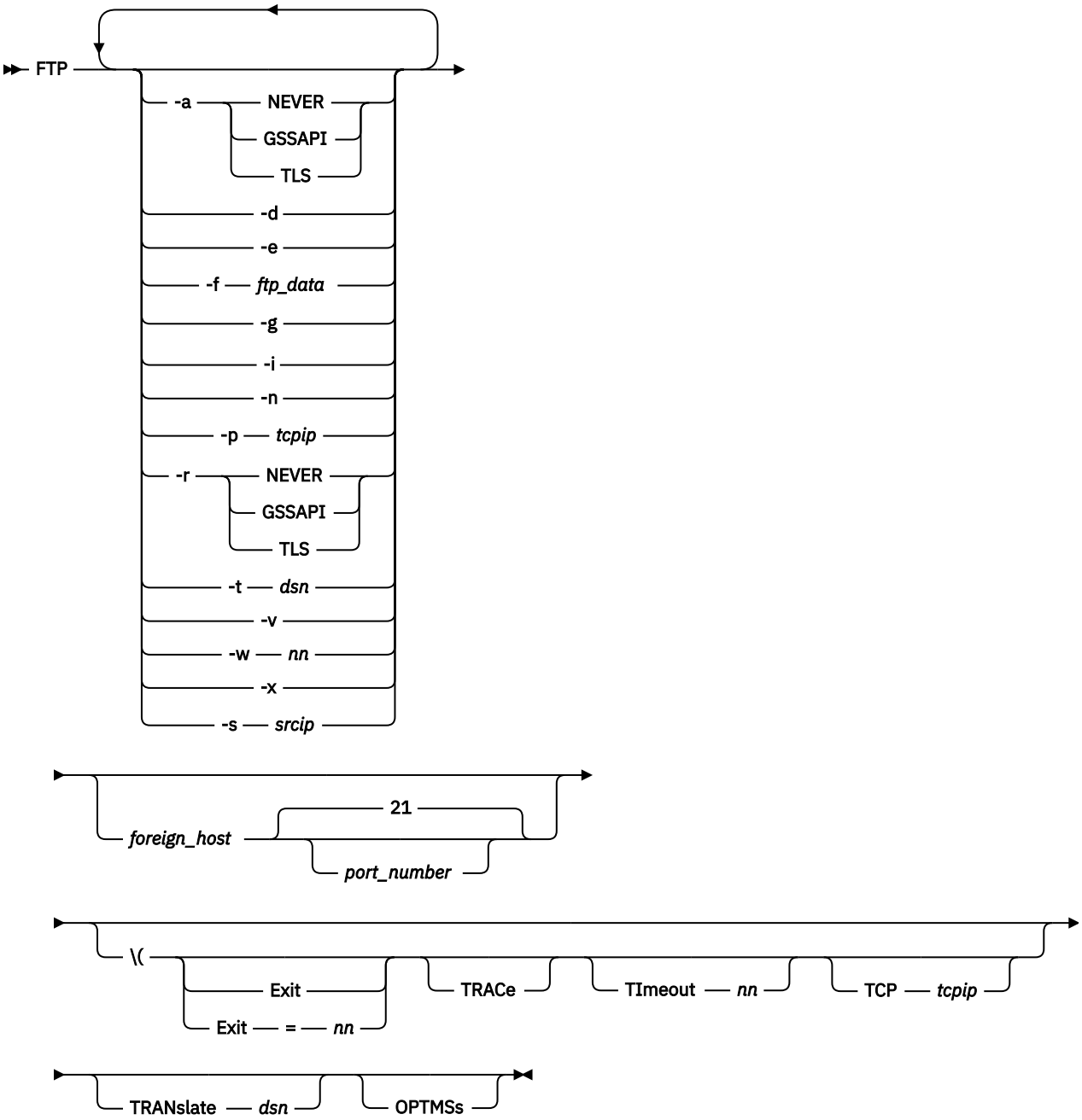
Display the DNS domain name of the system:



Notes:

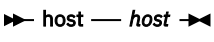
[1] Only one of the -c, -g, and -r parameters can be specified.

ftp command



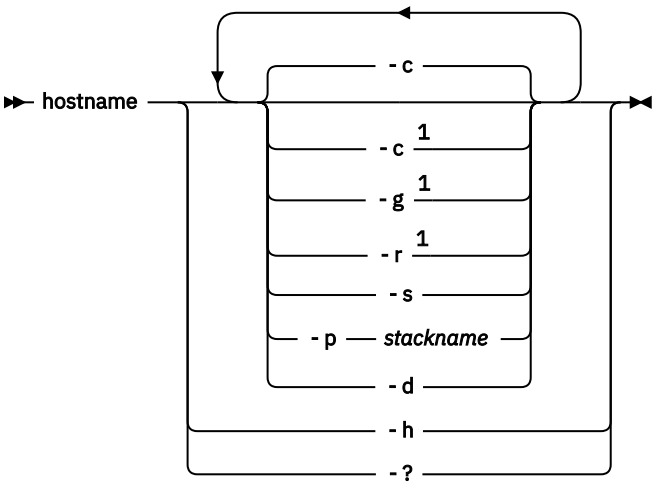
host command

Identify the IP addresses associated with a specified DNS host name or identify the DNS host names associated with a specified IP address:



hostname command

Display the fully qualified DNS hostname of the local system:

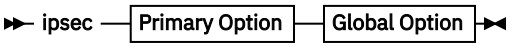


Notes:

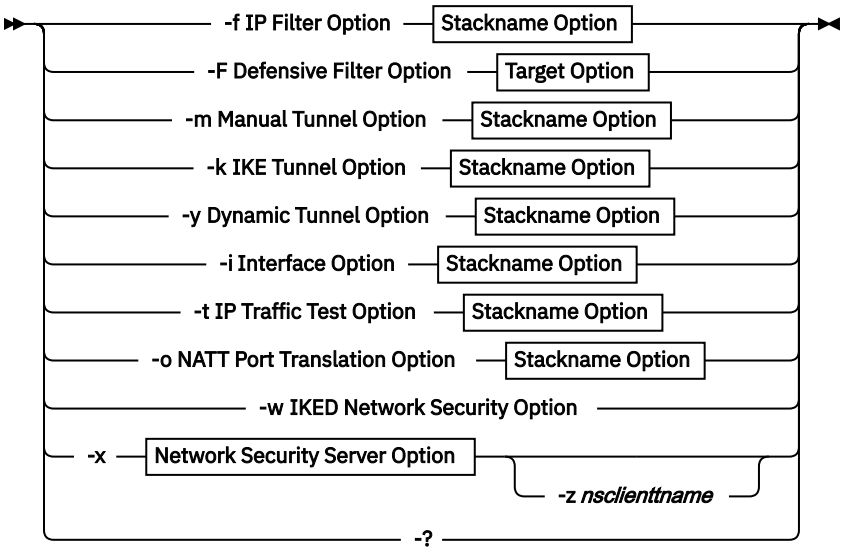
[1] Only one of the -c, -g, and -r parameters can be specified.

ipsec command

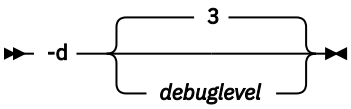
Display and modify IP security information on the local host:



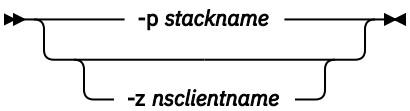
Primary Option



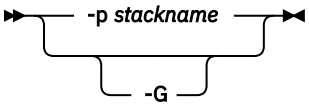
Global Option



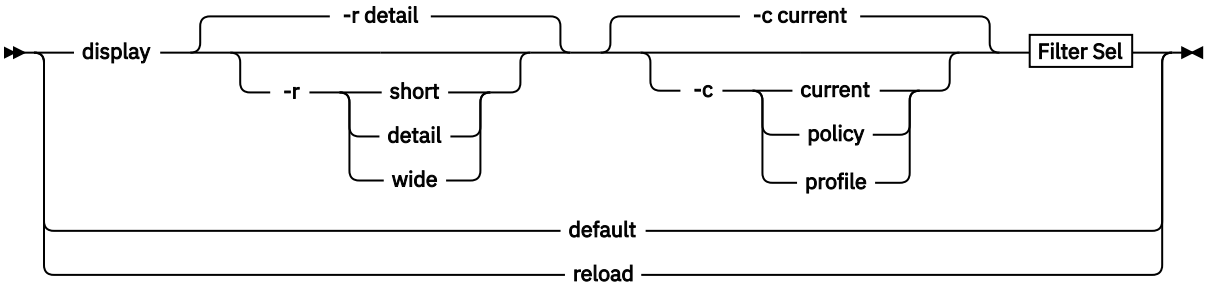
Stackname Option



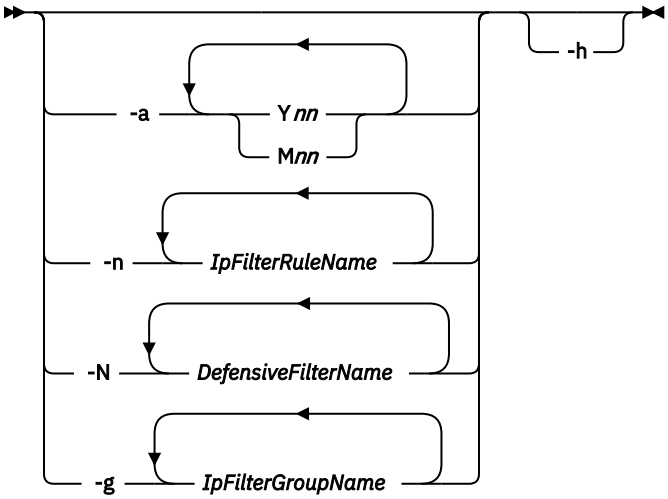
Target Option



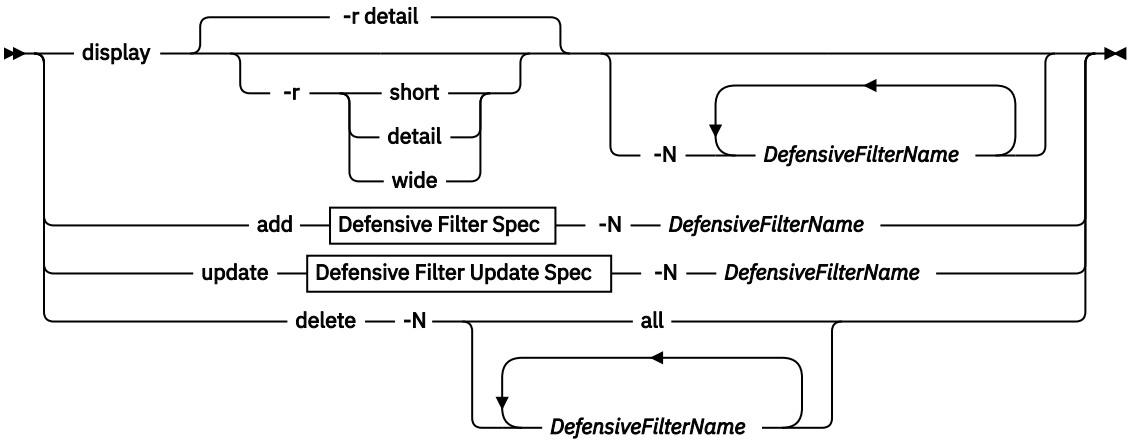
IP Filter Option



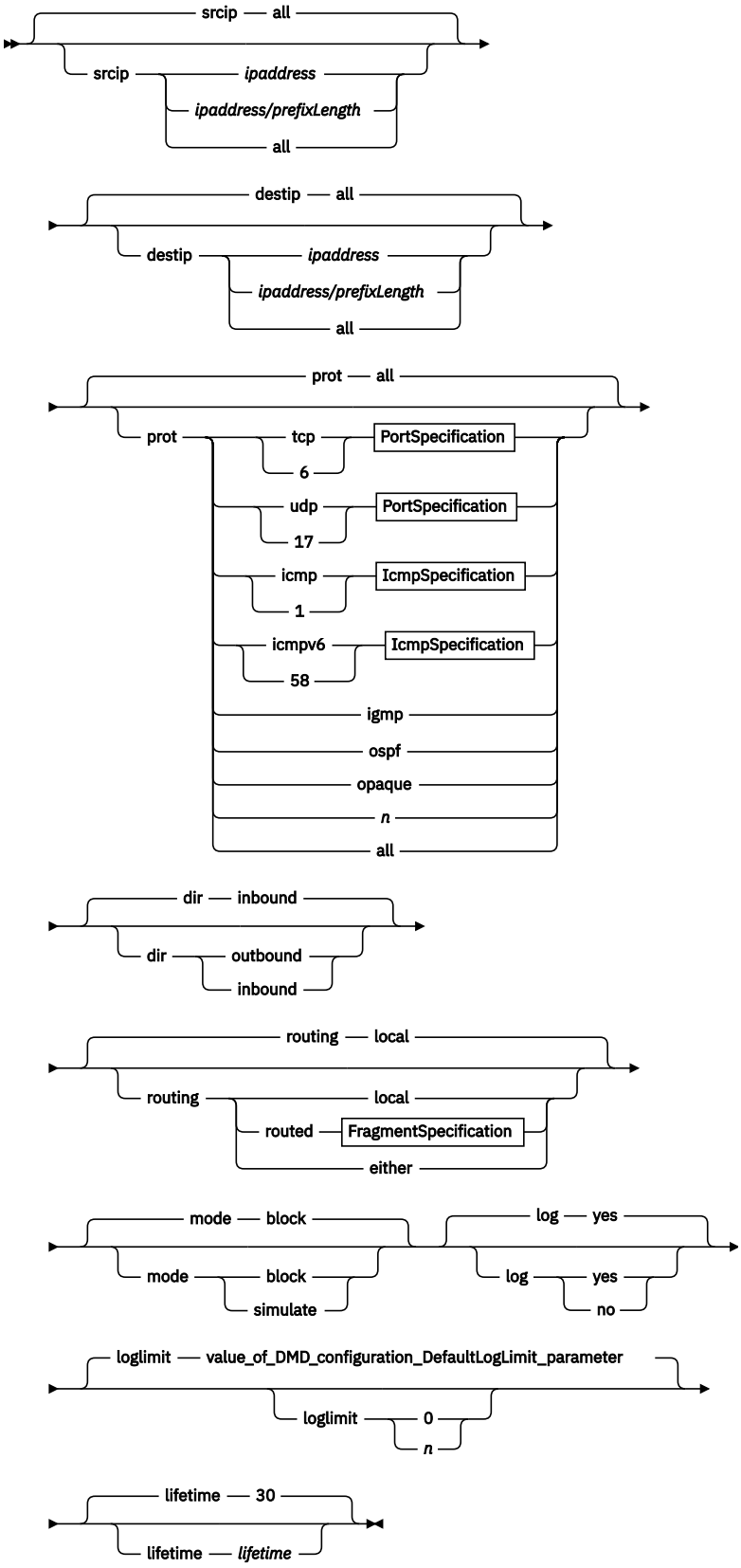
Filter Selection



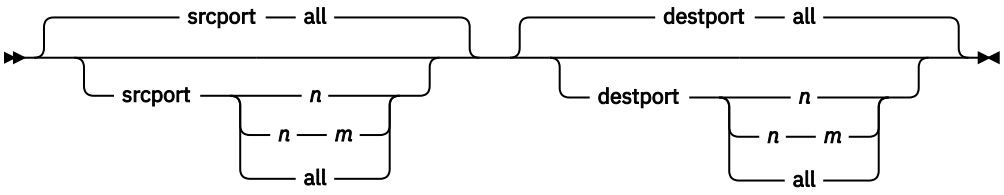
Defensive Filter Option



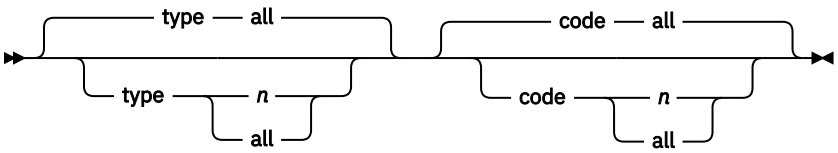
Defensive Filter Specification



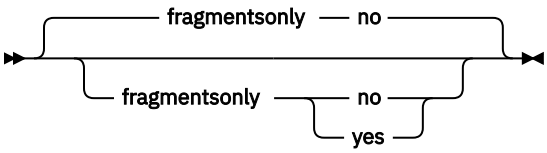
PortSpecification



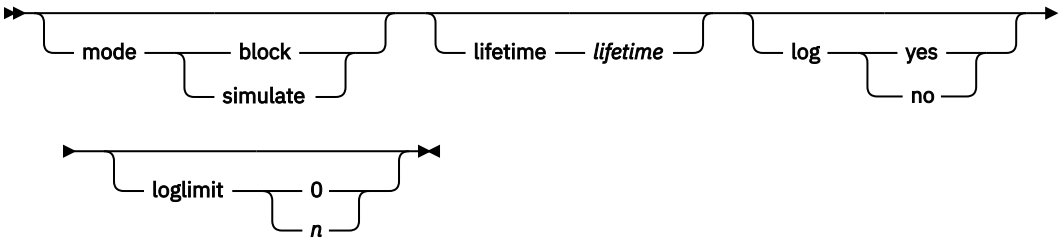
IcmpSpecification



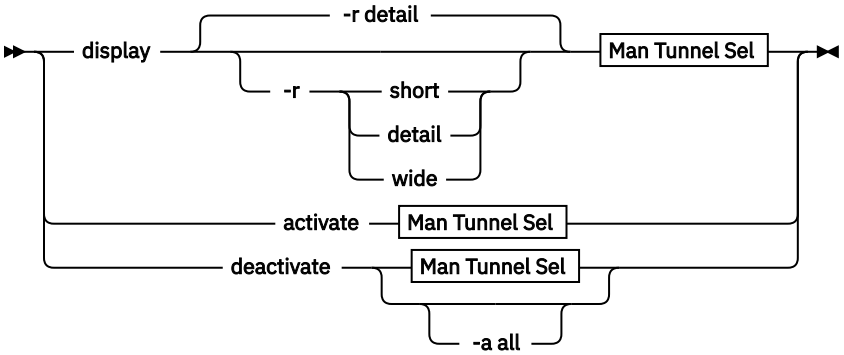
FragmentSpecification



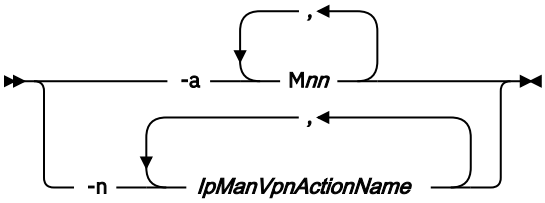
Defensive Filter Update Specification



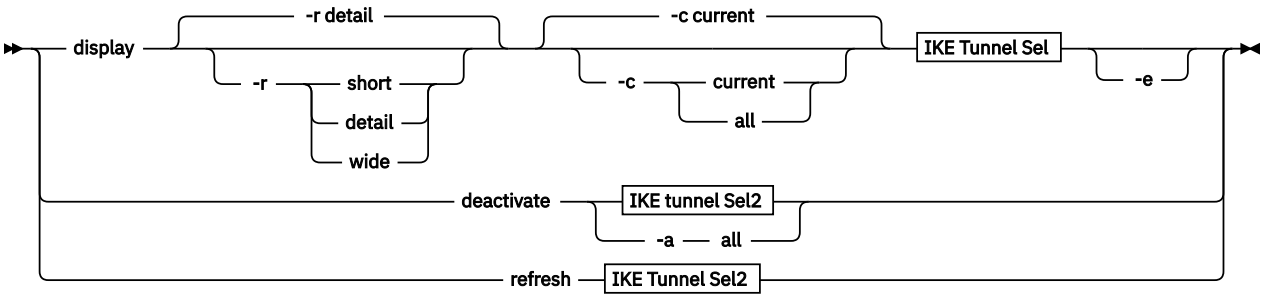
Manual Tunnel Option



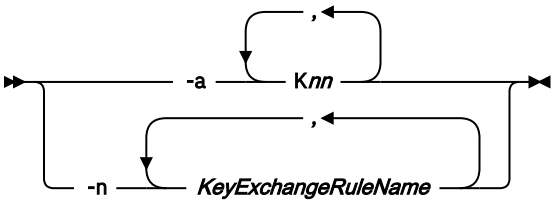
Man Tunnel Selection



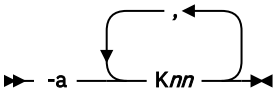
IKE Tunnel Option



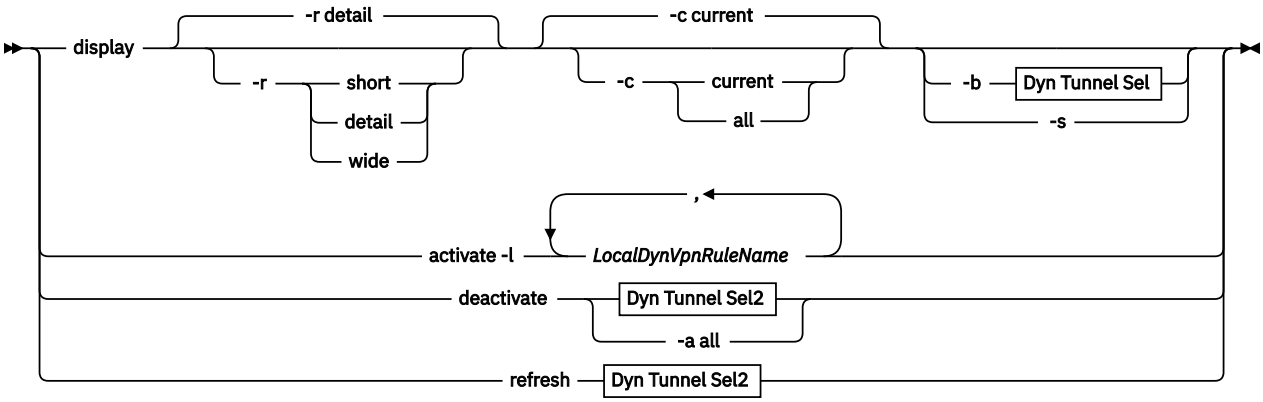
IKE Tunnel Selection



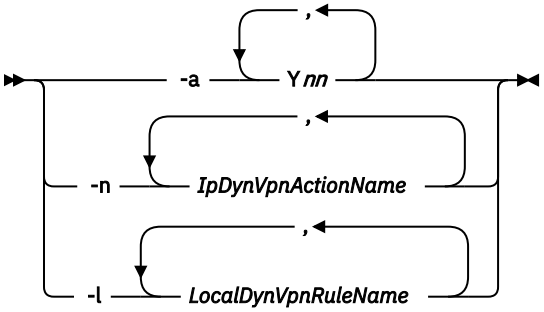
IKE Tunnel Selection2



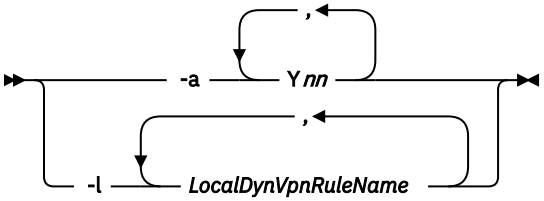
Dynamic Tunnel Option



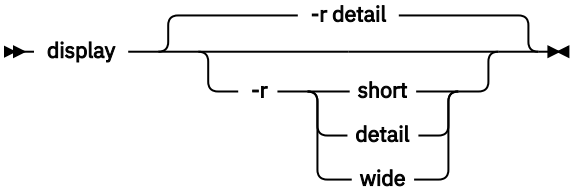
Dyn Tunnel Selection



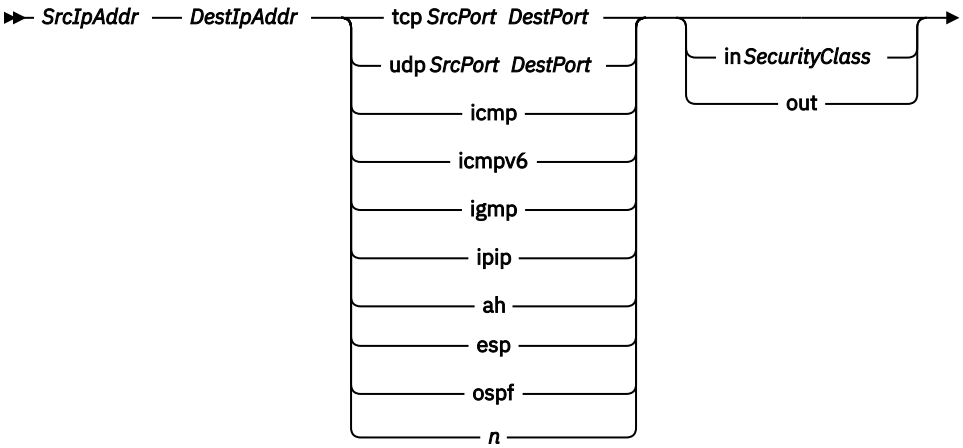
Dyn Tunnel Selection2

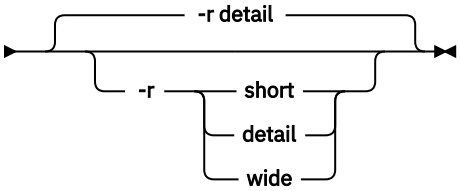


Interface Option

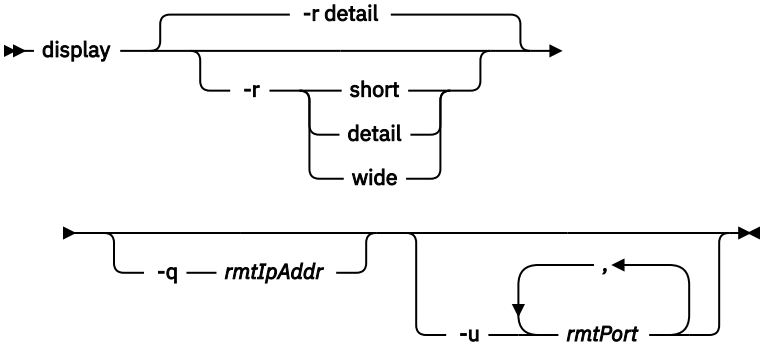


IP Traffic Test Option

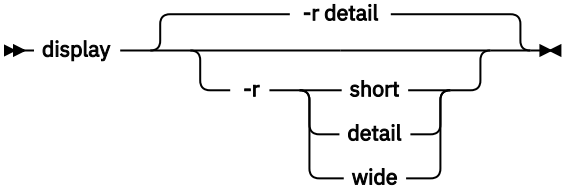




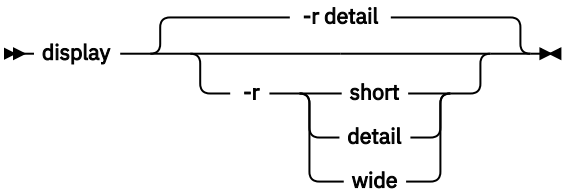
NATT Port Translation Option



IKED Network Security Option



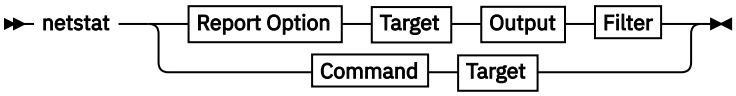
Network Security Server Option



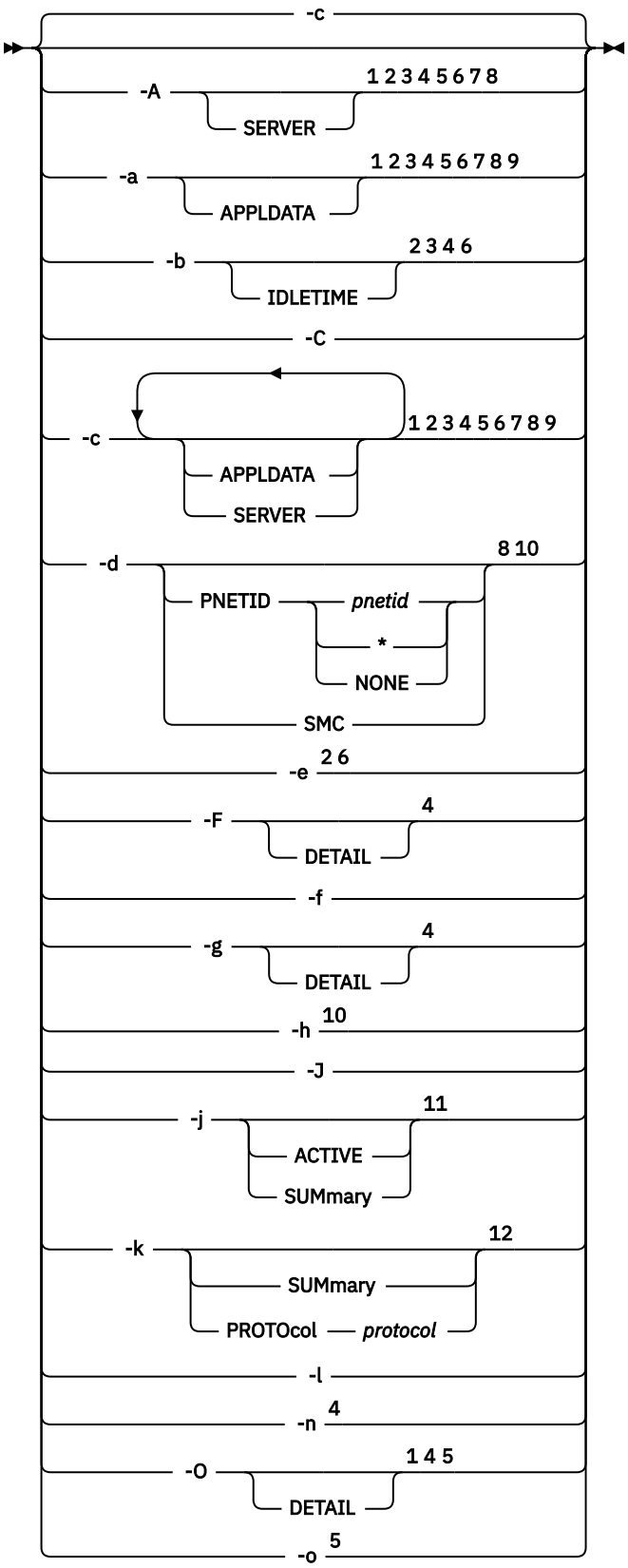
netstat command

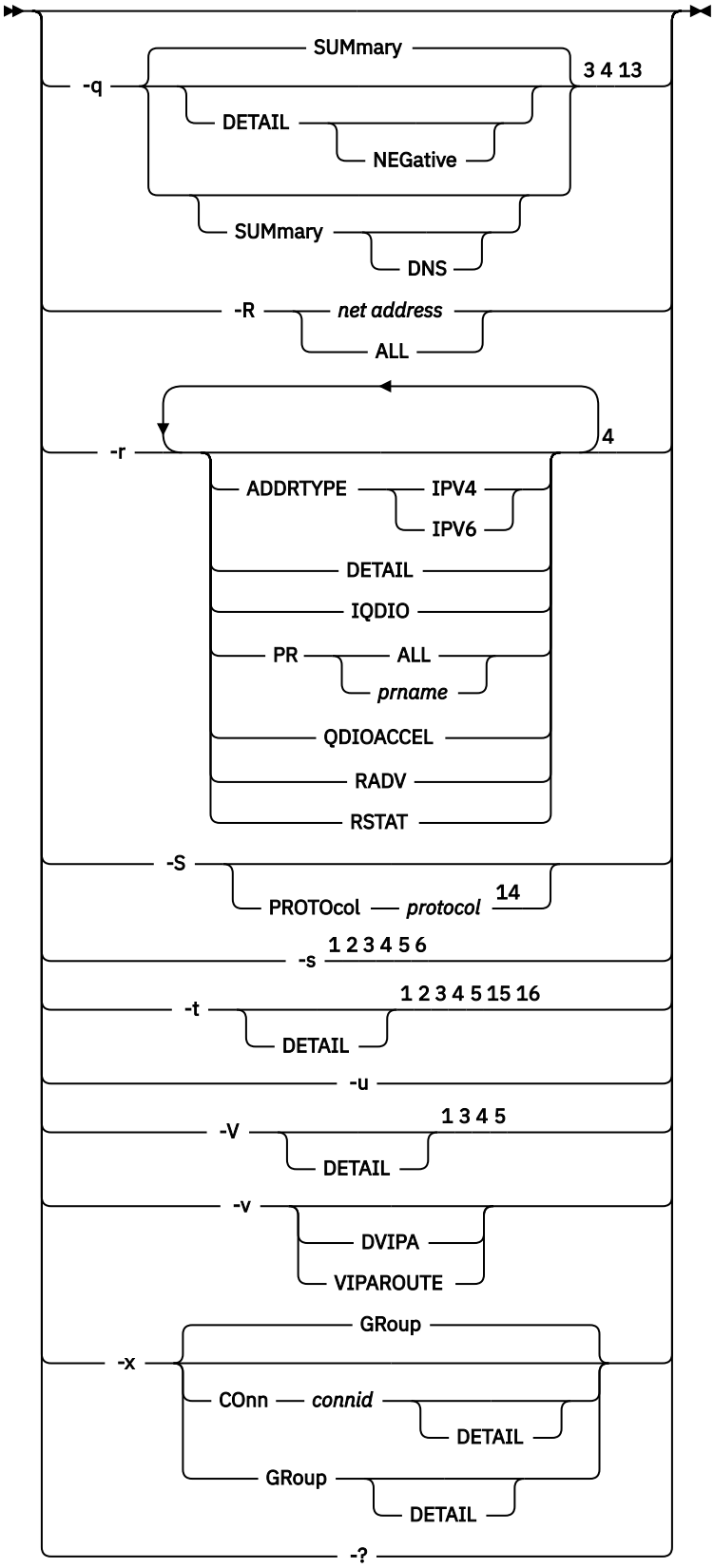
Use the z/OS UNIX **netstat** command to display the network configuration and status on a local TCP/IP stack:

Note: The synonym name for the **netstat** command in the z/OS UNIX shell is netstat. The **onetstat** command syntax is the same as that for the **onetstat** command



Report Option

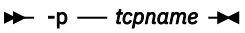

-c
-A
1 2 3 4 5 6 7 8
SERVER
-a
1 2 3 4 5 6 7 8 9
APPLDATA
-b
2 3 4 6
IDLETIME
-C
-c
1 2 3 4 5 6 7 8 9
APPLDATA
SERVER
-d
8 10
PNETID
pnetid
*
NONE
SMC
-e
2 6
-F
4
DETAIL
-f
-g
4
DETAIL
-h
10
-J
-j
11
ACTIVE
SUMmary
-k
12
SUMmary
PROTOcol
protocol
-l
-n
4
-O
1 4 5
DETAIL
-o
5



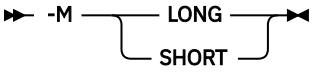
Command

-D — *n*

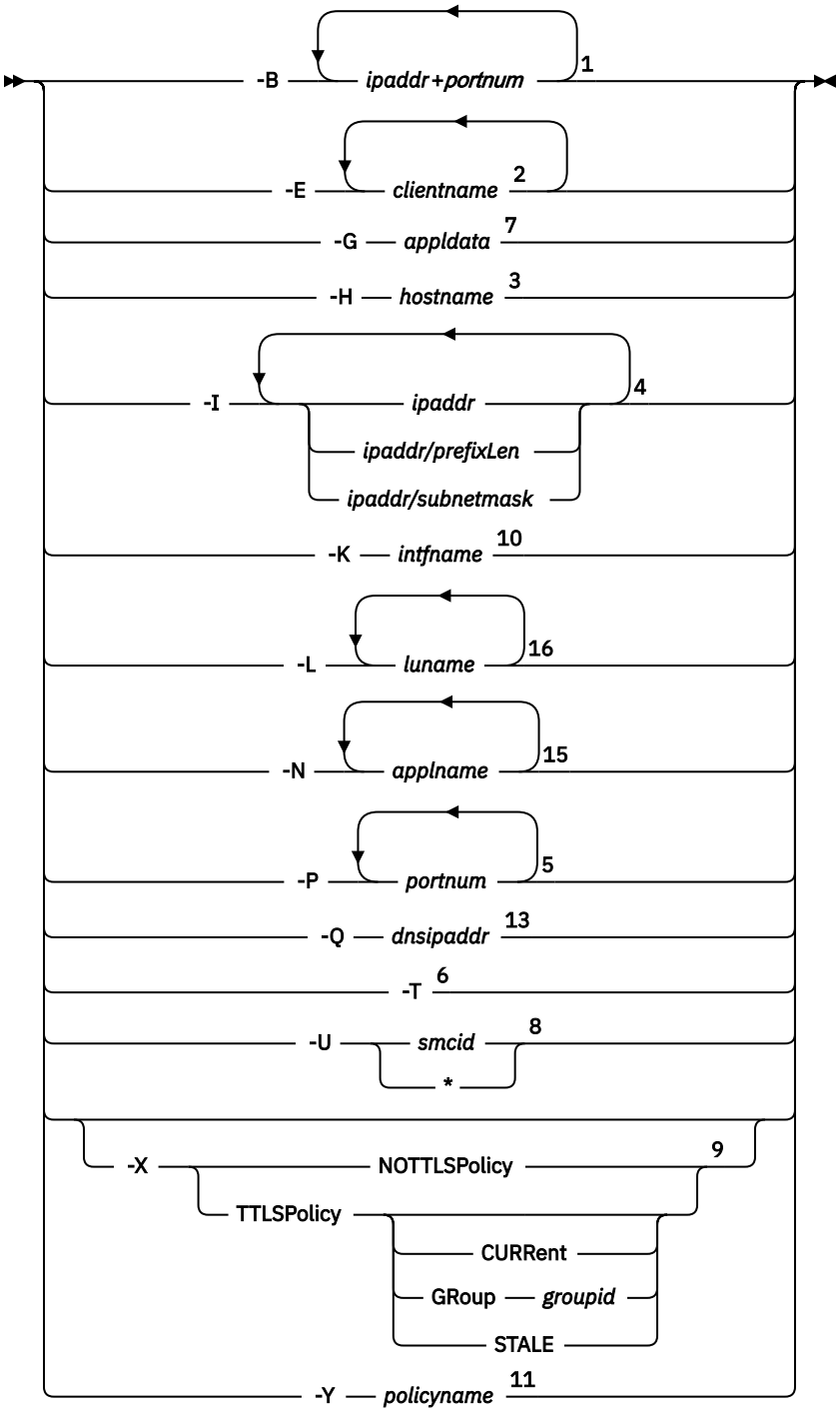
Target



Output



Filter



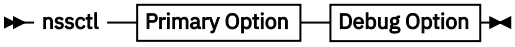
Notes:

[1] -B filter is valid only with -A, -a, -c, -s, -t, -O, and -V.
[2] -E filter is valid only with -A, -a, -b, -c, -e, -s, and -t.
[3] -H filter is valid only with -A, -a, -b, -c, -q, -s, -t, and -V.

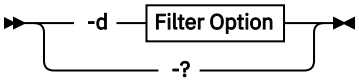
[4] -I filter is valid only with -A, -a, -b, -c, -F, -g, -n, -O, -q, -r, -s, -t, and -V.
[5] -P filter is valid only with -A, -a, -c, -O, -o, -s, -t, and -V.
[6] -T filter is valid only with -A, -a, -b, -c, -e, and -s.
[7] -G filter is valid only with -A, -a, and -c.
[8] -U filter is valid only with -A, -a, -c and -d.
[9] -X filter is valid only with -a, and -c.
[10] -K filter is valid only with -d and -h.
[11] -Y filter is valid only with -j.
[12] The valid protocol values are TCP, and UDP.
[13] -Q filter is valid only with -q.
[14] The valid protocol values are ICMP, IP, TCP, and UDP.
[15] -N filter is valid only with -t.
[16] -L filter is valid only with -t.

nssctl command

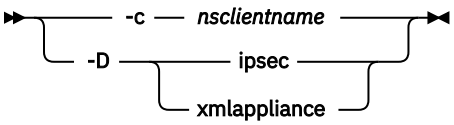
The z/OS UNIX nssctl command is used to display information for NSS clients that are currently connected to the local NSS server.



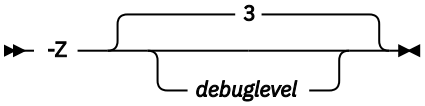
Primary Option



Filter Option



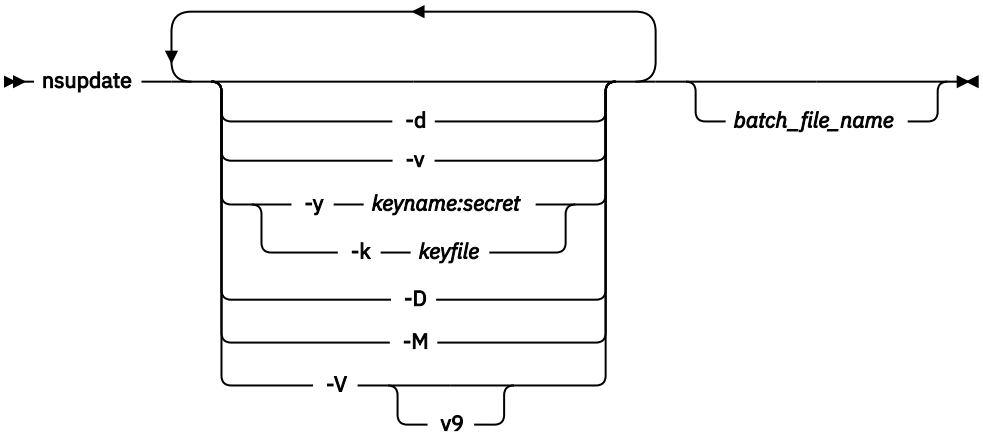
Debug Option



nsupdate Command

Dynamically update a name server:

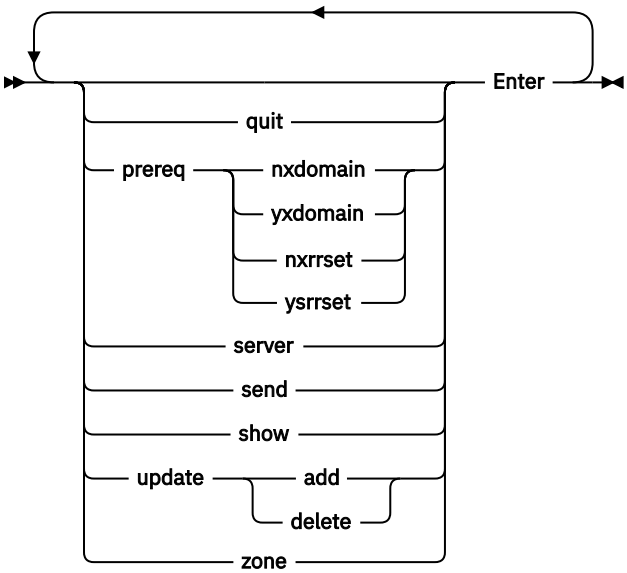
Command mode:



Subcommand mode:

Start nsupdate subcommand mode

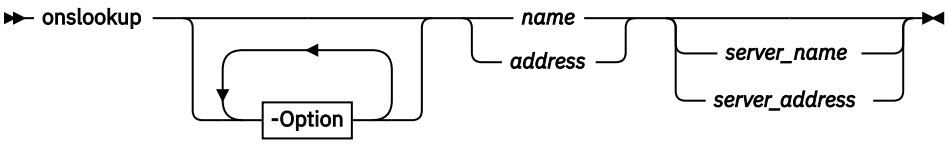
Subsequent subcommand entry (valid with version 9 of nsupdate)



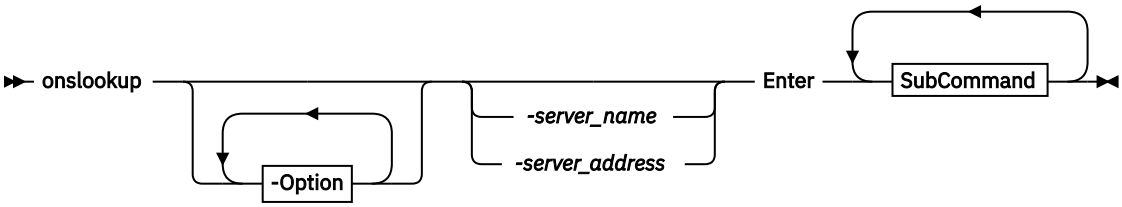
onslookup and nslookup command

Note: The synonym for the **onslookup** command in the z/OS UNIX shell is nslookup. The **nslookup** command syntax is the same as that for the **onslookup** command.

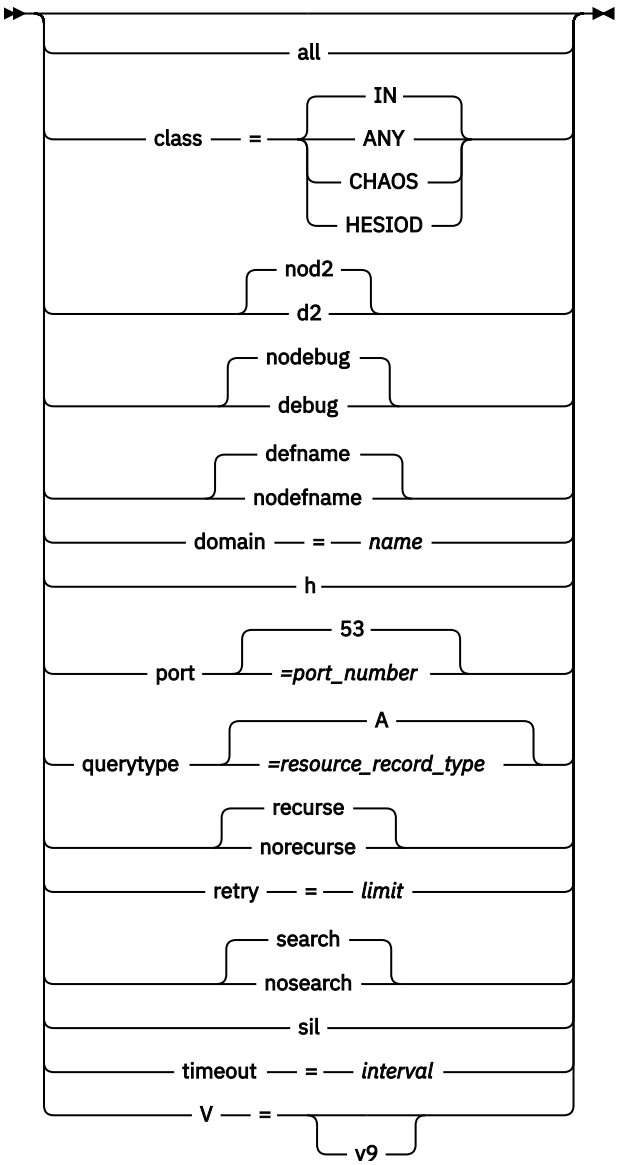
Querying a name server in command mode:



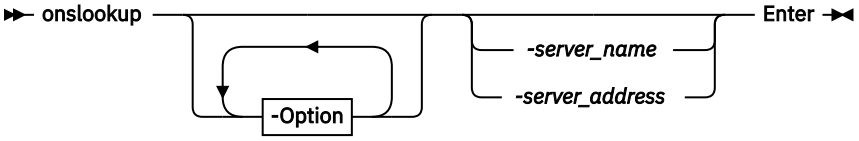
Issue multiple queries to name servers in interactive mode:



Options:



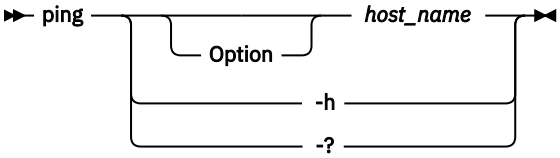
SubCommand:



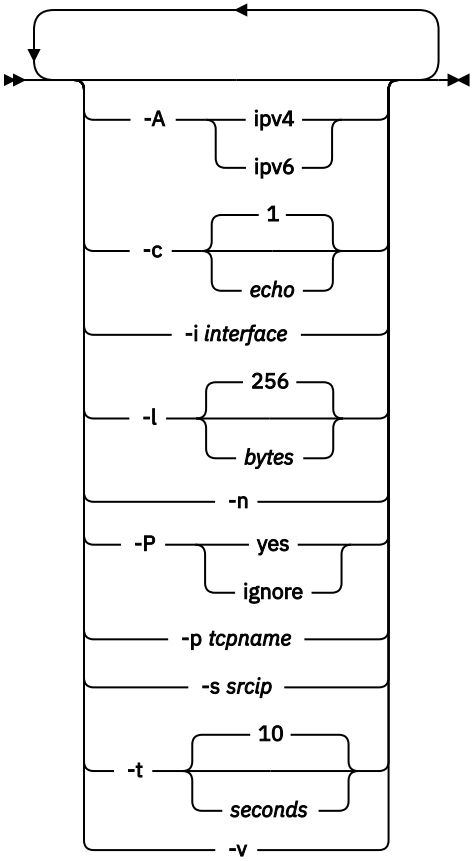
ping command

Send an echo request to a foreign node (remote host) to determine whether the node is accessible:

Note: The synonym for the **oping** command in the z/OS UNIX shell is ping. The **oping** command syntax is the same as that for the **ping** command.

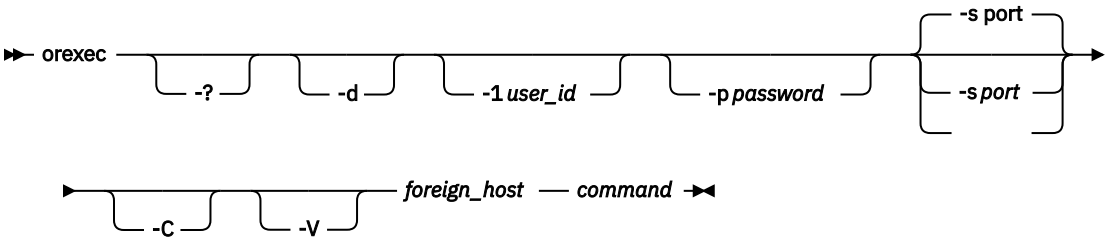


Option



orexec and rexec commands

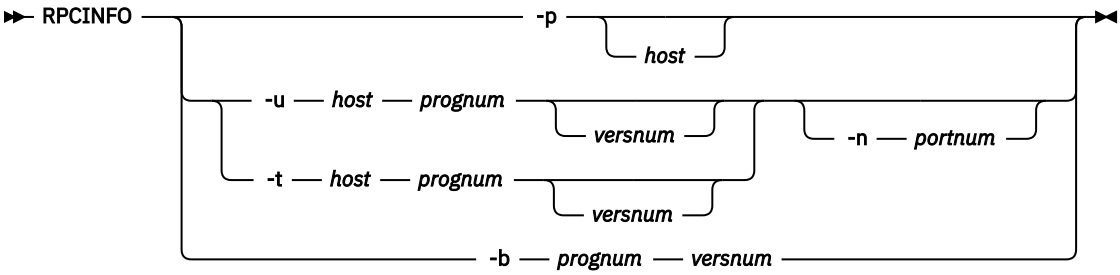
Execute a command on the remote host:



Note: The synonym for the **orexec** command in the z/OS UNIX shell is rexec. The **rexec** command syntax is the same as that for the **orexec** command.

orpcinfo and rpcinfo commands

Display server information:

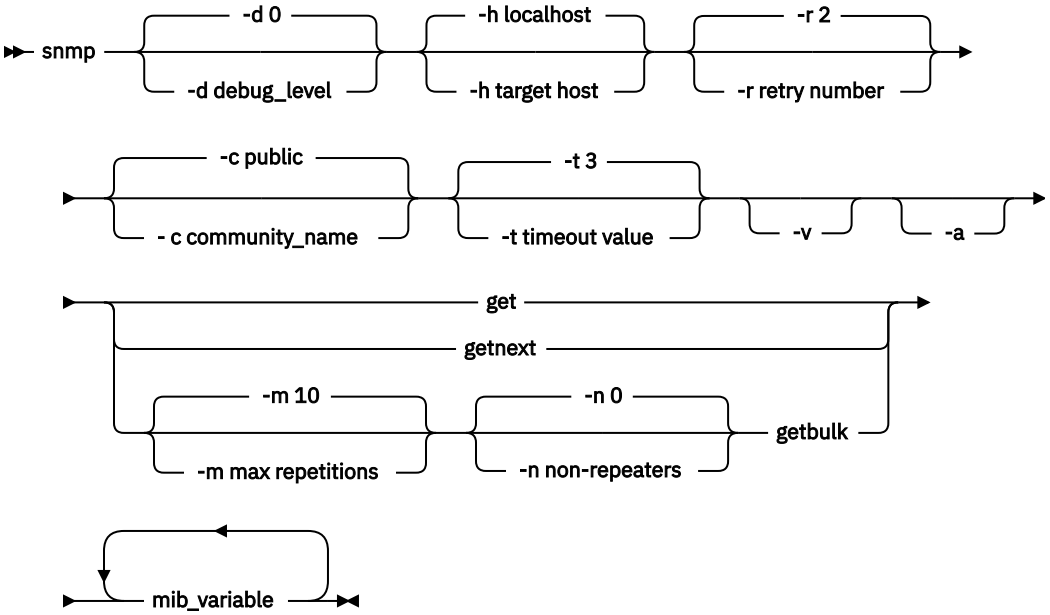


Note: The synonym for the **orpcinfo** command in the z/OS UNIX shell is **rpcinfo**. The **rpcinfo** command syntax is the same as that for the **orpcinfo** command.

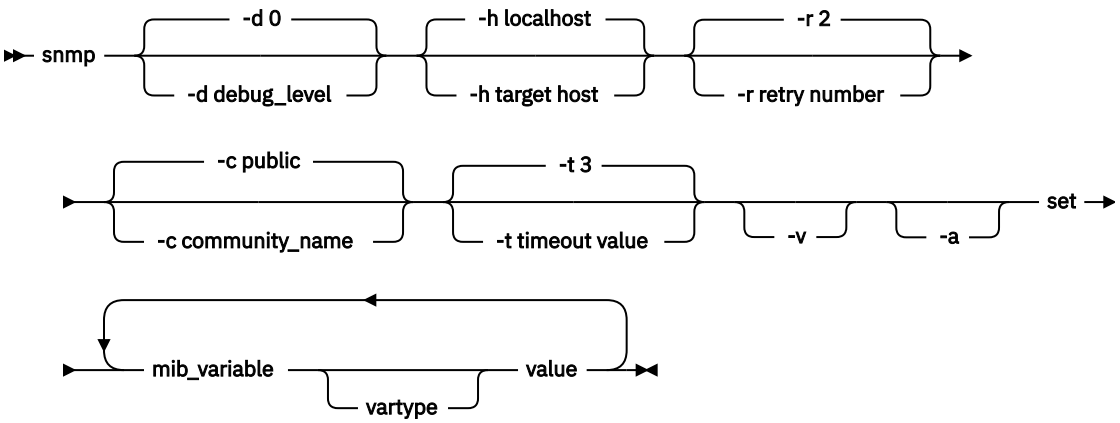
snmp command

Note: The synonym for the **osnmp** command in the z/OS UNIX shell is snmp. The **snmp** command syntax is the same as that for the **osnmp** command.

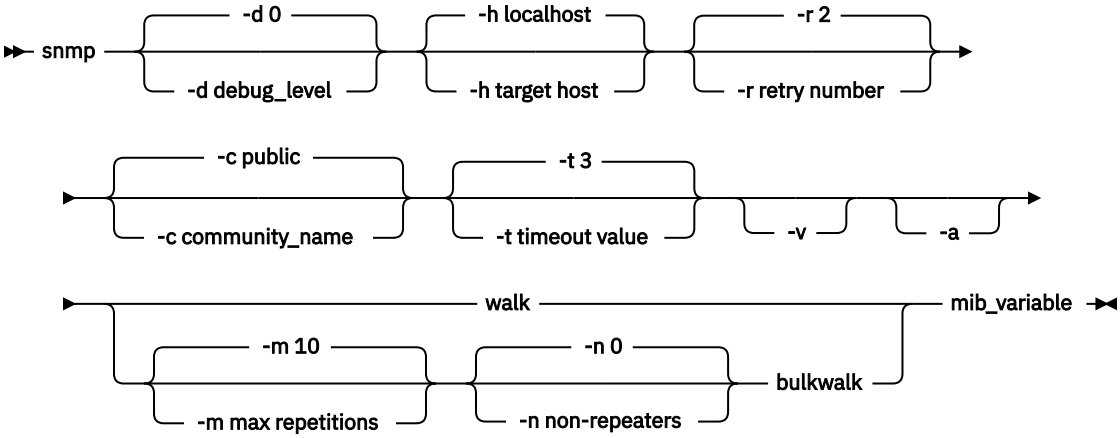
Get MIB variables:



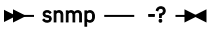
Set the MIB variables:



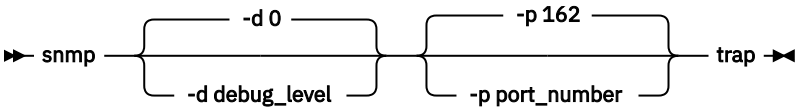
Walk the MIB tree:



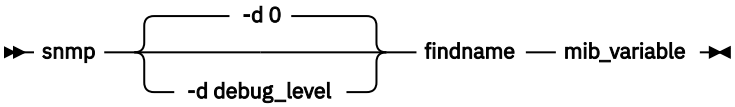
Displaying **osnmp** help:



Receive a trap:



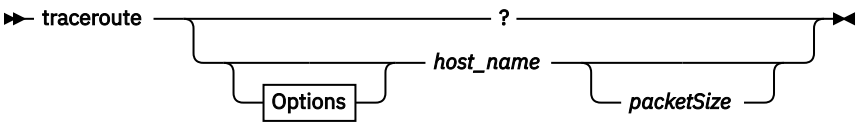
Finding a MIB variable name:



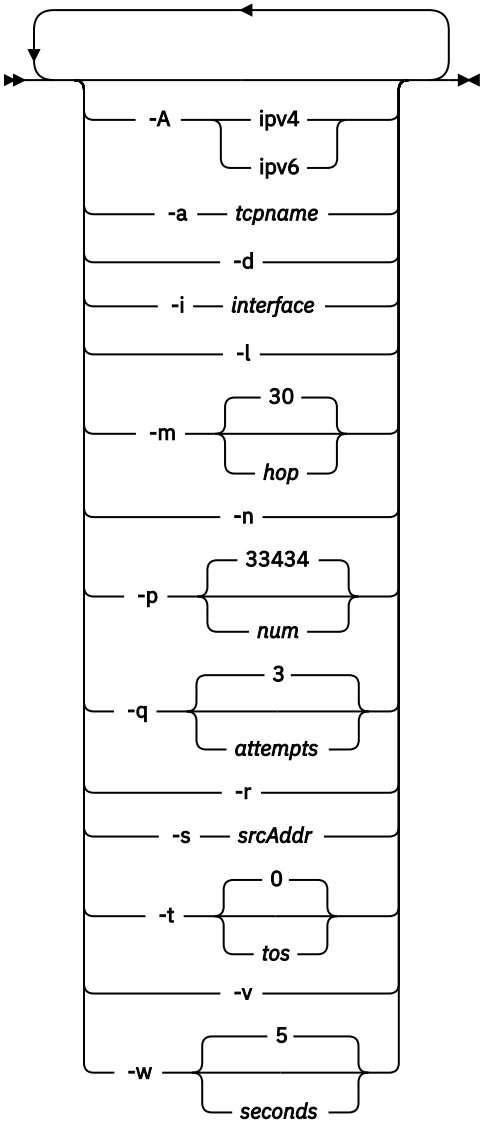
traceroute command

Debug network problems:

Note: The synonym for the **otracert** command in the z/OS UNIX shell is traceroute. The **traceroute** command syntax is the same as that for the **otracert** command.

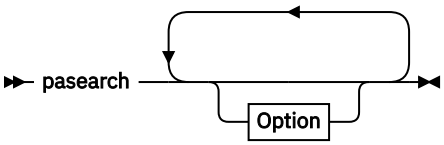


Options

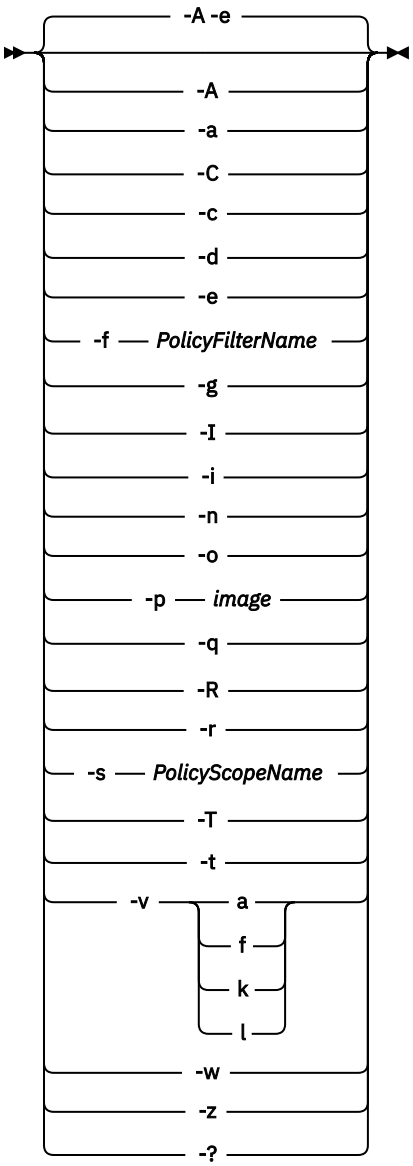


pasearch command

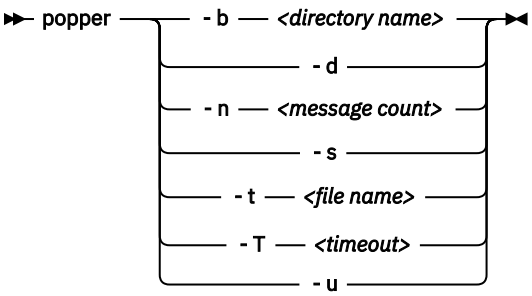
Query information from the Policy Agent (Pagent):



Option

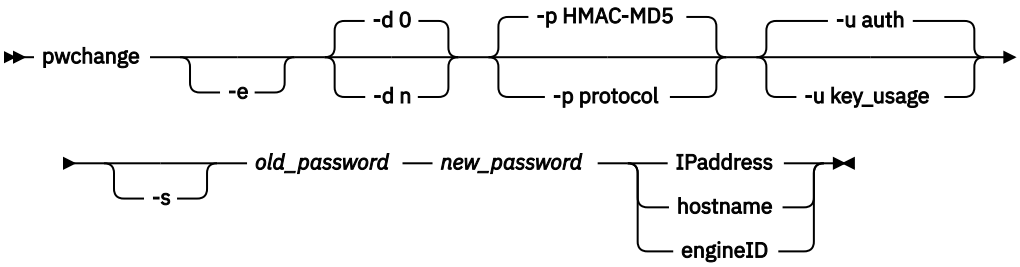


popper command



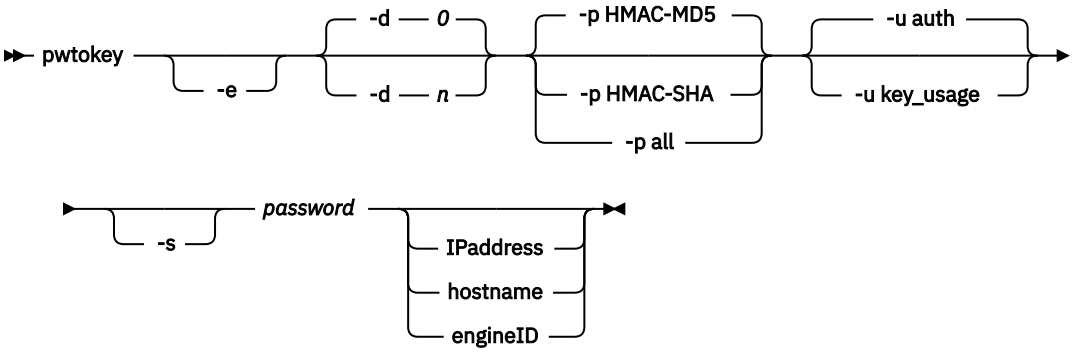
pwchange command

Generate hexadecimal encryption key to update password for SNMP use:

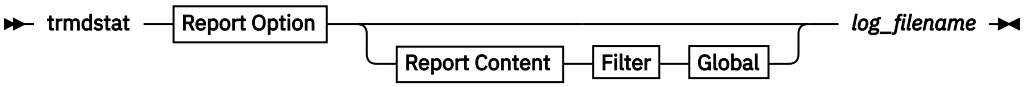


pwtokey command

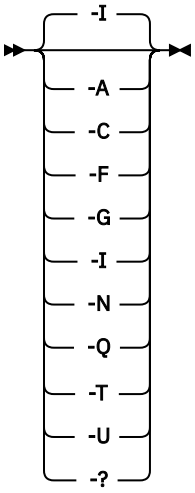
Convert password into hexadecimal encryption key for SNMP or OMPROUTE use:



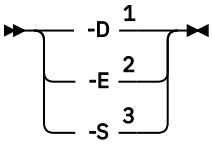
trmdstat command



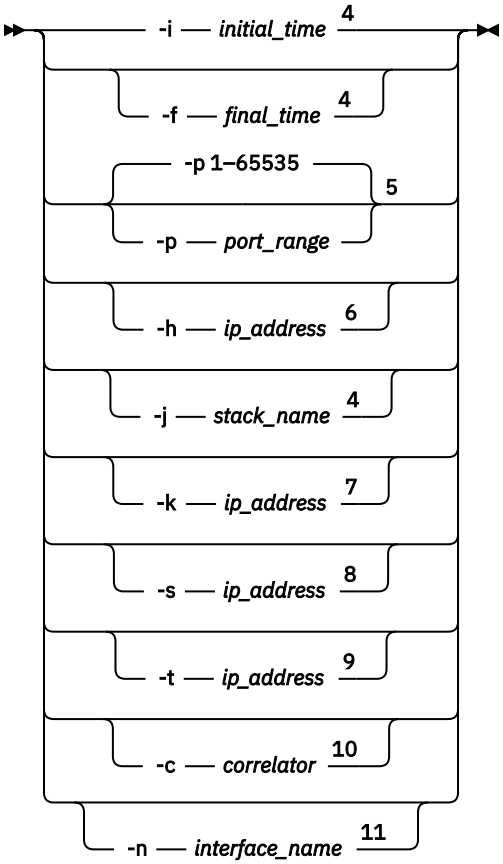
Report Option



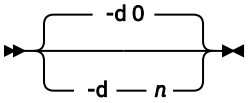
Report Content



Filter



Global



Notes:

[1] Valid only when -A/-C/-F/-G/-N/-Q/-T/-U is specified.
[2] Valid only when -T is specified.
[3] Valid only when -A/-F/-T/-U is specified.
[4] Valid only when -A/-C/-F/-G/-I/-N/-Q/-T/-U is specified.
[5] Valid only when -A/-C/-F/-G/-Q/-T/-U is specified except when -A -S or -F -S are specified.
[6] Valid only when -A/-C/-F/-G/-N/-Q/-U is specified except when -A -S is specified.
[7] Valid only when -T and -S is specified.
[8] Valid only when -A/-G/-Q/-T is specified except when -A -S or -T -S are specified.
[9] Valid only when -A/-G/-Q/-T is specified except when -A -S is specified.
[10] Not valid when -S or -I is specified.
[11] Valid only when -F is specified.

Other IP commands, options, and subcommands

Table 1. IP commands, options, and subcommands

Command type	**Reference**
NetView SNMP (SNMP) Command	See z/OS Communications Server: IP System Administrator's Commands.
IPCS subcommands for TCP/IP	See z/OS Communications Server: IP Diagnosis Guide.
CTRACE command and options for TCP/IP	See z/OS Communications Server: IP Diagnosis Guide.

Chapter 2. VTAM commands

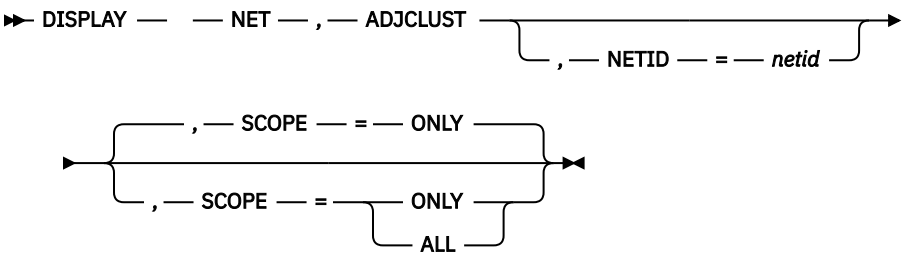
VTAM commands are listed in this section alphabetically.

For more information about these commands, see z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

Operator display commands

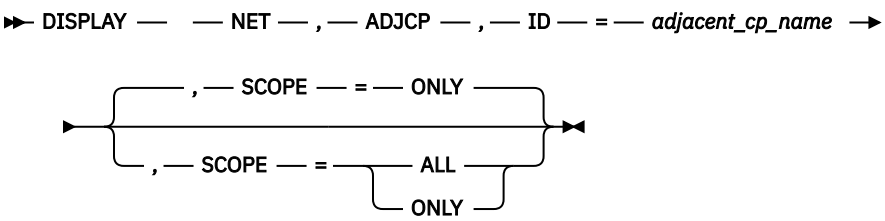
D ADJCLUST command

Display the adjacent cluster (routing) tables and their entries in the order to be used for APPN searches:



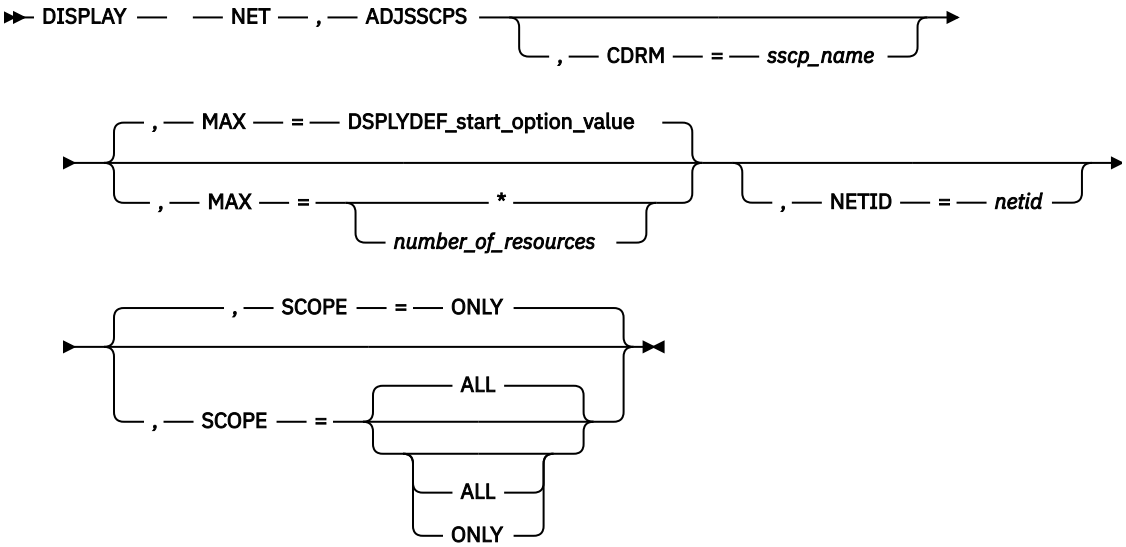
D ADJCP command

Display the attributes of a specific adjacent node and the connections in which it is currently involved:

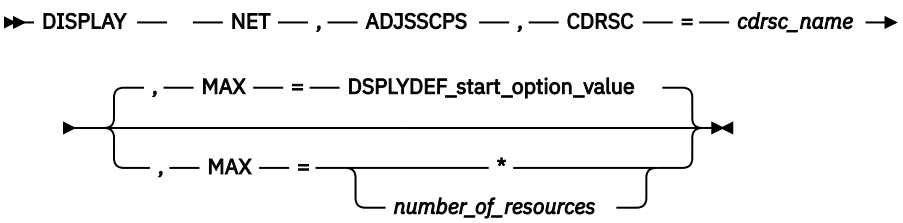


D ADJSSCPS command

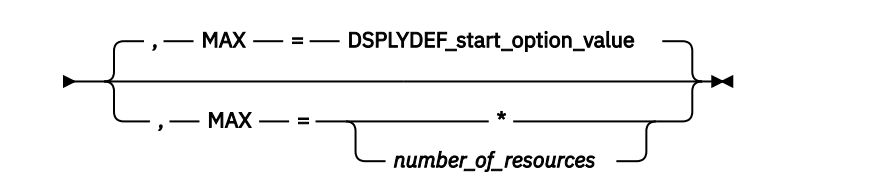
Display user-defined and dynamic adjacent SSCP tables:



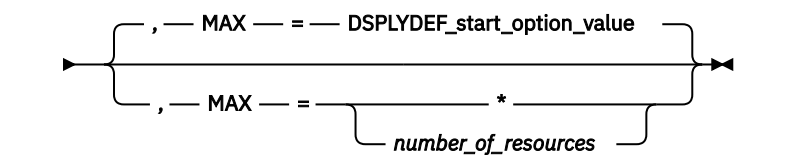
Display the adjacent SSCP table for a specific cross-domain resource:



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

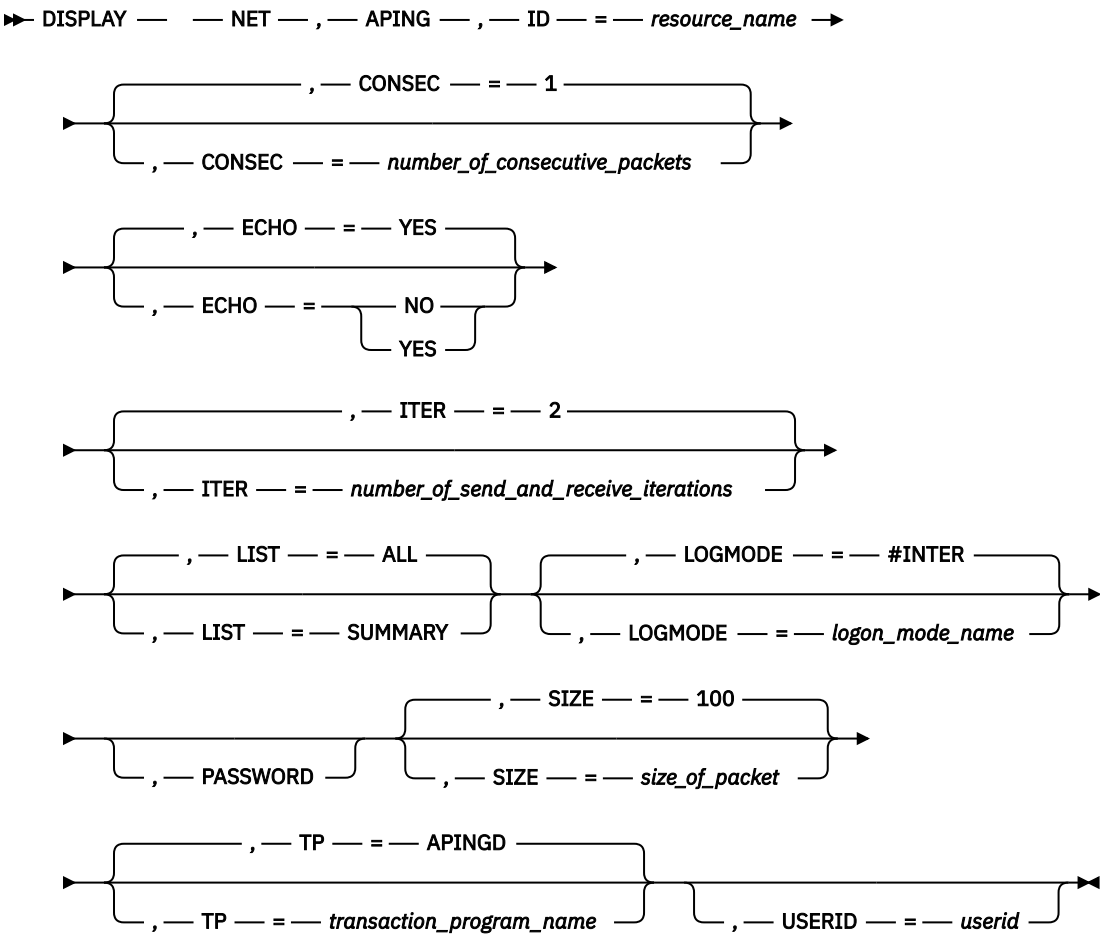


Display all lists of adjacent CDRMs:



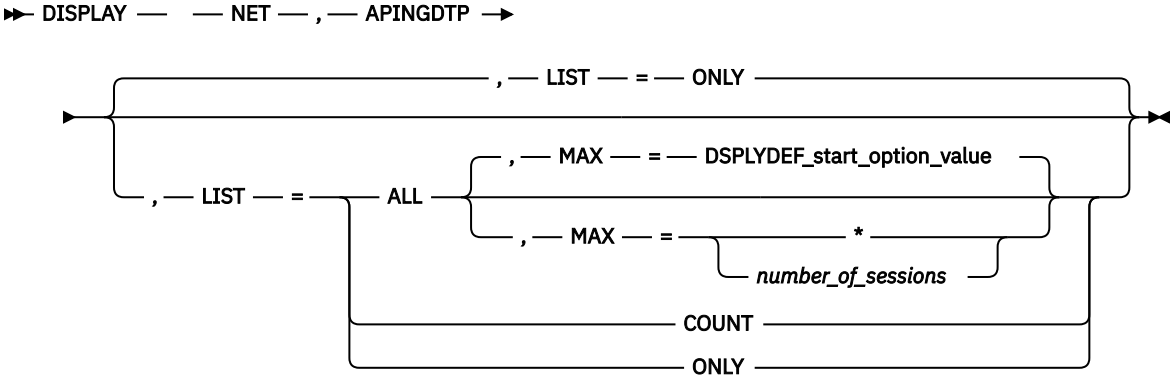
D APING command

Test whether a route to another LU 6.2 resource or control point is available and display performance information for the route if the resource supports an APING server:



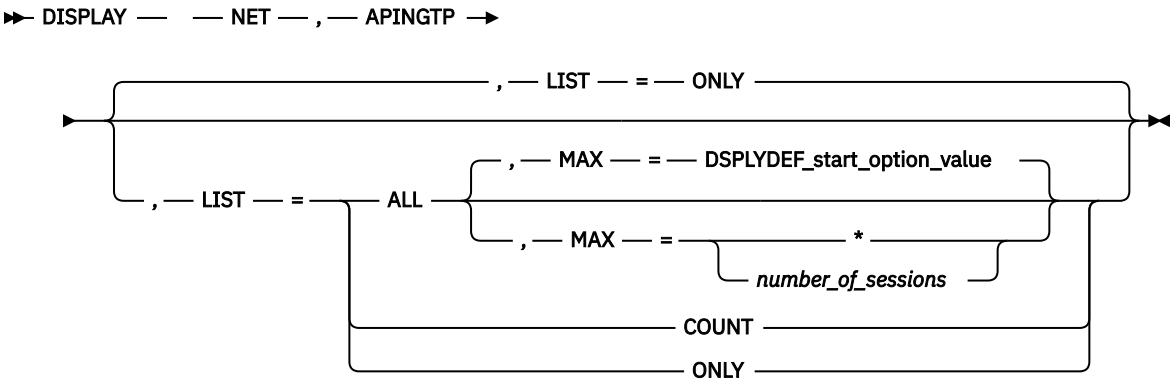
D APINGDTP command

Display the number of APINGD transaction programs permitted to run concurrently for responding to APING requests from other nodes:



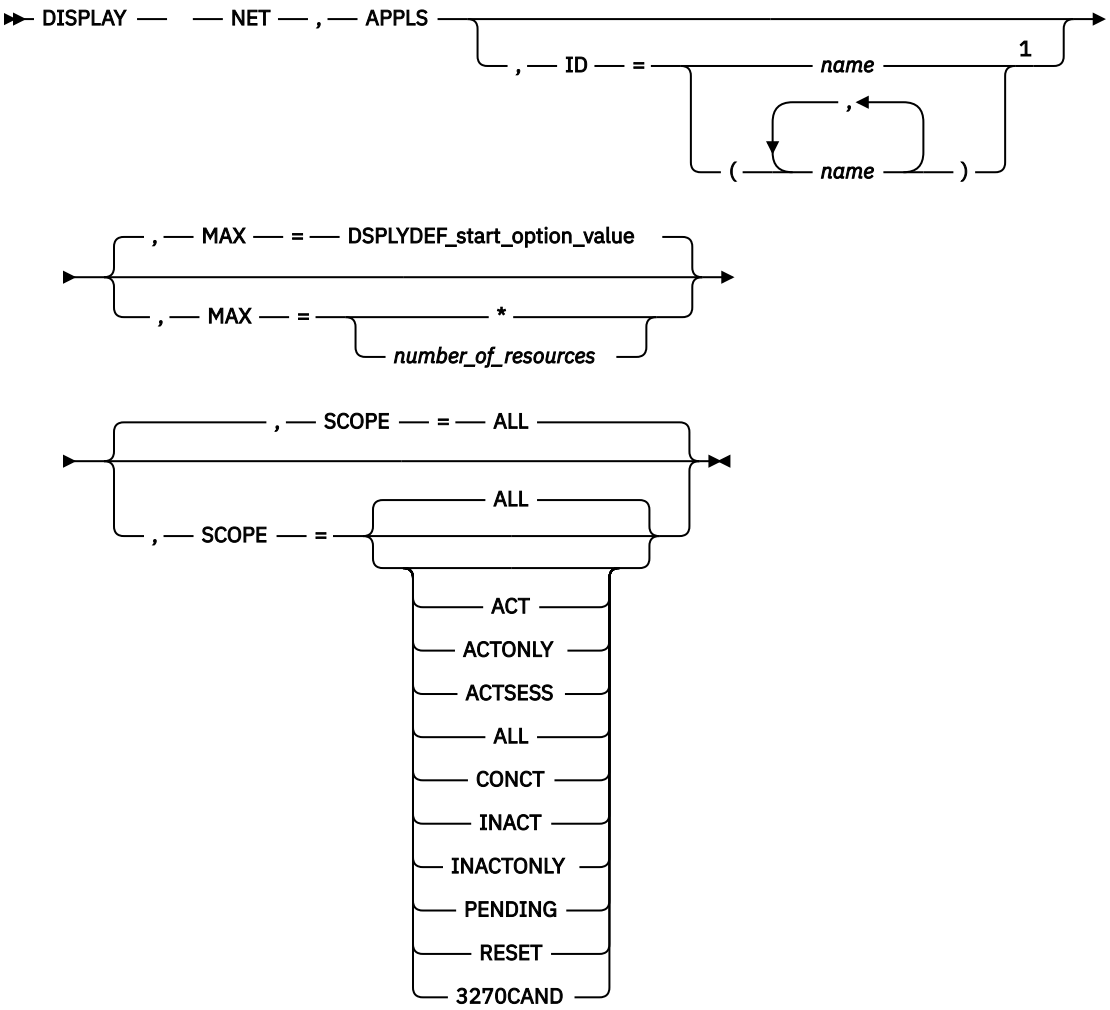
D APINGTP command

Display the number of APING transaction programs permitted to run concurrently for sending APING command requests to other node; optionally, display the number of active sessions for the APINGD TP and show information about those sessions:



D APPLS command

Display the status of active application program major nodes in the domain along with their subordinate application program minor nodes:



Notes:

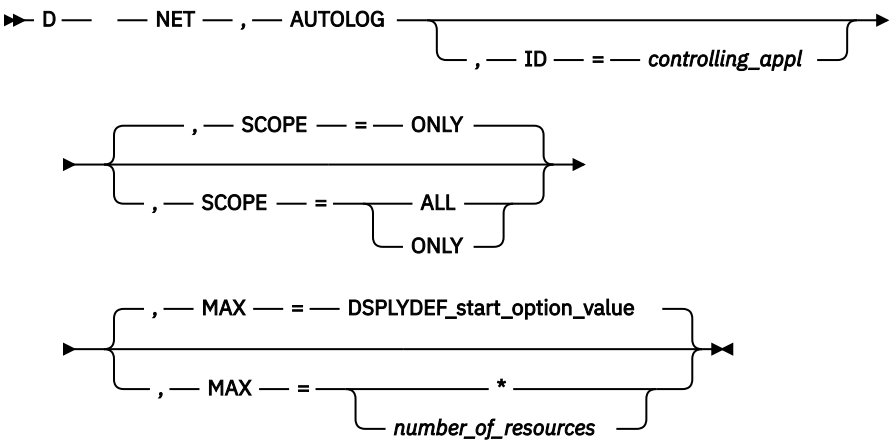
[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D APPNTOSA command

Display the APPN-to-subarea class-of-service mapping table:

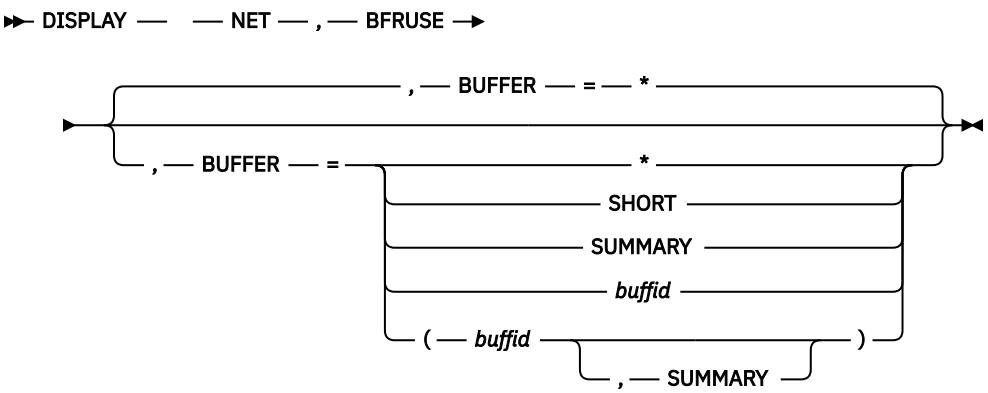
D AUTOLOG command

Display the controlling applications for which there are pending AUTOLOGON requests:



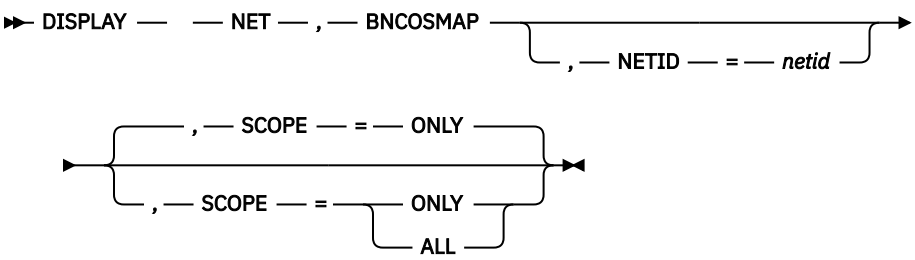
D BFRUSE command

Display information about VTAM buffer use and storage usage summary information for VTAM modules:



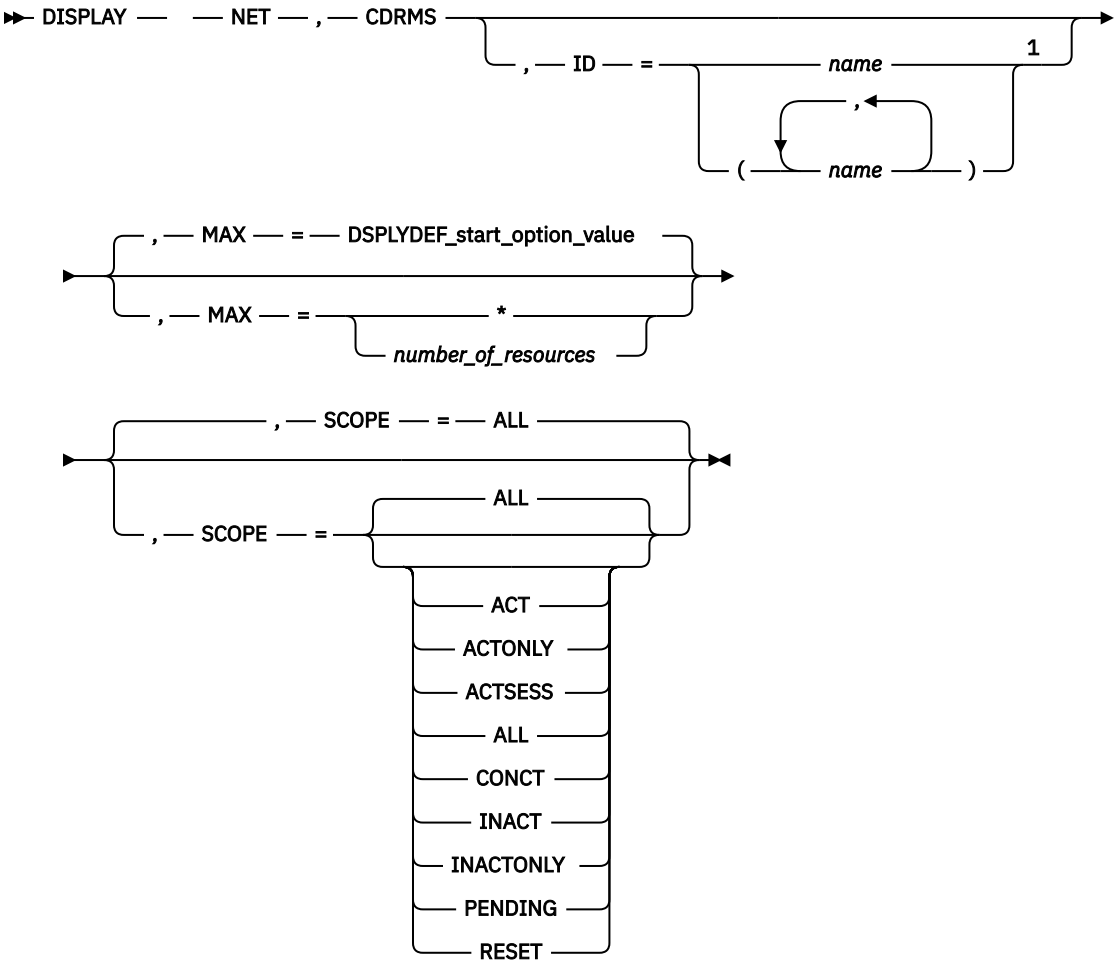
D BNCOSMAP command

Display native and nonnative COS mappings defined for a border node:



D CDRMS command

Display the status of active cross-domain resource manager (CDRM) major nodes and their subordinate minor nodes:

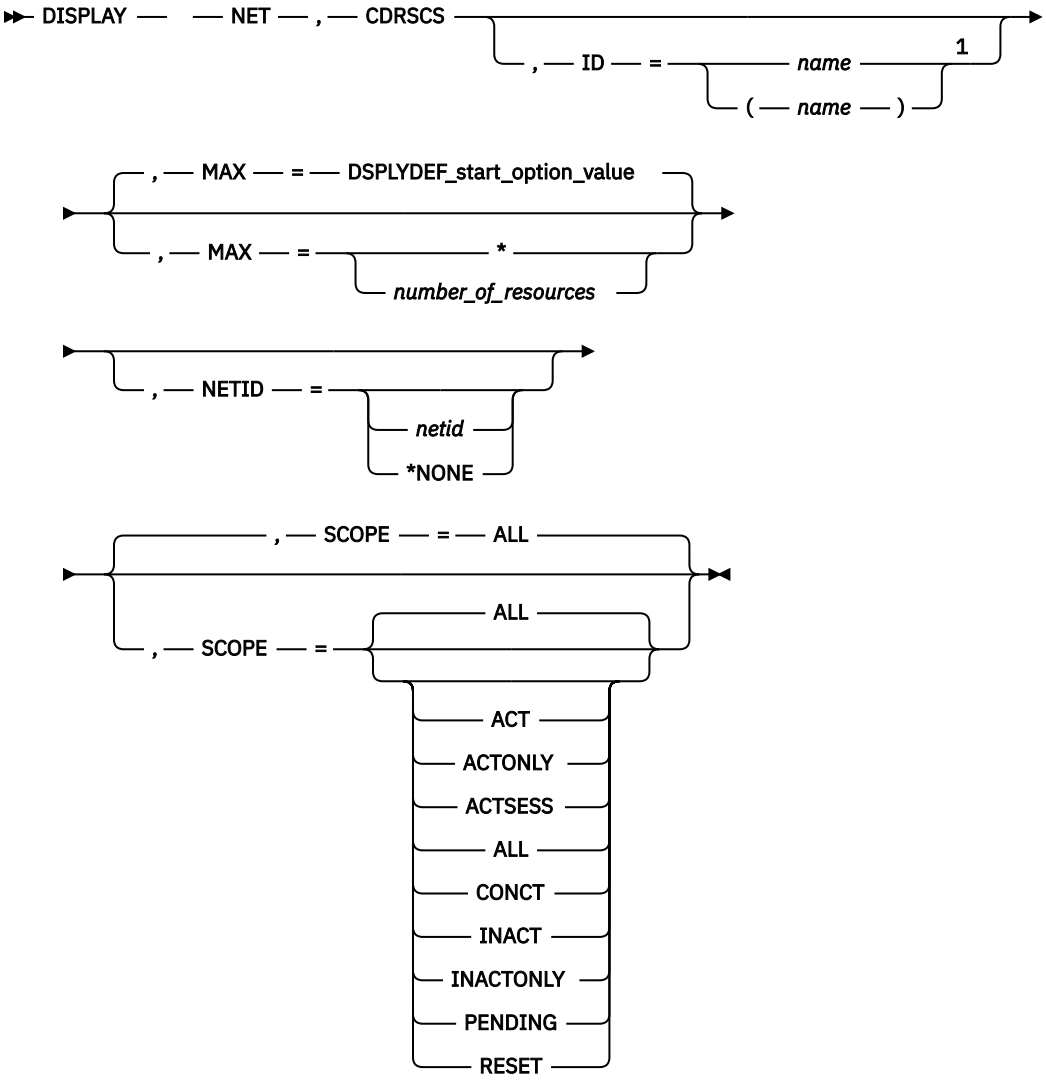


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D CDRSCS command

Display information about cross-domain resources, including independent LUs:

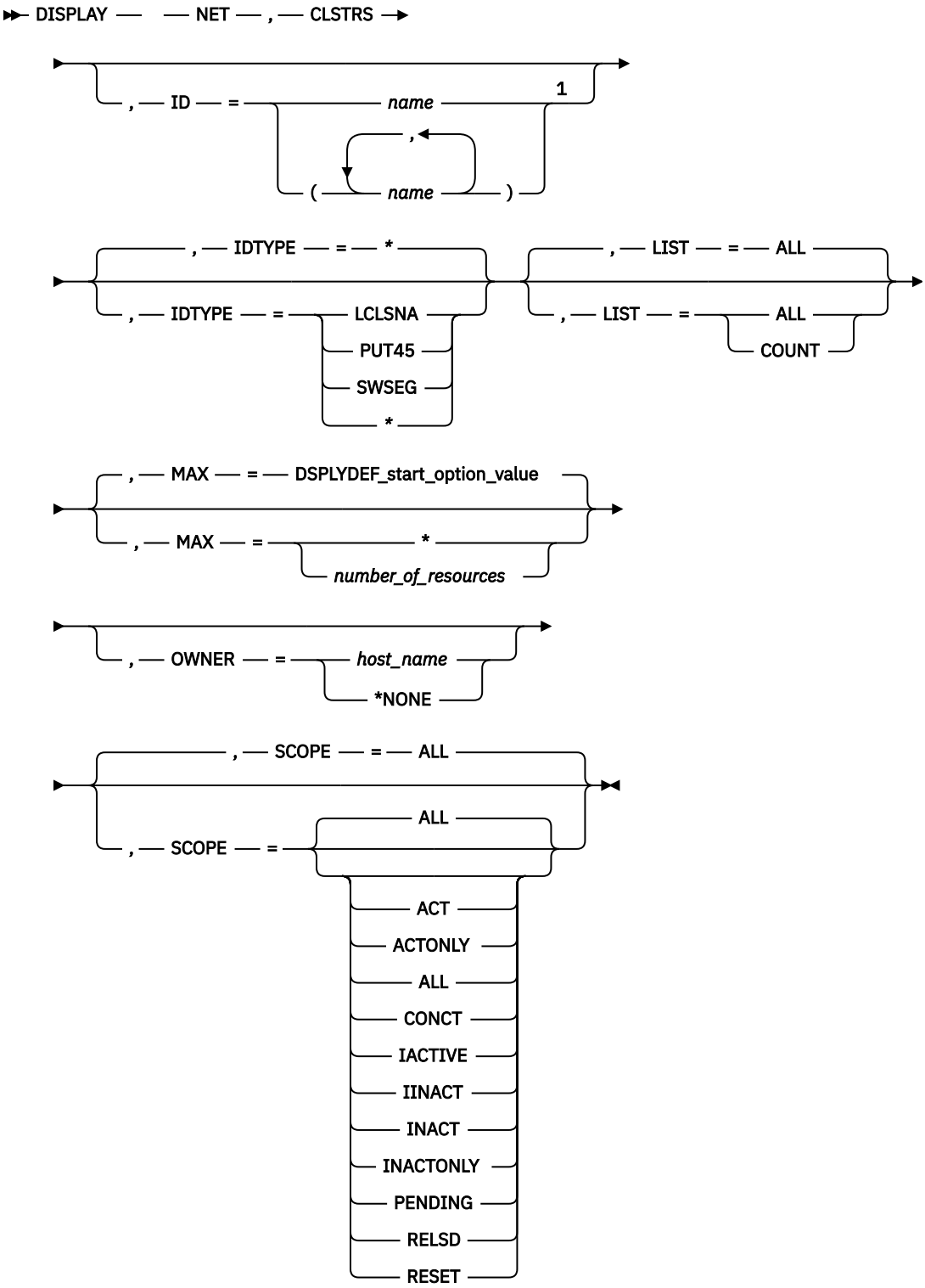


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D CLSTRS command

Display the status of physical units (PUs) subordinate to an NCP node, a local SNA node, or a switched subarea node:

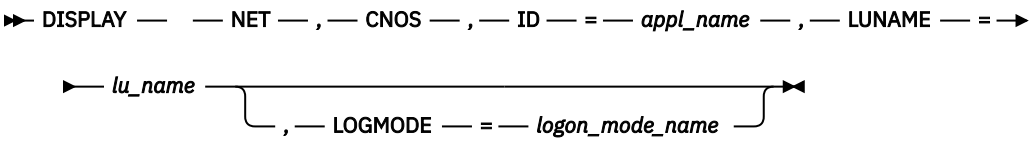


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

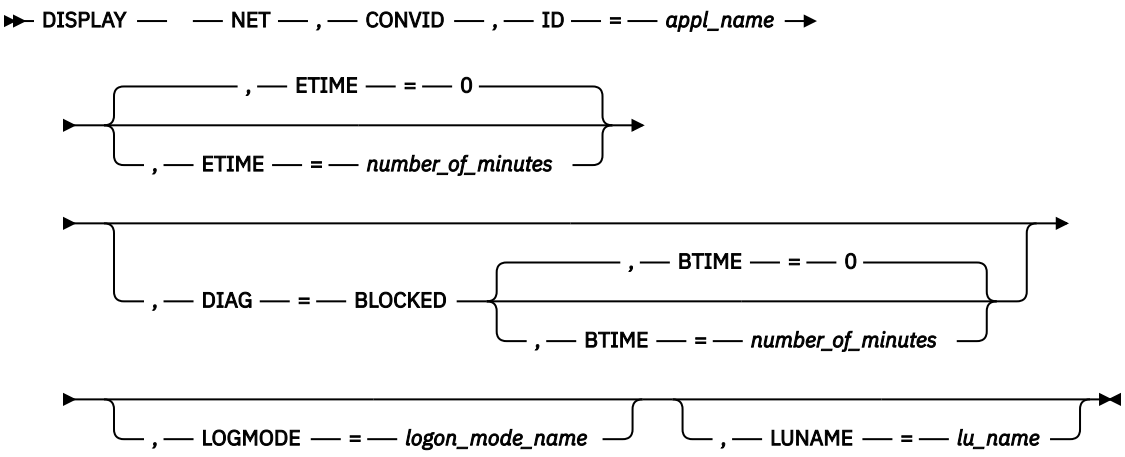
D CNOS command

Display LU 6.2 information associated with an application program and a partner LU and logon mode:



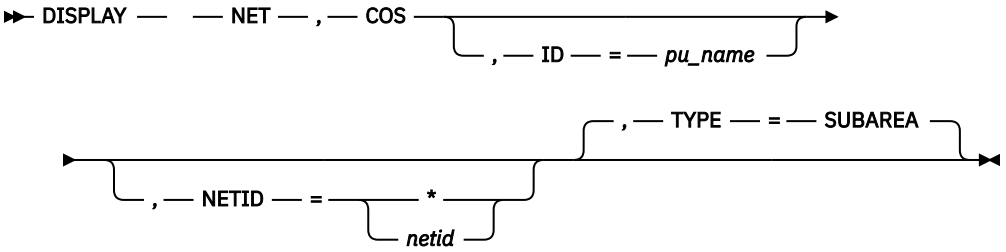
D CONVID command

Provide information about active conversations with the specified application program:

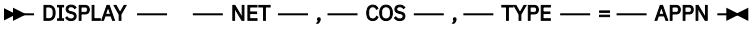


D COS command

Display the Class of Service (CoS) table name for a particular network or all networks associated with a specified PU type 4 or 5:

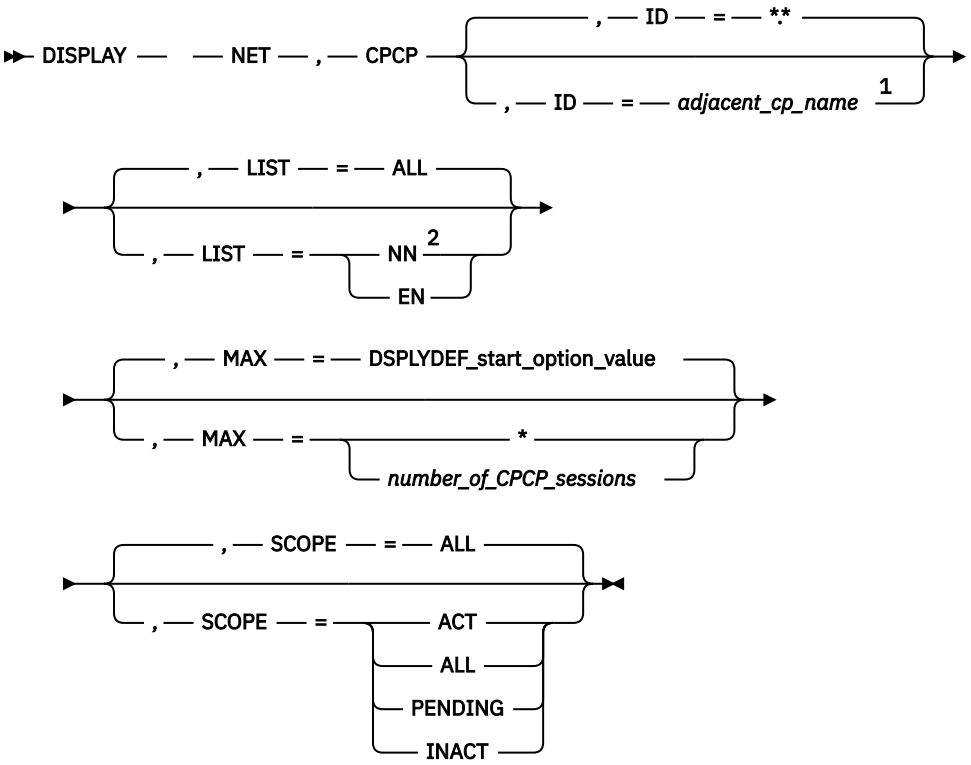


Display the APPN Class of service table entries and the APPNCOS table used to create each entry:



D CPCP command

Display detailed CP-CP session status:



Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

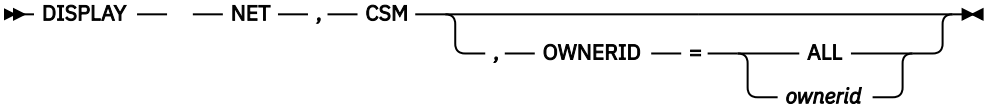
[2] Because an end node will never have CP-CP sessions with another end node, LIST=EN is not valid if this command is issued from an end node. In this case, the LIST operand is not necessary because the output for LIST=ALL and LIST=NN will be identical.

D CSDUMP command

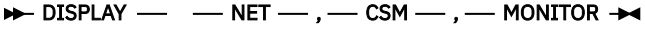
Display the current CSDUMP triggers set earlier by the MODIFY CSDUMP command or the CSDUMP start option:

D CSM command

Monitor the use of storage managed by the communications storage manager (CSM):

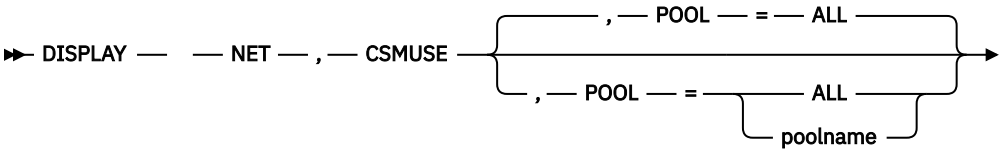


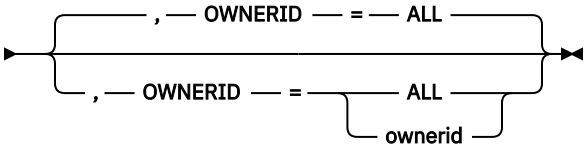
Display the status of the CSM Monitoring:



D CSMUSE command

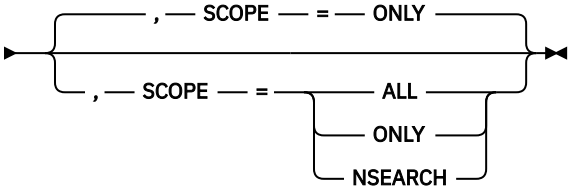
The DISPLAY CSMUSE command allows IBM service to evaluate the use of storage managed by the communications storage manager (CSM). Although this command is similar to DISPLAY CSM command, it provides a lower level of detail regarding storage usage, and therefore the output of this command is different than that of DISPLAY CSM.



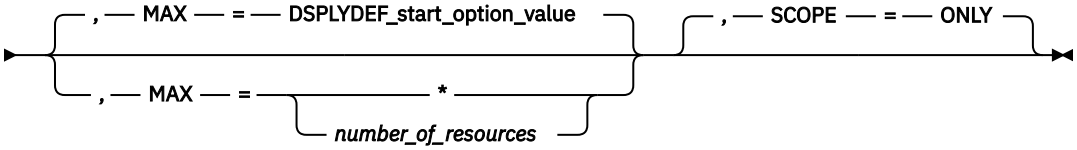


D DIRECTRY command

Display information about a resource:



Display a resource name in any network:

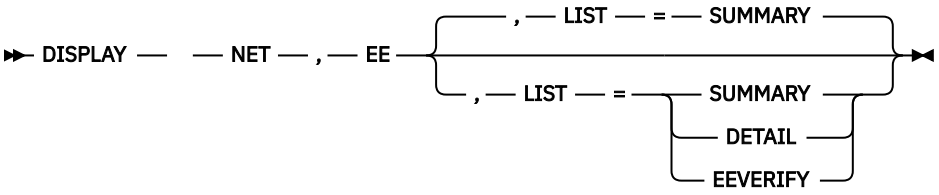


D DLURS command

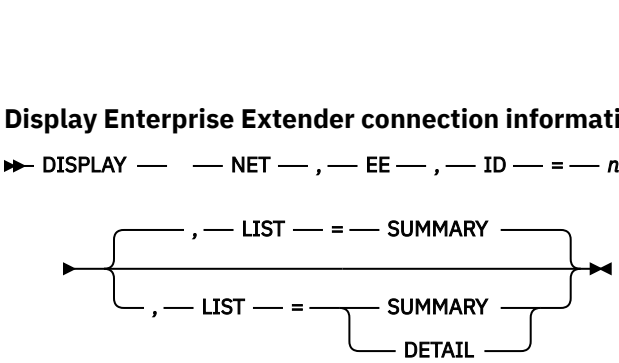
Display all DLURs for which this host acts as dependent LU server (DLUS):

D EE command

Display general Enterprise Extender information:

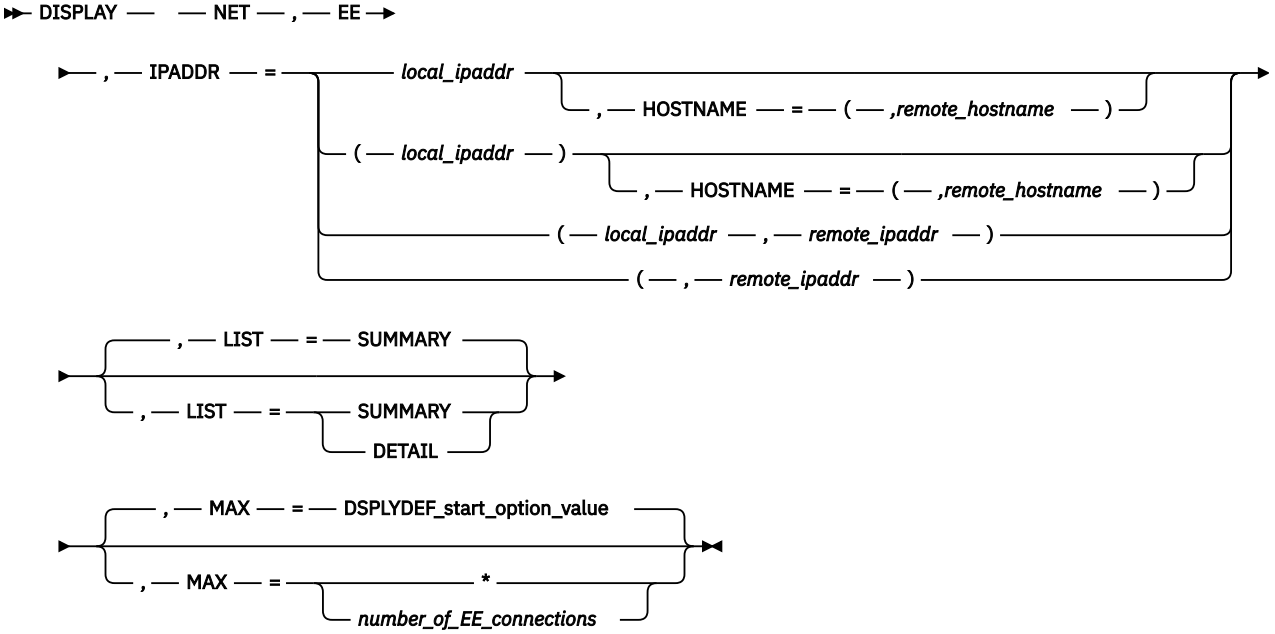


Display Enterprise Extender connection information by LINE or PU name:

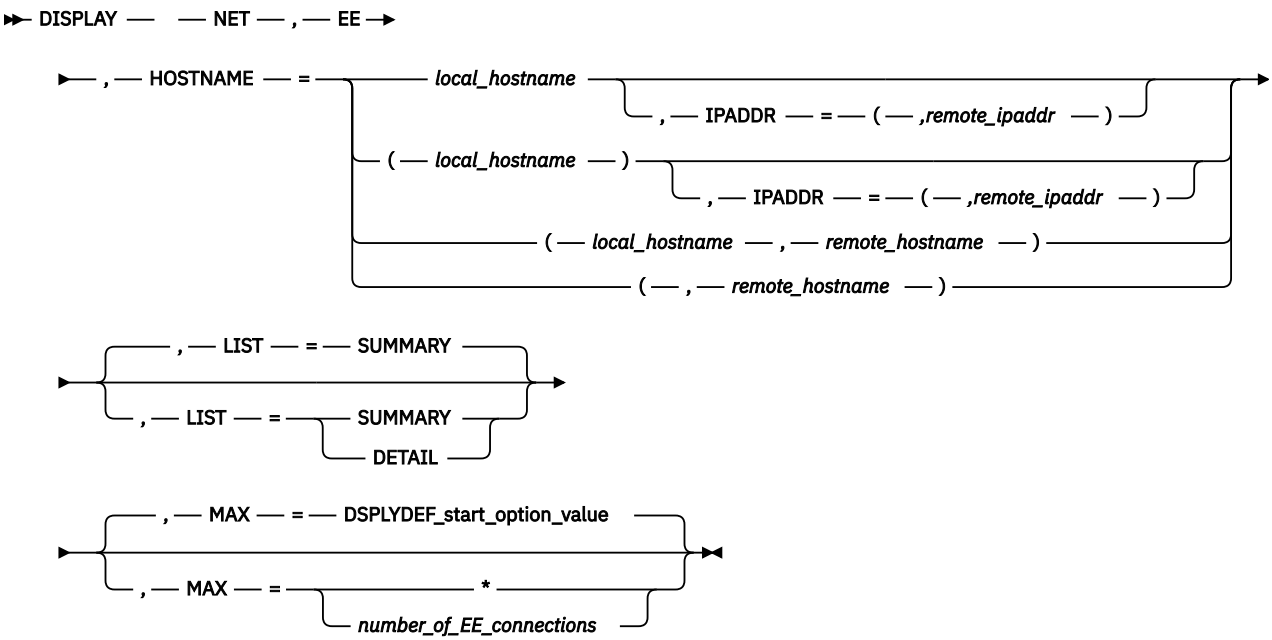


Note: The name represents either an Enterprise Extender LINE or switched PU which has an active connection.

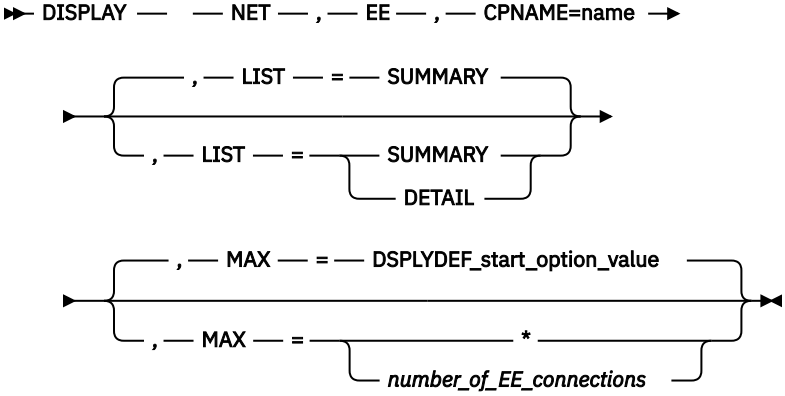
Display Enterprise Extender connection information by IPADDR:



Display Enterprise Extender connection information by HOSTNAME:

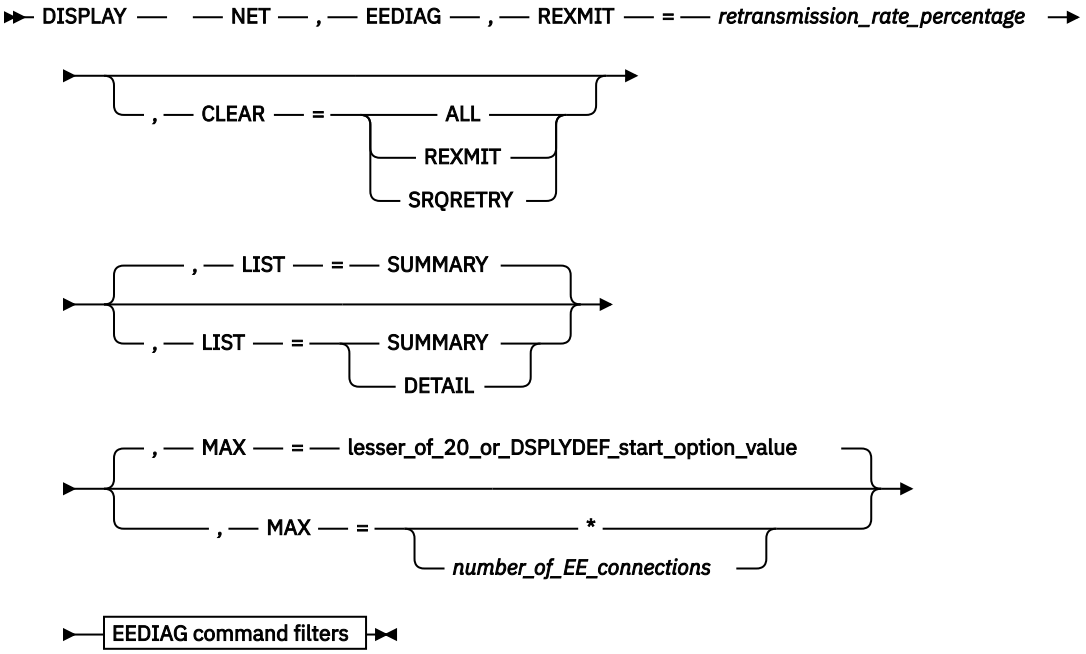


Display Enterprise Extender connection information by remote CPNAME:



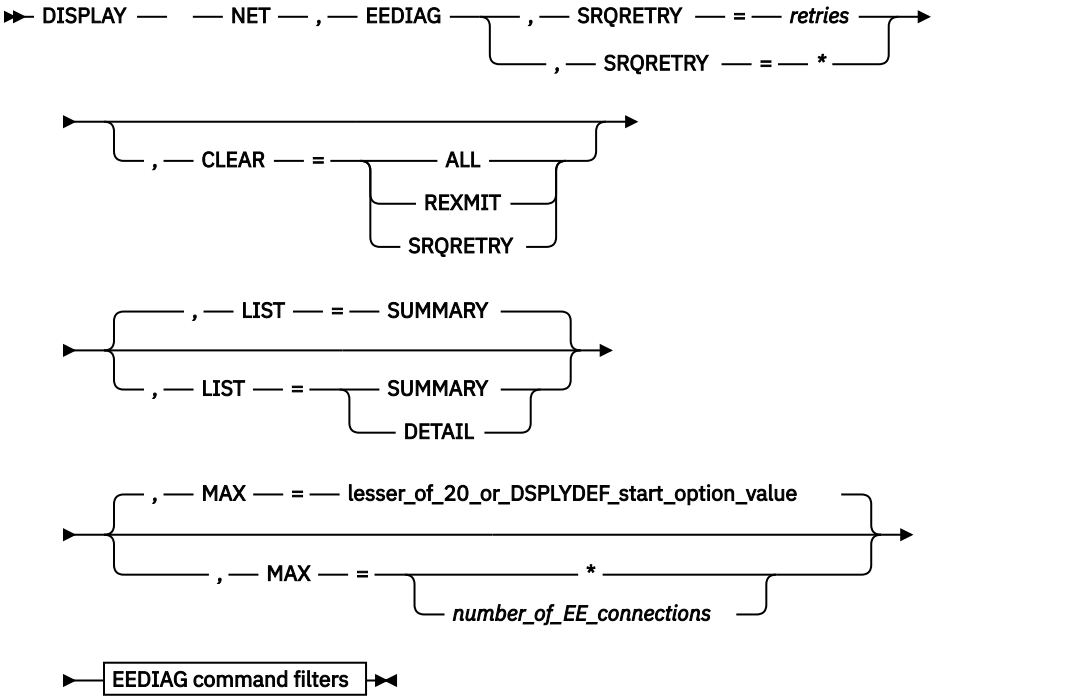
D EEDIAG command

Display Enterprise Extender (EE) connections that meet or exceed a specified retransmission threshold:



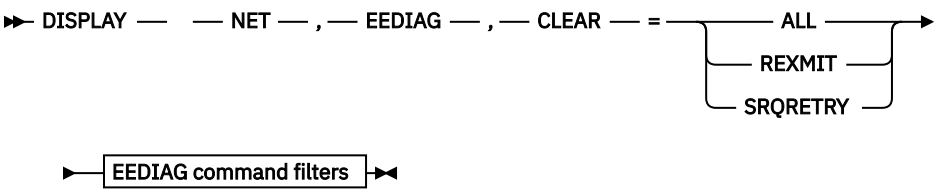
Tip: Specify the CLEAR operand on this command to clear the diagnostic counters. The REXMIT information is displayed before the diagnostic counters are cleared.

Display Enterprise Extender connections that meet or exceed a specified SRQRETRY threshold:

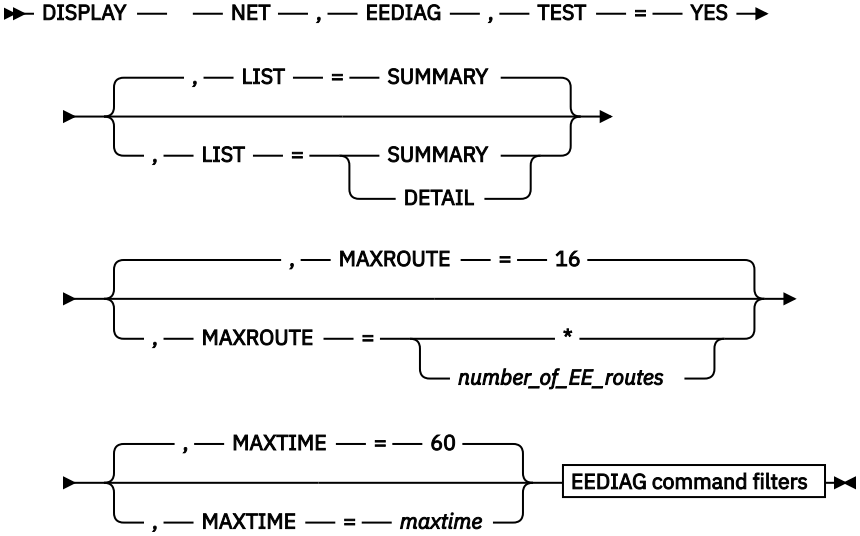


Tip: Specify the CLEAR operand on this command to clear the diagnostic counters. The SRQRETRY information is displayed before the diagnostic counters are cleared.

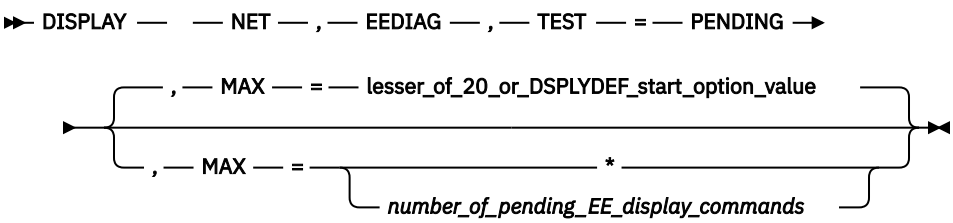
Clear Enterprise Extender diagnostic counters:



Display Enterprise Extender connectivity test information:

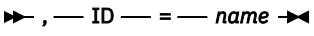


Query outstanding Enterprise Extender display commands:



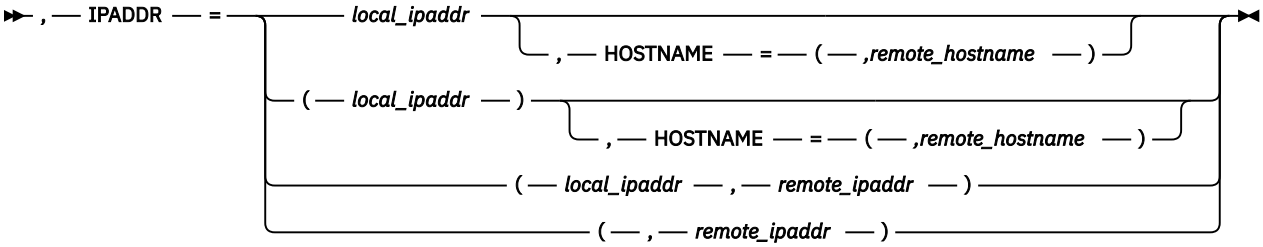
EEDIAG command filters:

Limit the DISPLAY EEDIAG command scope to one EE connection that is identified by LINE or PU name:

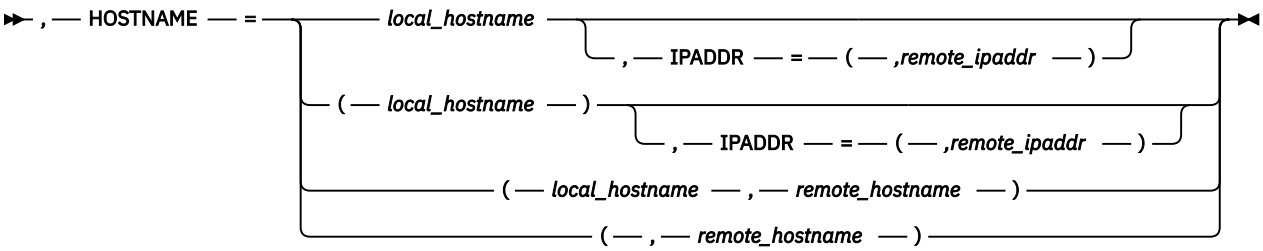


The name value represents either an Enterprise Extender LINE or a switched PU that has an active EE connection.

Limit the DISPLAY EEDIAG command scope to EE connections that are identified by an IP address (IPADDR):

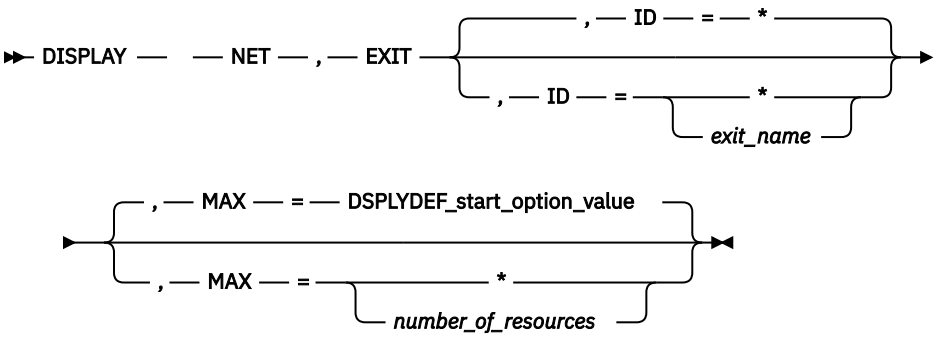


Limit the DISPLAY EEDIAG command scope to EE connections that are identified by a host name (HOSTNAME):



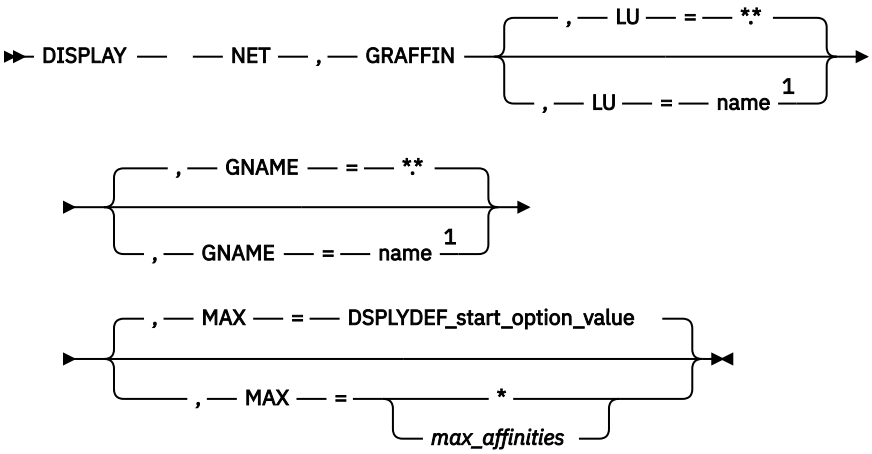
D EXIT command

Display the name, exit level, module name, and status of installation-wide exit routines:



D GRAFFIN command

Display affinity information for generic resources:

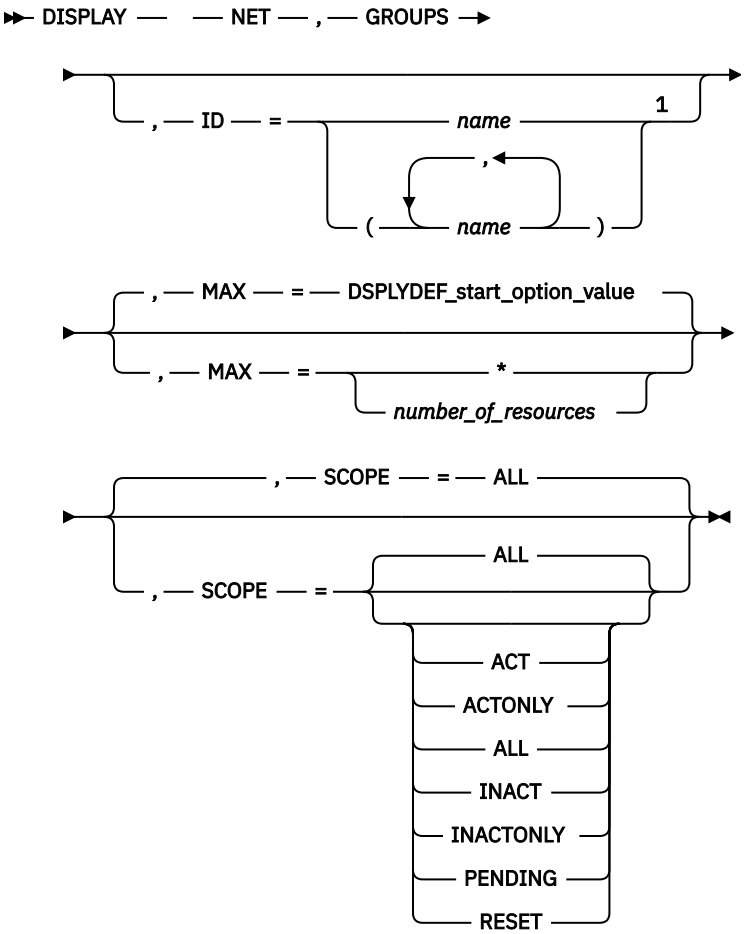


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D GROUPS command

Provide information about line groups:



Notes:

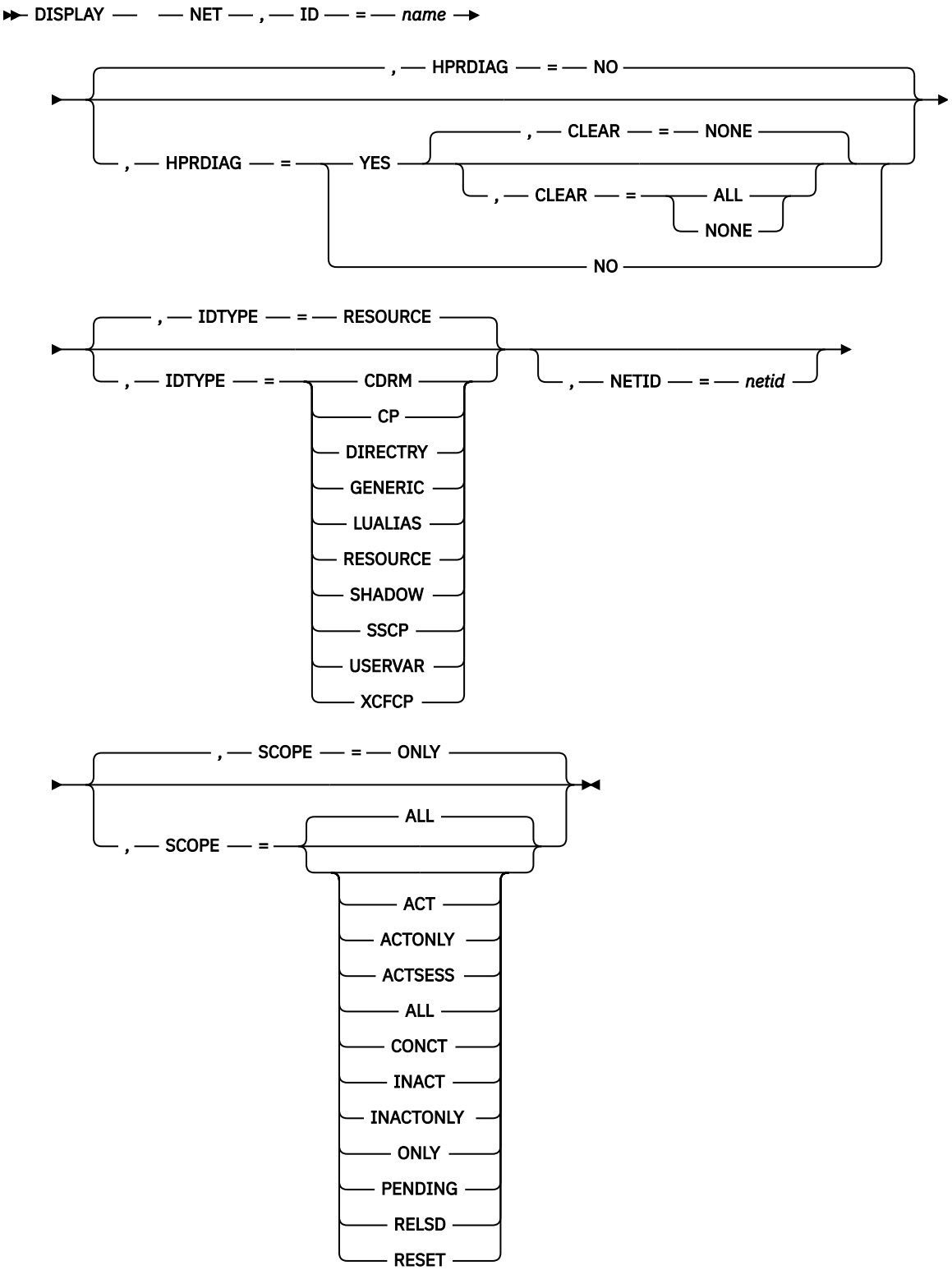
[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D GRPREFS command

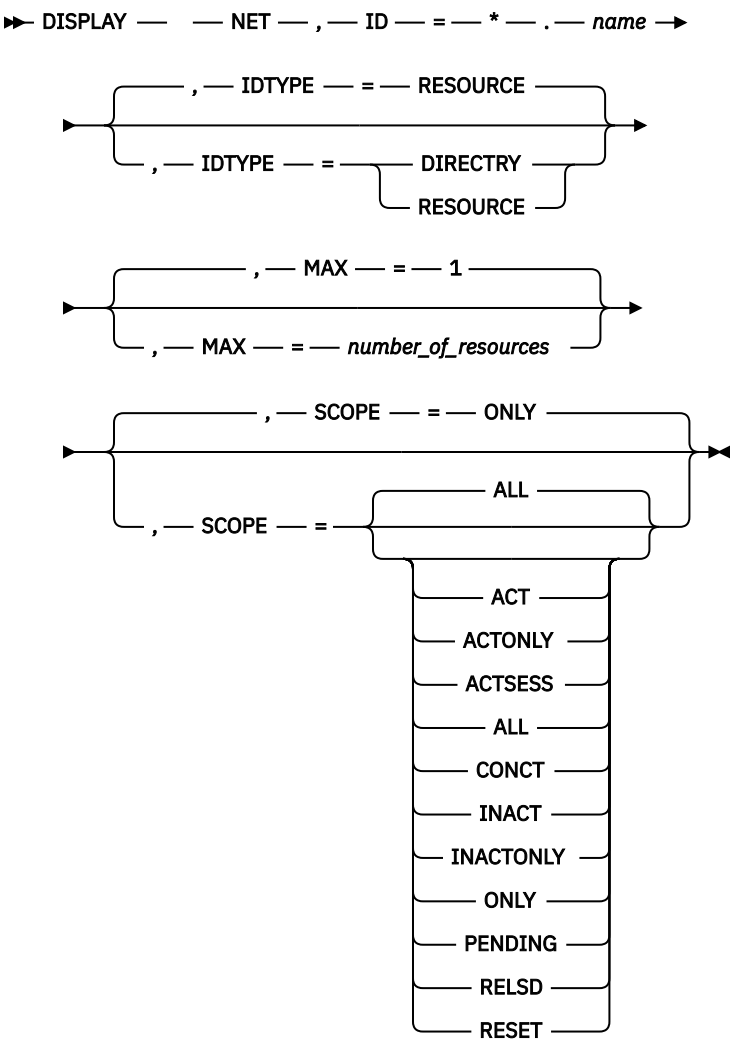
Display the generic resources preferences table:

D ID command

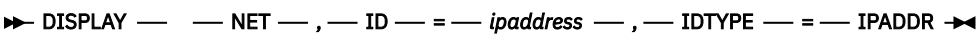
Display a resource:



Display a resource name in any network:

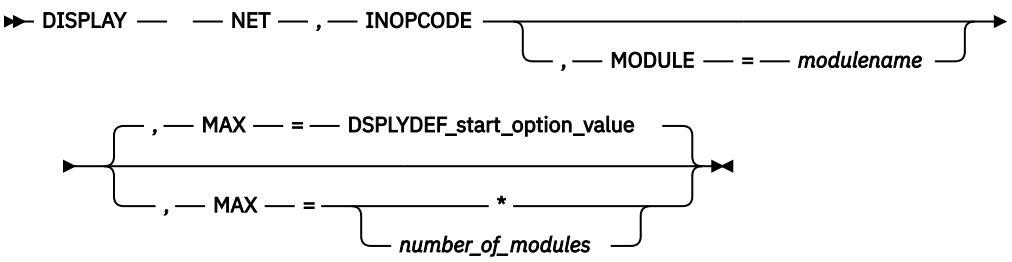


Display a resource name using an IP address:



D INOPCODE command

Determine the dump attributes for all VTAM INOPCODE commands or all VTAM INOPCODE commands in a given VTAM module:

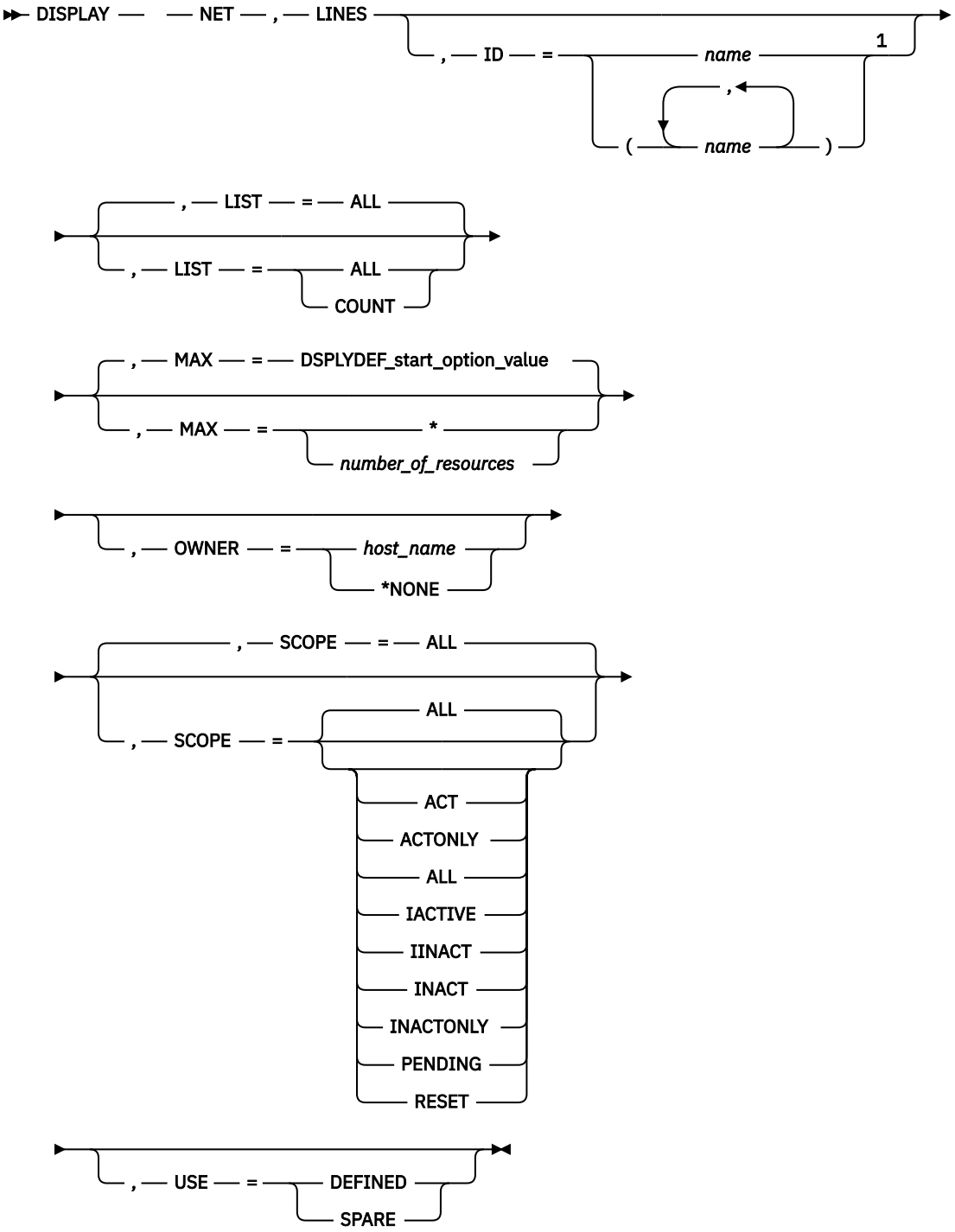


D INOPDUMP command

Determine the global status for INOPDUMP:

D LINES command

Display the status of lines and channel links in the domain:

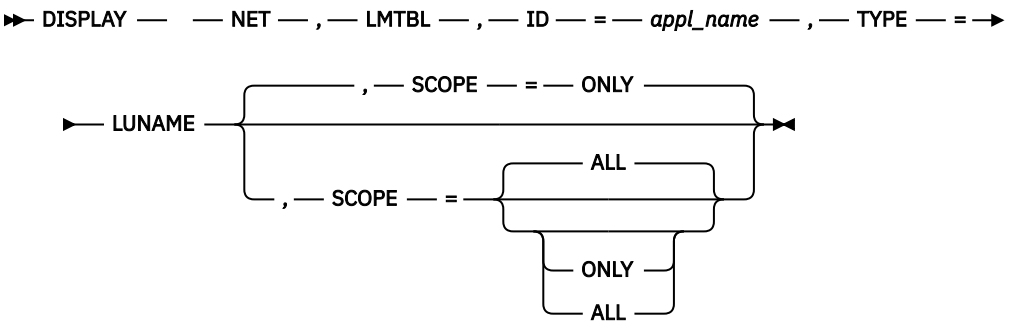


Notes:

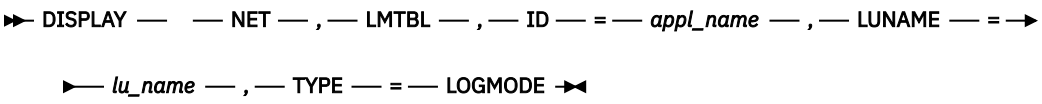
[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D LMTBL command

Display partner LUs in LU-mode table:

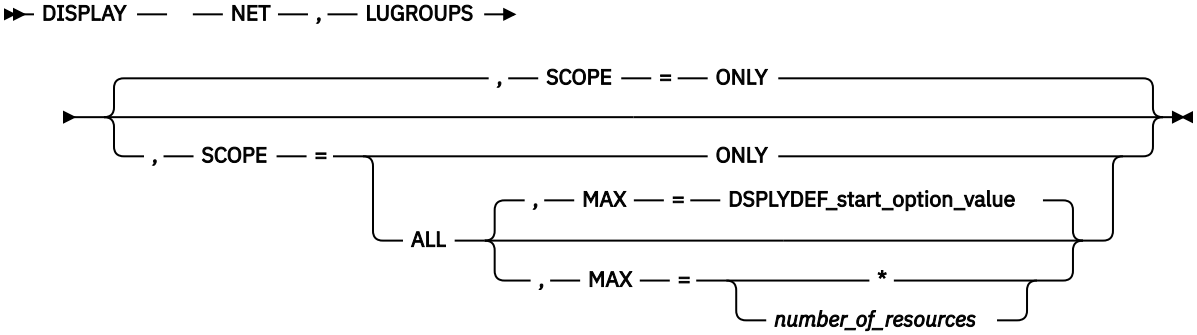


Display logon mode names in LU-mode table:

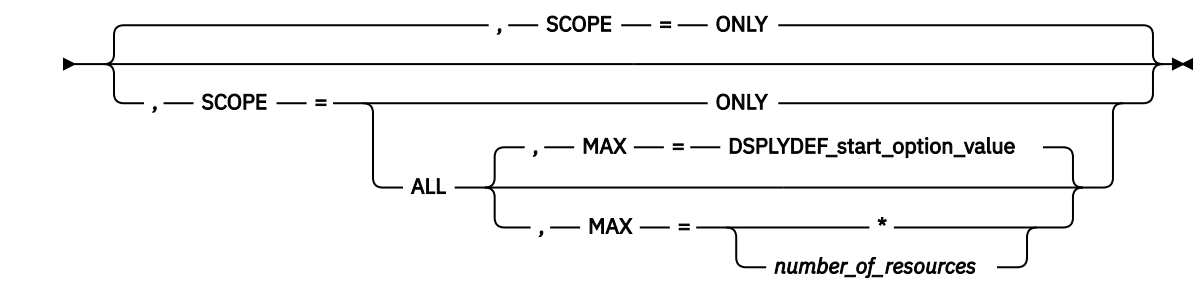


D LUGROUPS command

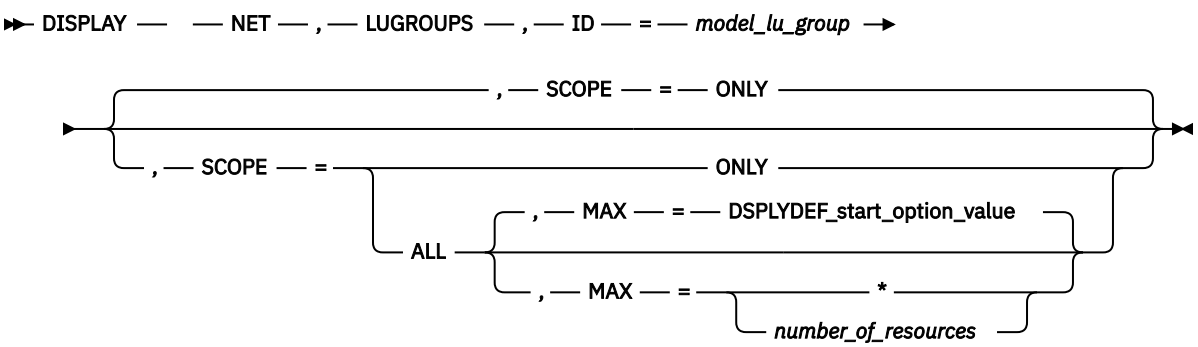
Display all LUGROUP major nodes:



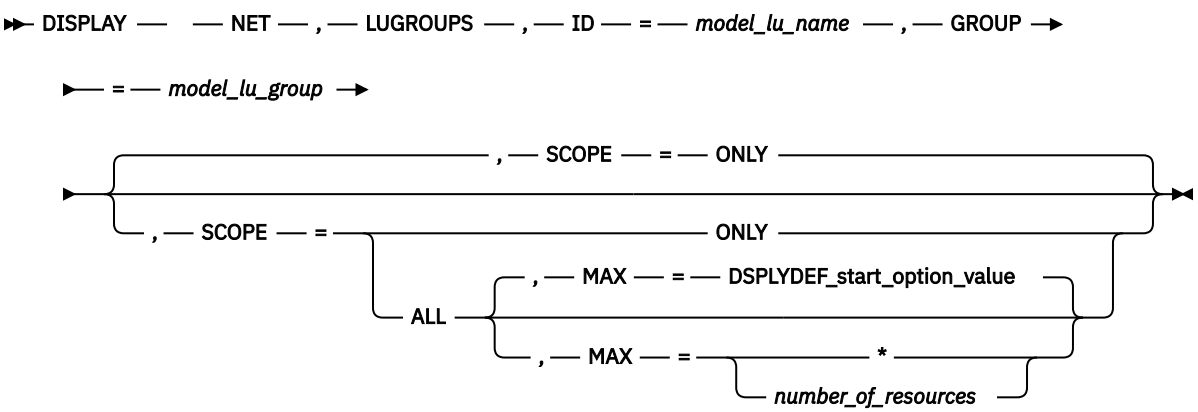
Display a specific LUGROUP major node:



Display a model LU group:

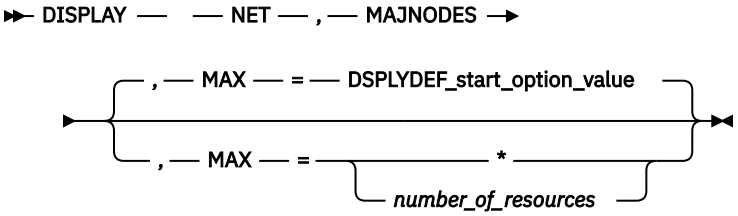


Display a model LU:



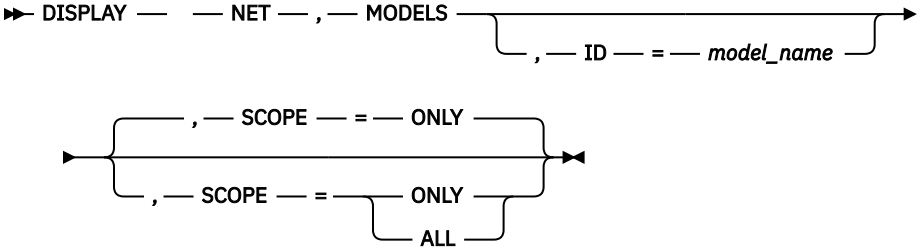
D MAJNODES command

Display the status of all active major nodes in the domain:



D MODELS command

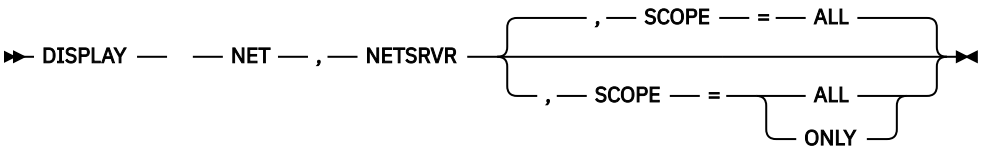
Display model major nodes, model PUs, and model LU:



Display the best, active model application definition for a given application name:

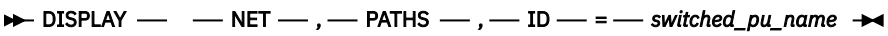
D NETSRVR command

Display information about network node servers:



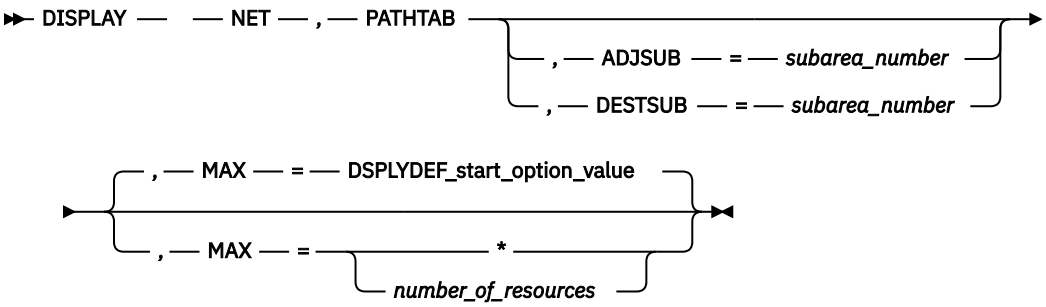
D PATHS command

Display dial-out path information about a switched physical unit:



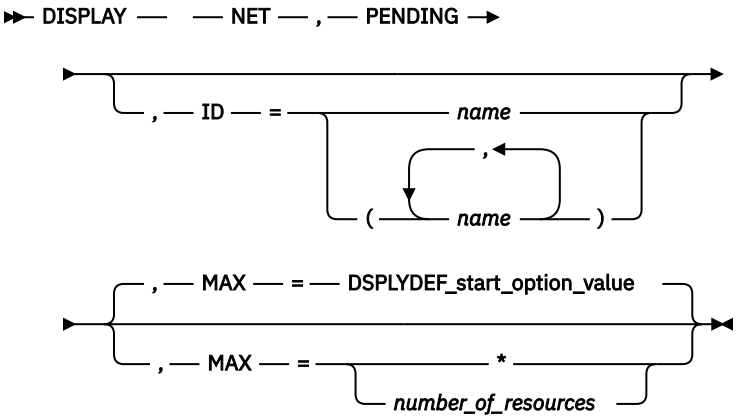
D PATHTAB command

Display the status of explicit routes and their associated virtual routes for this host:



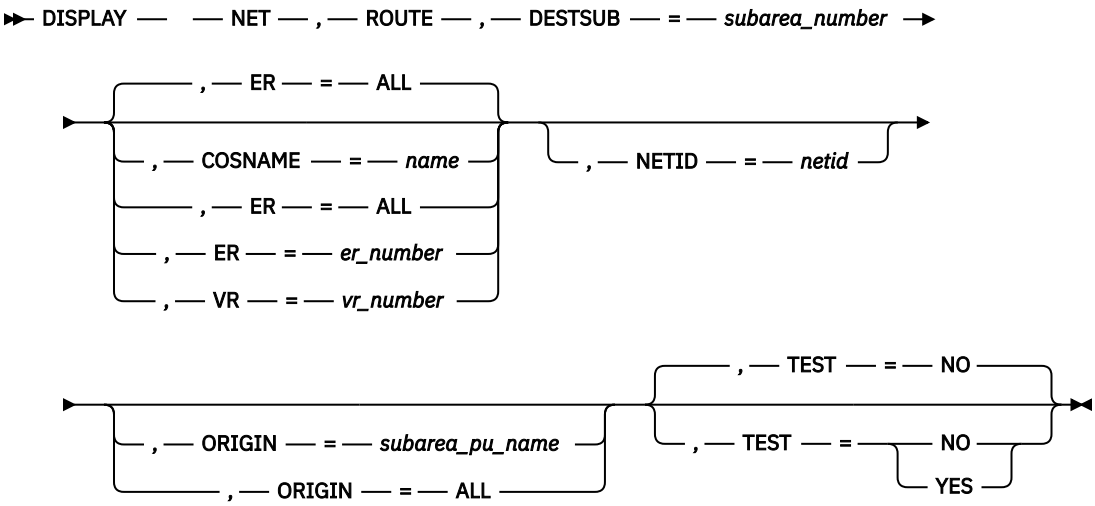
D PENDING command

Display information about resources in the domain that are in a "pending" state:

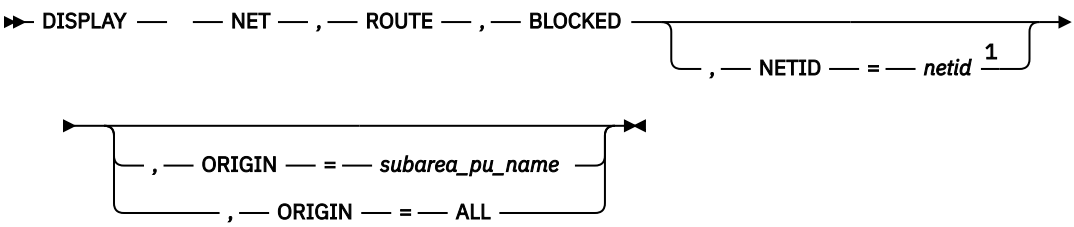


D ROUTE command

Displaying the status of routes:



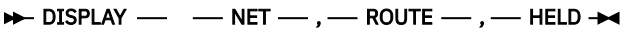
Displaying blocked virtual routes:



Notes:

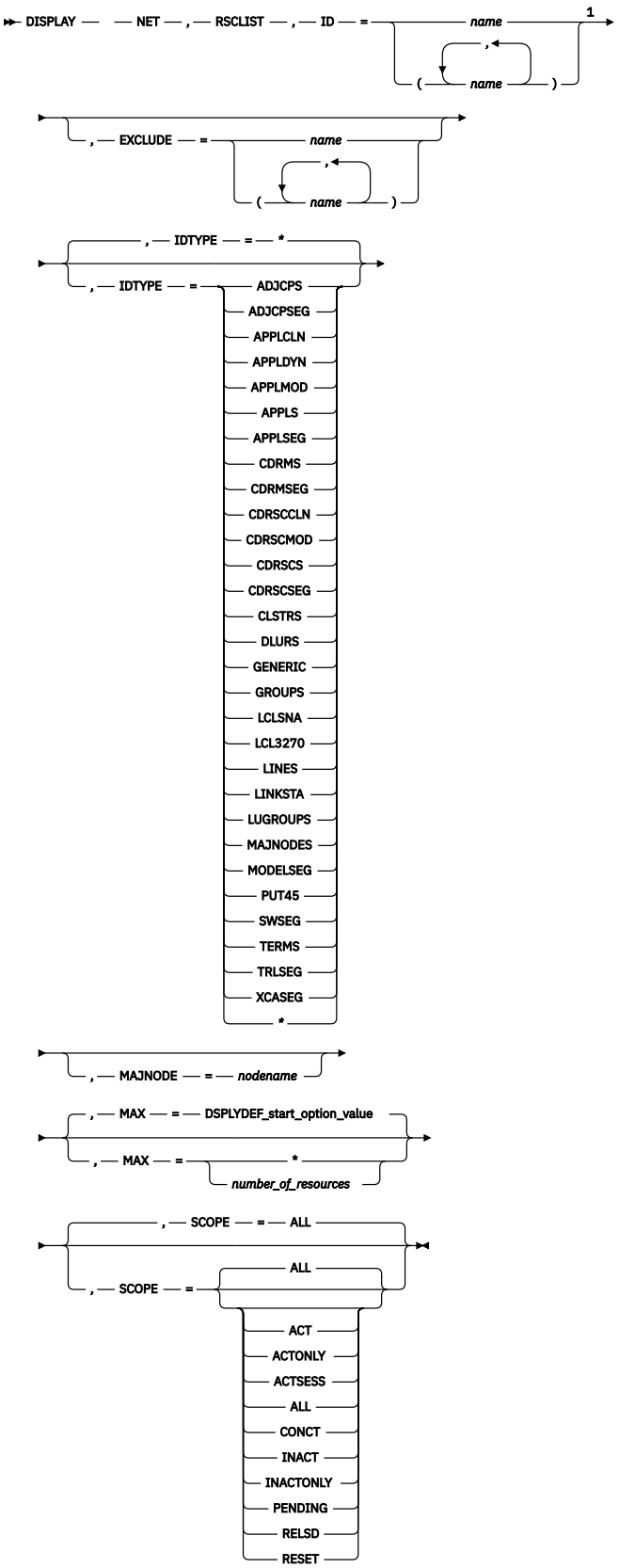
[1] When the BLOCKED operand is specified, the NETID of the host where the command was entered is assumed, and specification of another NETID is not permitted.

Displaying held virtual routes:



D RSCLIST command

Display information about resources whose names match a particular pattern:

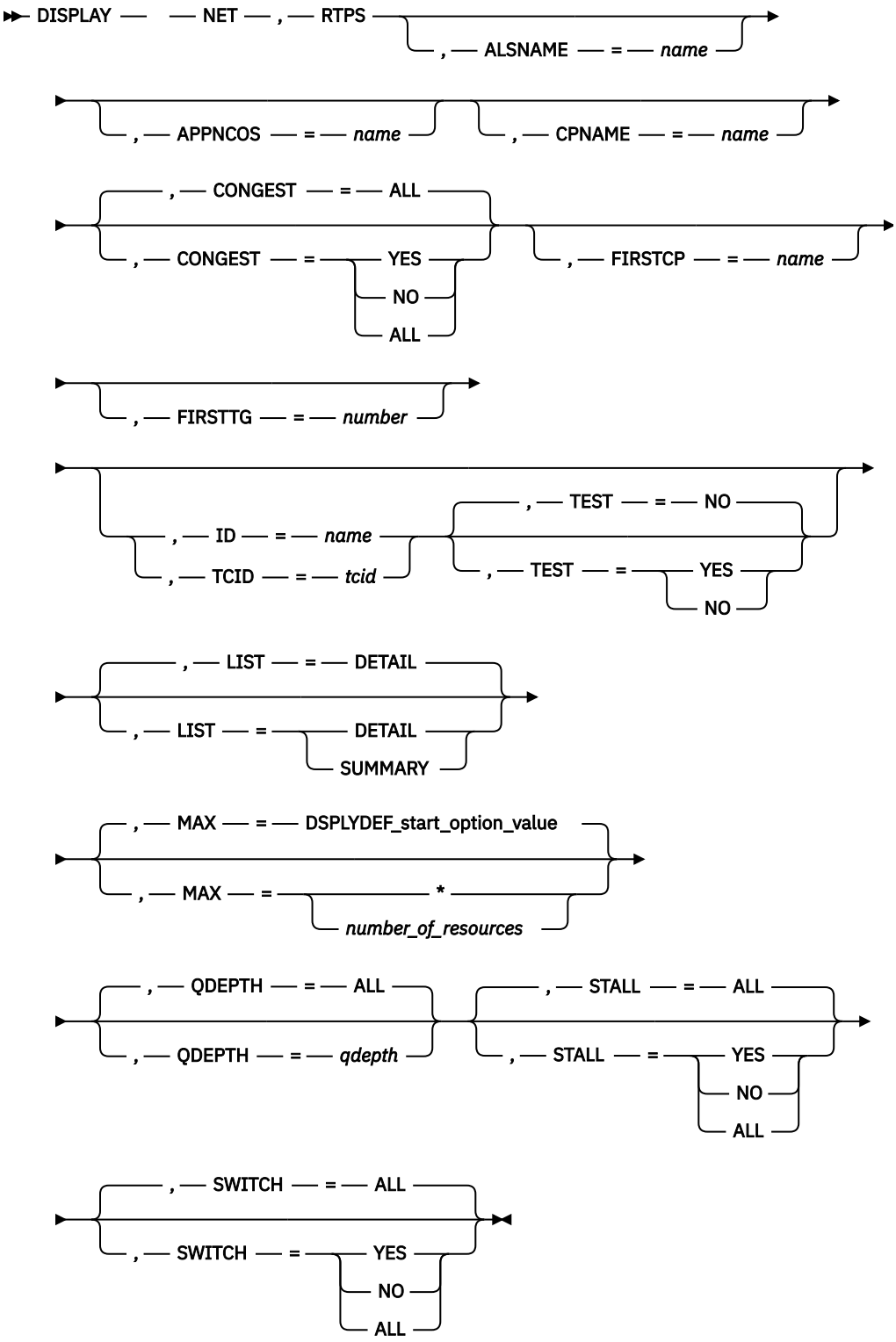


Notes:

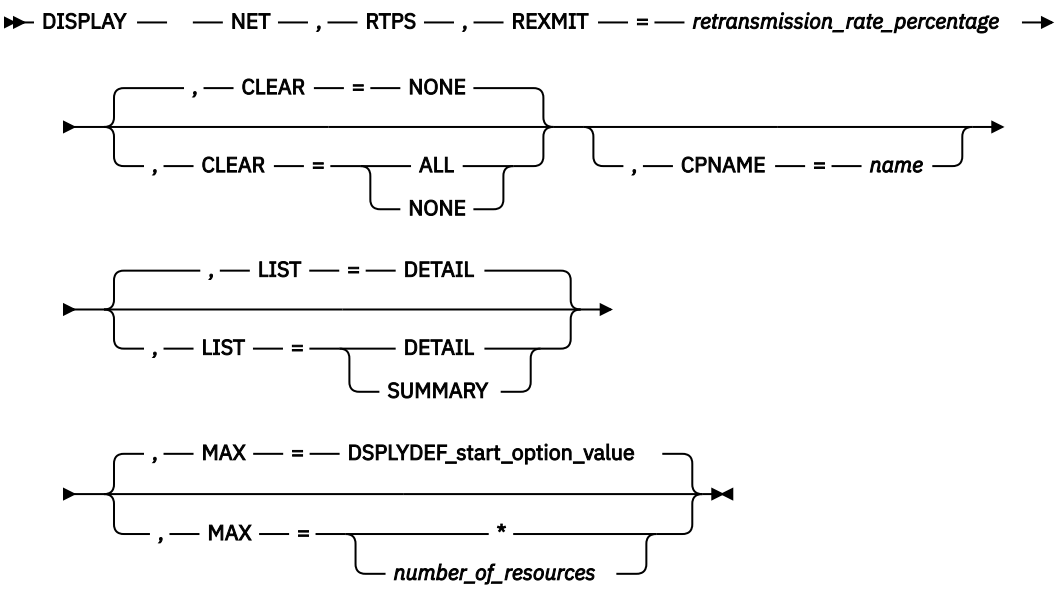
[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D RTPS command

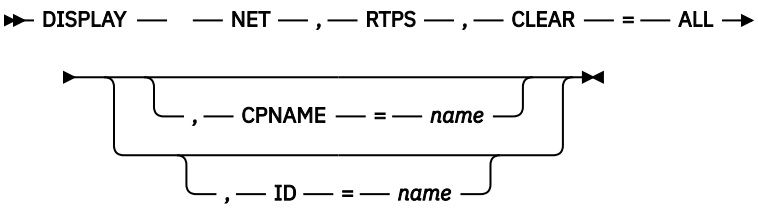
Display information concerning HPR pipes:



Display RTP pipes that meet or exceed a specified retransmission threshold:



Clear the RTP pipes diagnostic counters:



D SAMAP command

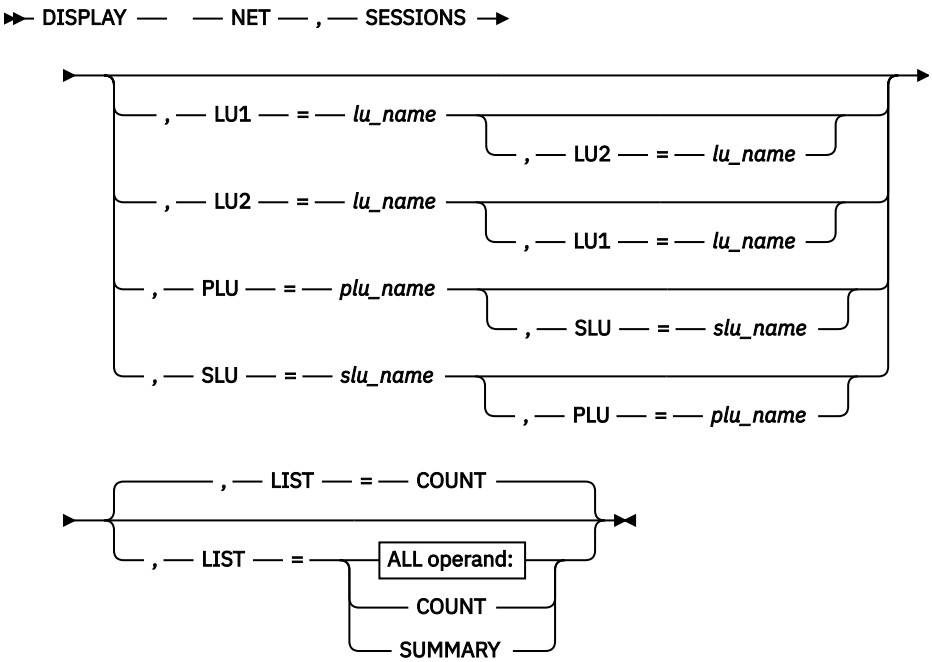
Display the subarea mapping table from an ICN host:

D SATOAPPN command

Display the subarea-to-APPN class-of-service mapping table:

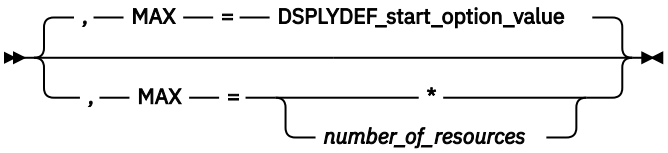
D SESSIONS command

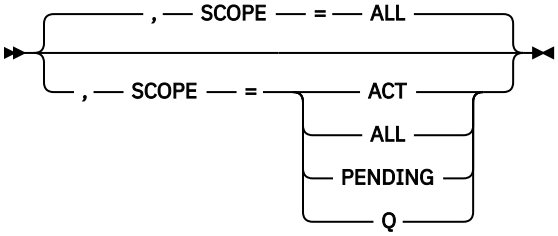
Display all sessions:



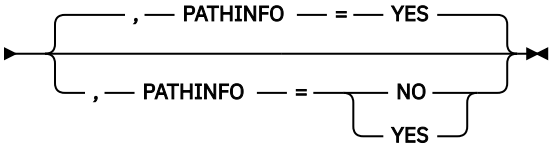
ALL operand:

MAX operand:





Display a specific session:

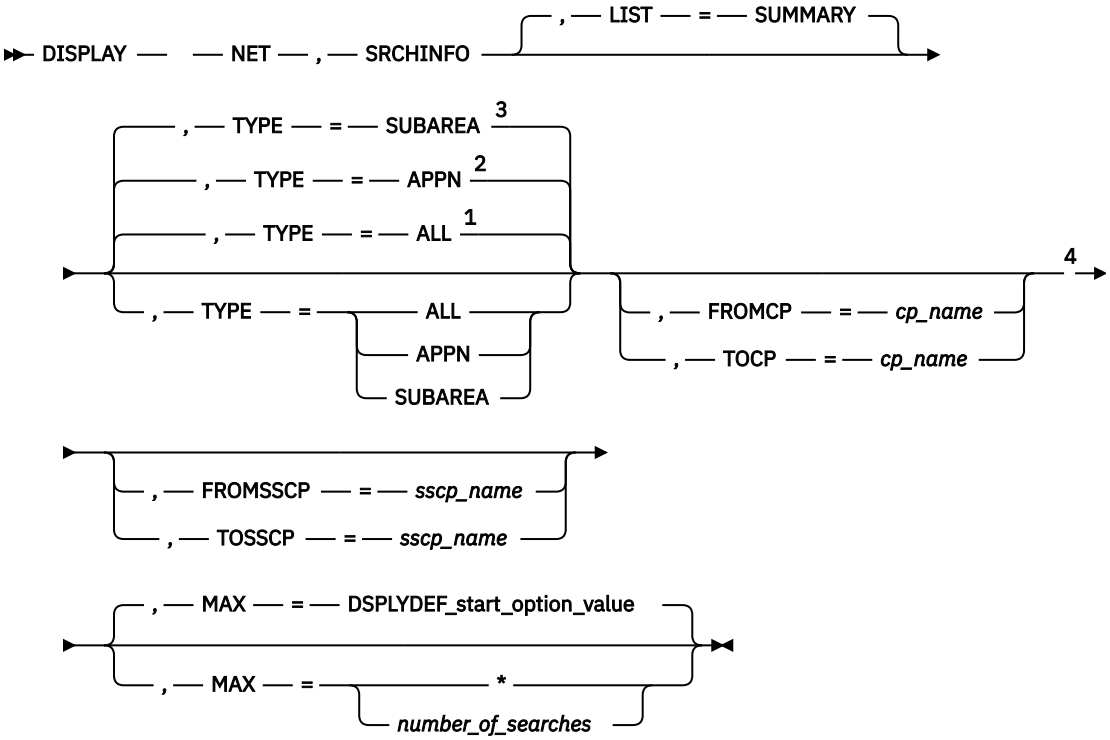


D SNSFILTR command

Display the current active SAW sense filter:

D SRCHINFO command

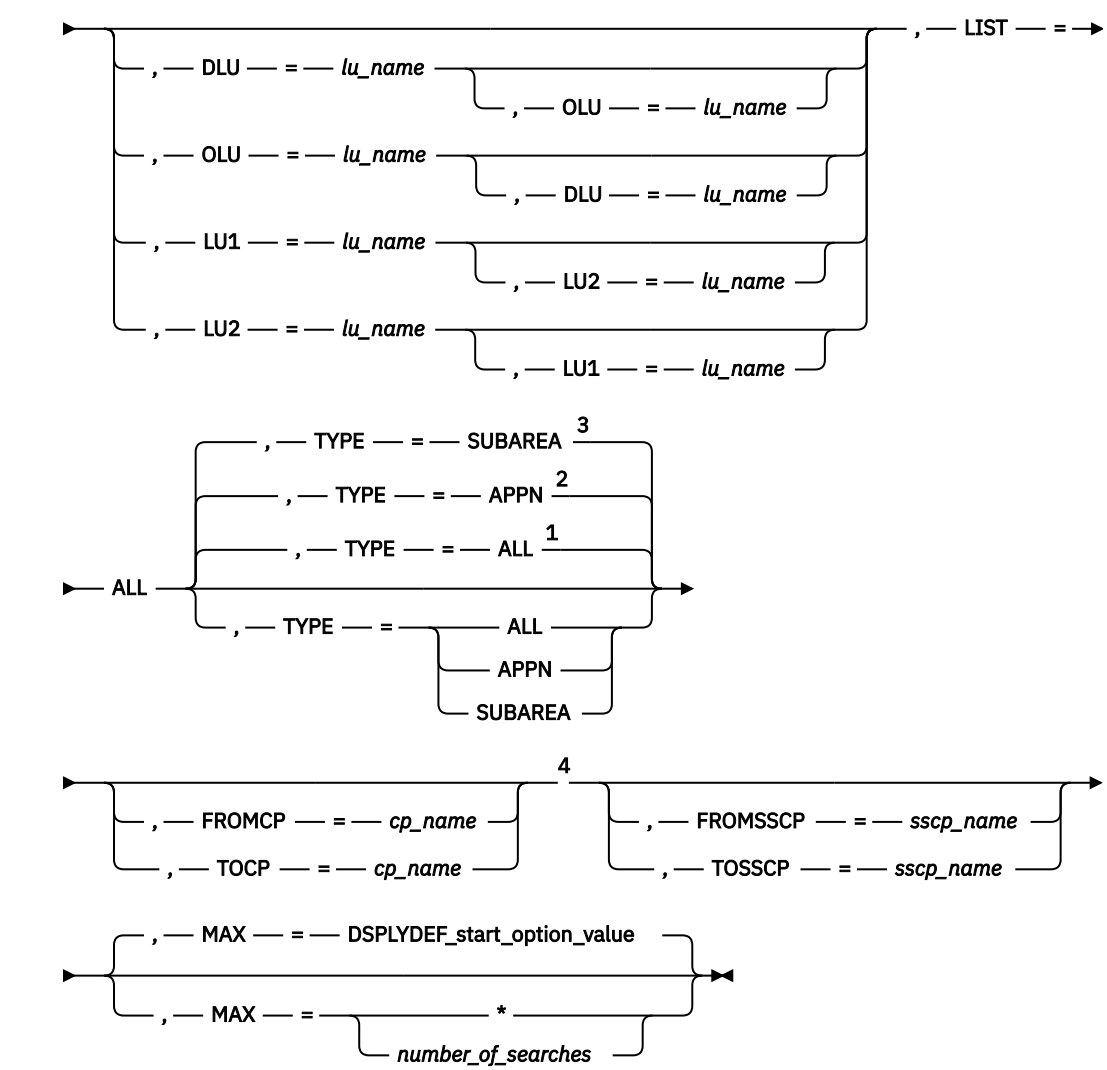
Display summary information about outstanding subarea and APPN searches:



Notes:

[1] TYPE=ALL is the default when the HOSTSA and NODETYPE start options are specified.
[2] TYPE=APPN is the default when the NODETYPE start option is specified without the HOSTSA start option.
[3] TYPE=SUBAREA is the default when the HOSTSA start option is specified without the NODETYPE start option.
[4] These operands are valid with TYPE=APPN or TYPE=ALL.

Display detailed information about outstanding subarea and APPN searches:



Notes:

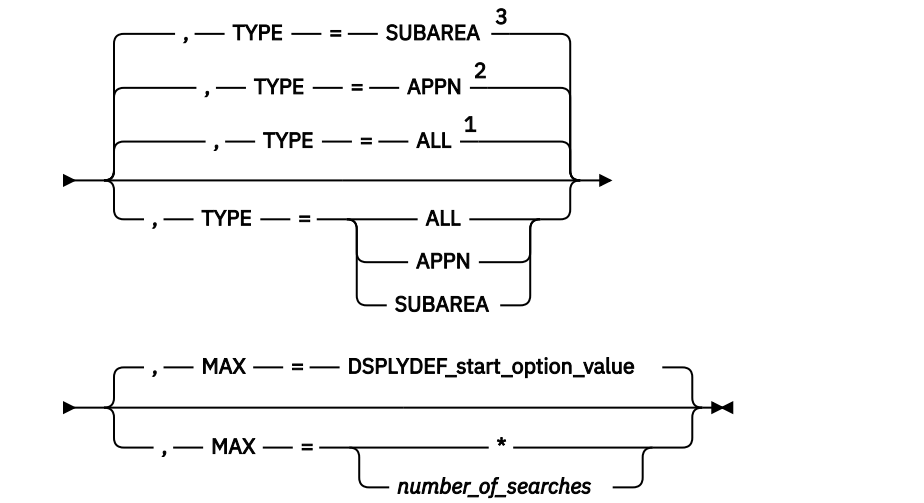
[1] TYPE=ALL is the default when the HOSTSA and NODETYPE start options are specified.

[2] TYPE=APPN is the default when the NODETYPE start option is specified without the HOSTSA start option.

[3] TYPE=SUBAREA is the default when the HOSTSA start option is specified without the NODETYPE start option.

[4] These operands are valid with TYPE=APPN or TYPE=ALL.

Display search information about a specific search request:



Notes:

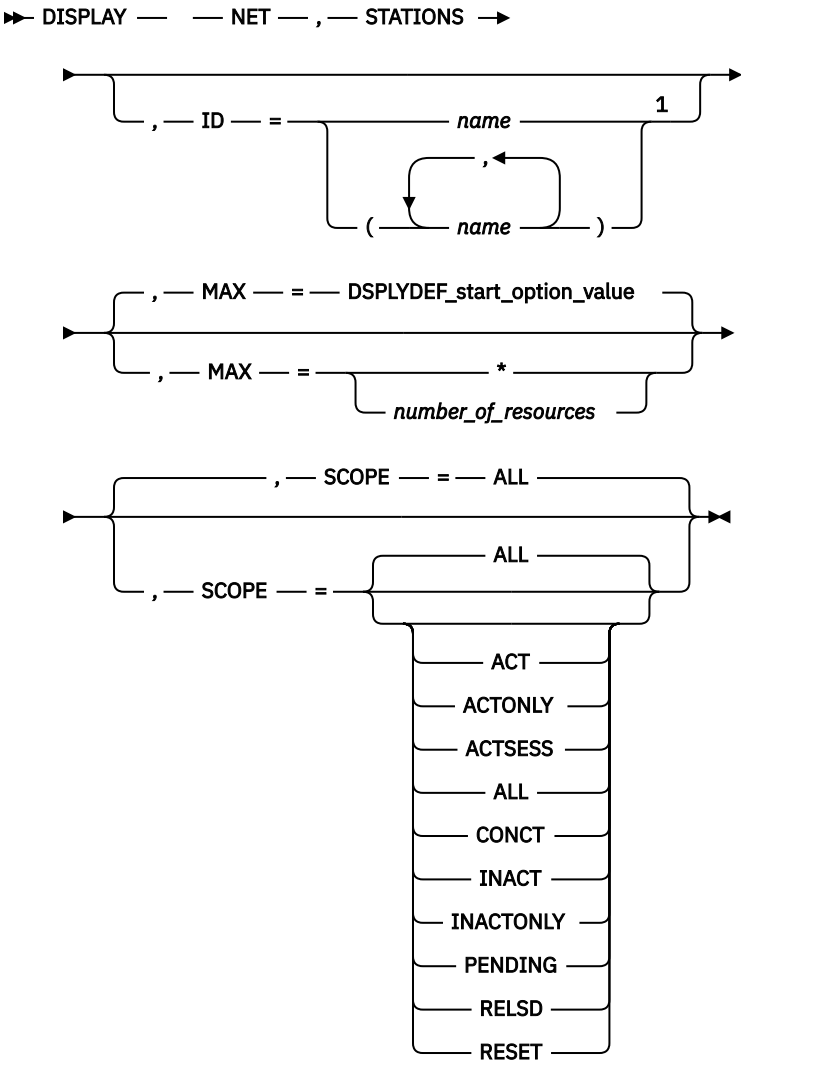
[1] TYPE=ALL is the default when the HOSTSA and NODETYPE start options are specified.

[2] TYPE=APPN is the default when the NODETYPE start option is specified without the HOSTSA start option.

[3] TYPE=SUBAREA is the default when the HOSTSA start option is specified without the NODETYPE start option.

D STATIONS command

Display the status of all cross-subarea link stations for active major nodes:

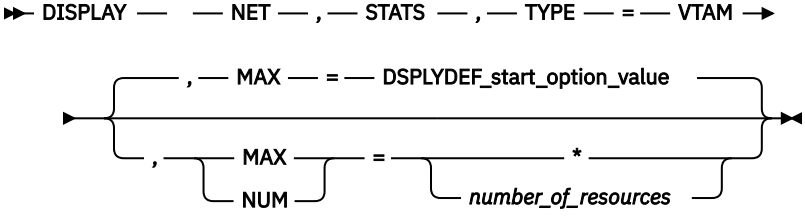


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

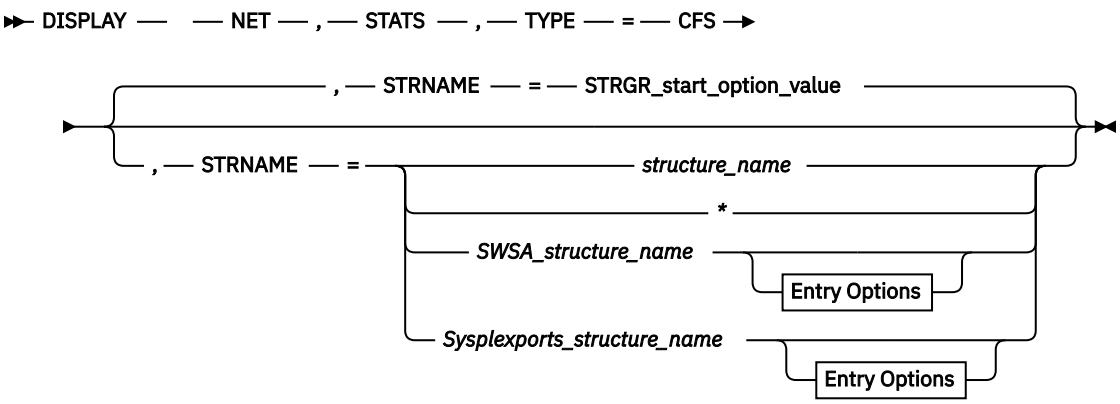
D STATS command

Display resource statistics:



Display data compression statistics:

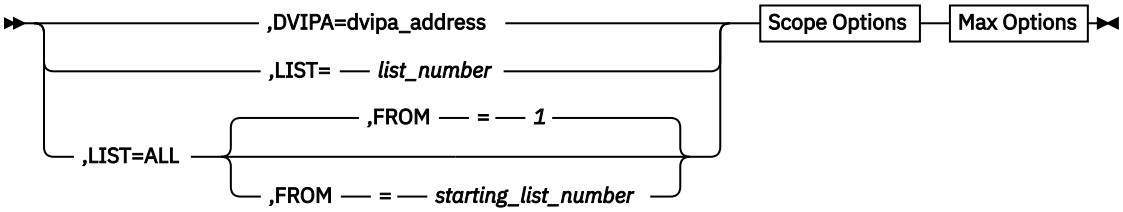
Display coupling facility structure statistics:



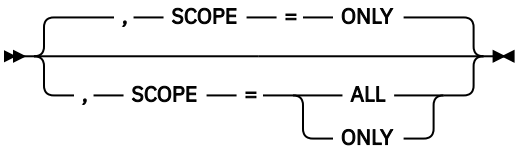
The vv value is the VTAM XCF group ID, as specified on the XCFGRPID start option. The tt value is the TCP XCF group ID, as specified on the XCFGRPID parameter on the GLOBAL CONFIG statement.

If a VTAM XCF group ID is specified, and no TCP XCF group ID is specified, the tt value is not present. If a TCP XCF group ID is specified, and no VTAM XCF group ID is specified, vv is 01. If both a VTAM XCF group ID and a TCP XCF group ID were not specified, vv and tt are not present.

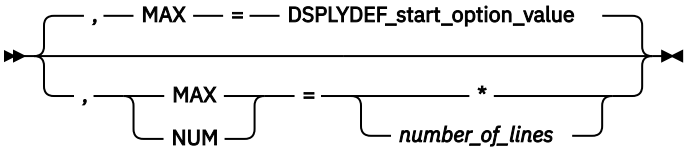
Entry Options



Scope Options

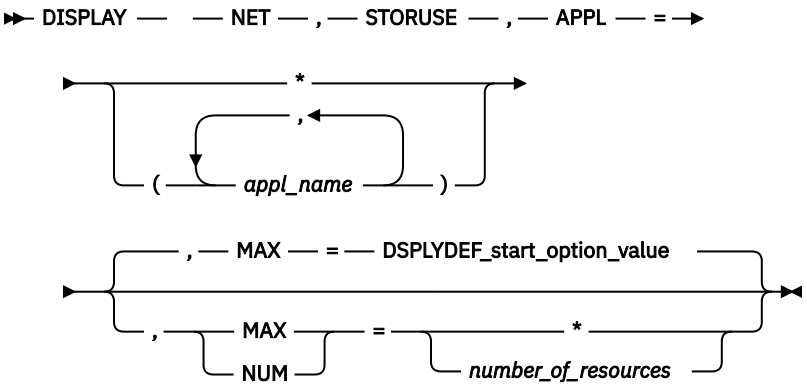


Max Options

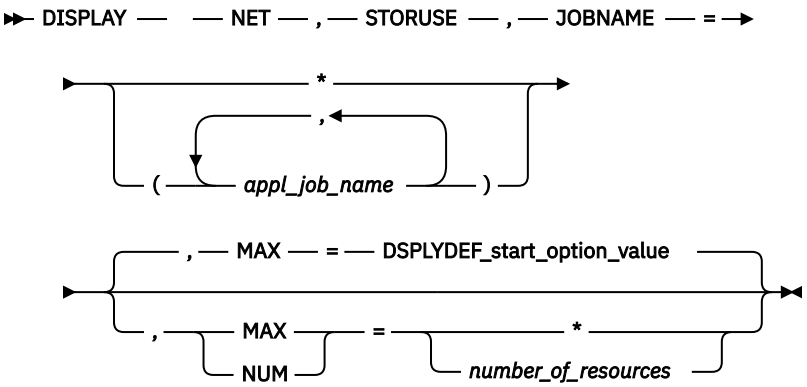


D STORUSE command

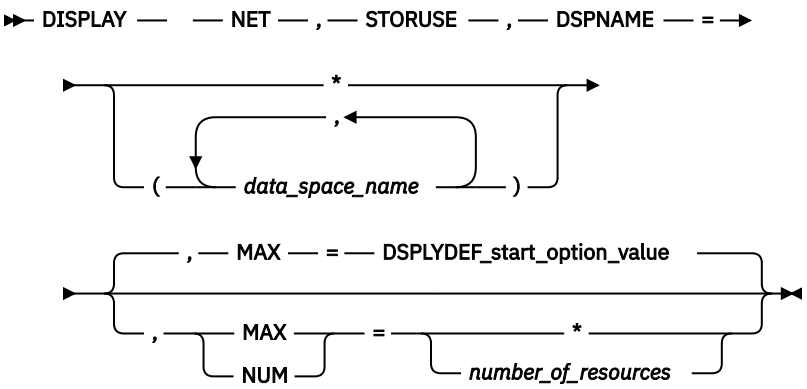
Display storage usage for applications:



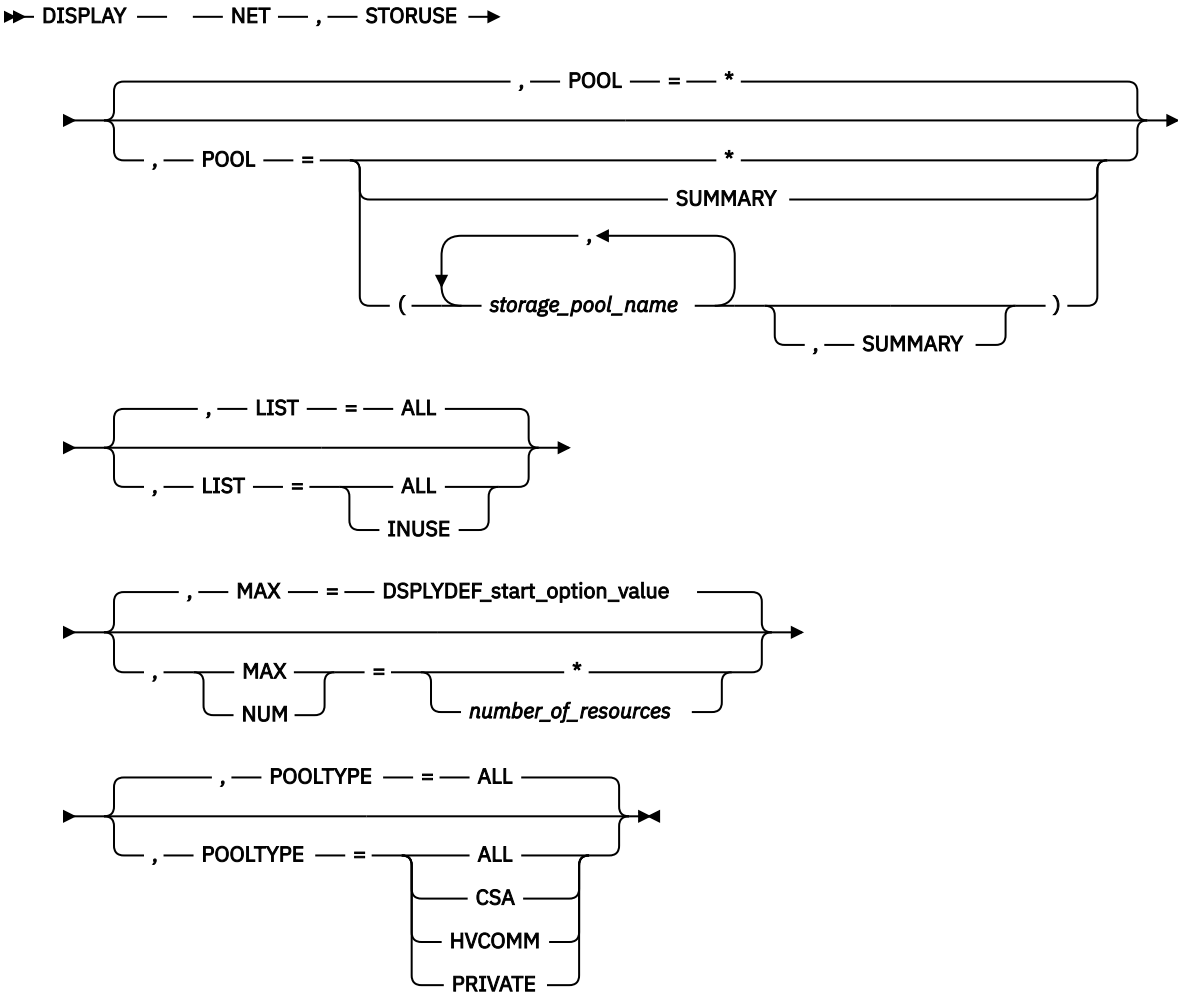
Display storage usage for application jobs:



Display storage usage for data spaces:

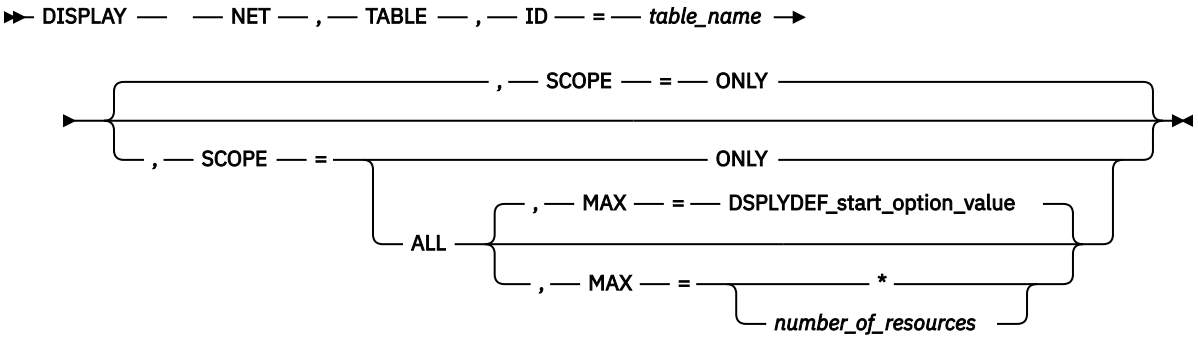


Display storage usage for storage pools:



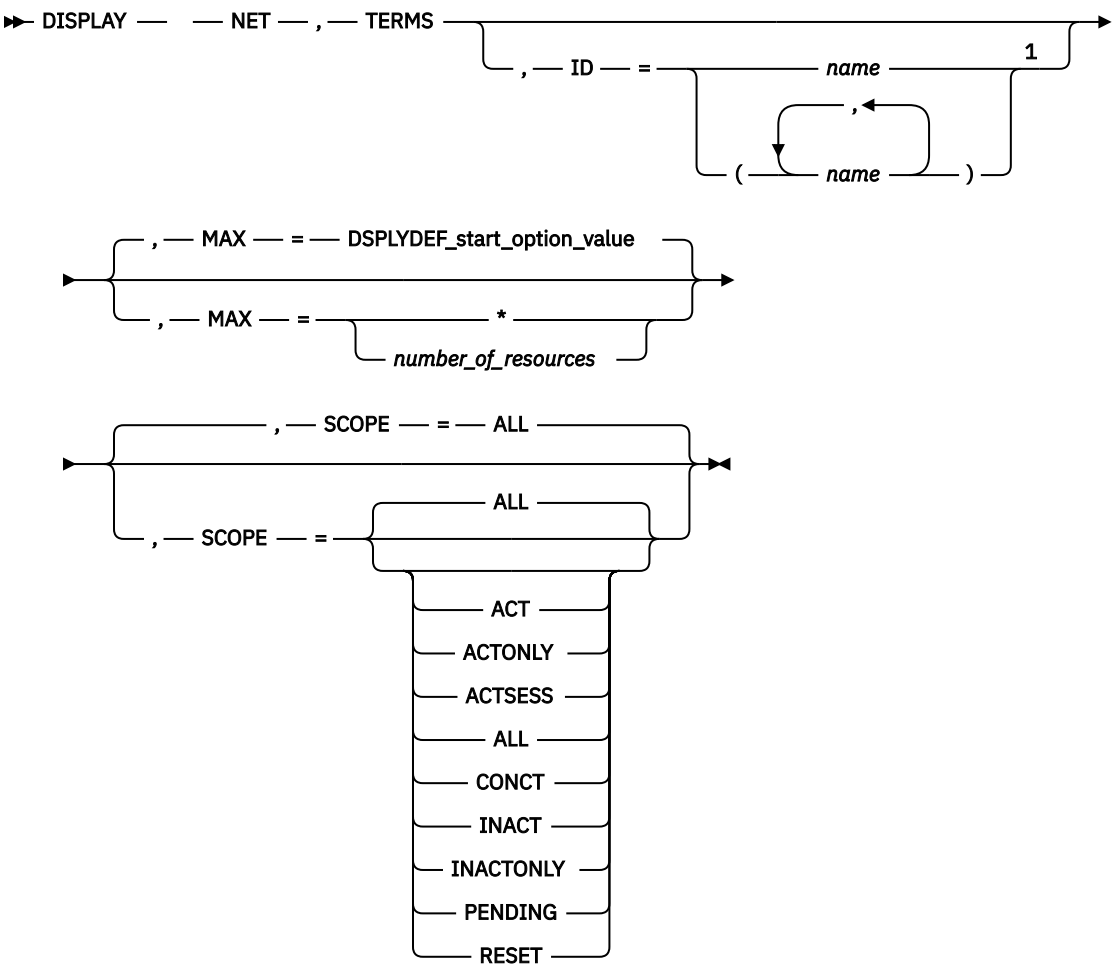
D TABLE command

Display the table type and the number of resources that are associated with the table (use count) and identify the users of a table:



D TERMS command

Display the status of device-type logical units (terminals) that are in active major nodes:

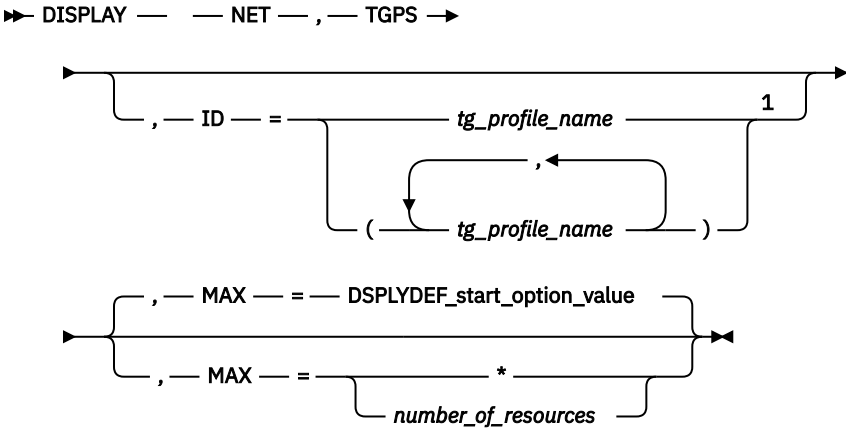


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

D TGPS command

Display the currently defined TG profiles by name, along with the transmission group characteristics that they represent:

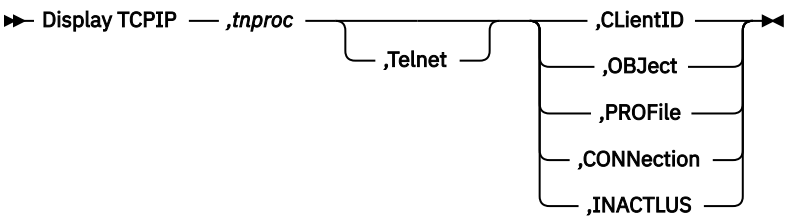


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

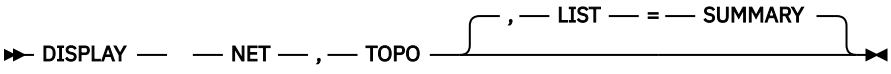
D TNSTAT command

Display the current status of global and TRLE tuning statistics and the CNSL and TIME values: (If system management facility (SMF) recording is enabled, this is also indicated.)

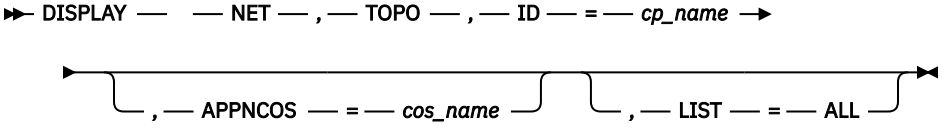


D TOPO command

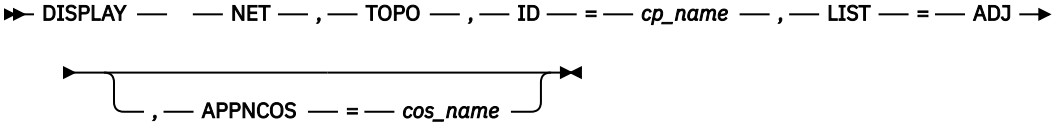
Display a summary of the topology database:



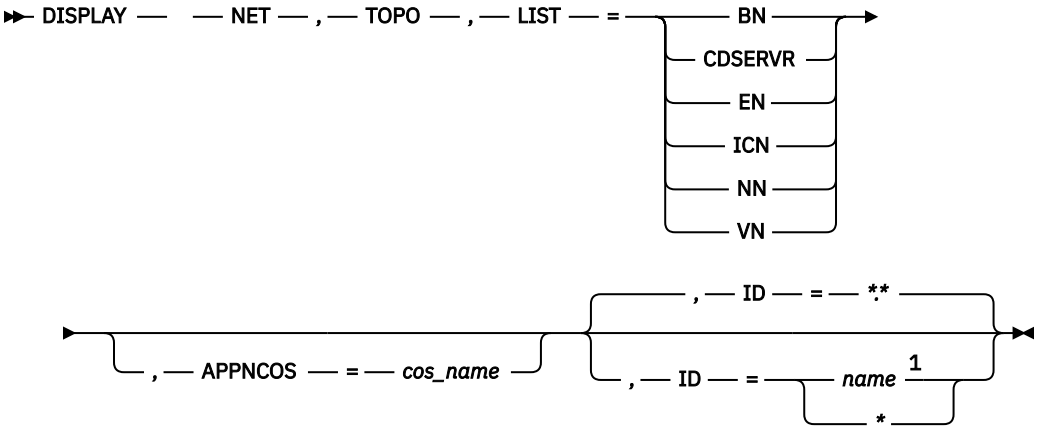
Display a specific node:



Display adjacent nodes:



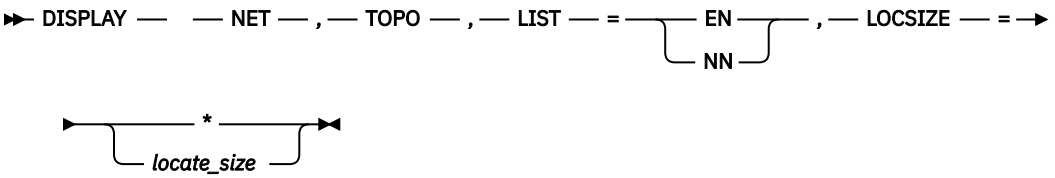
Display nodes of a specific type:



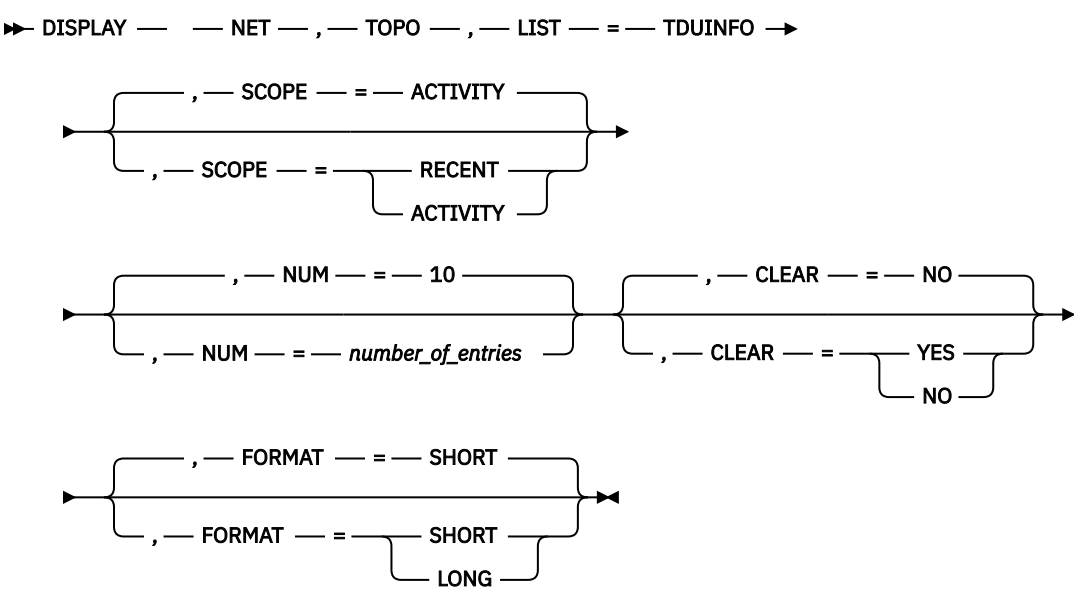
Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

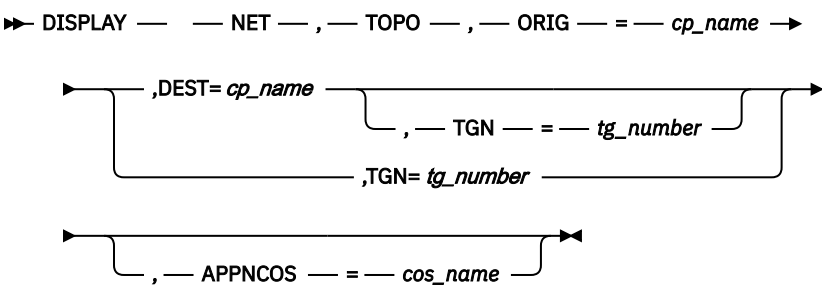
Display all nodes with a specific locsize:



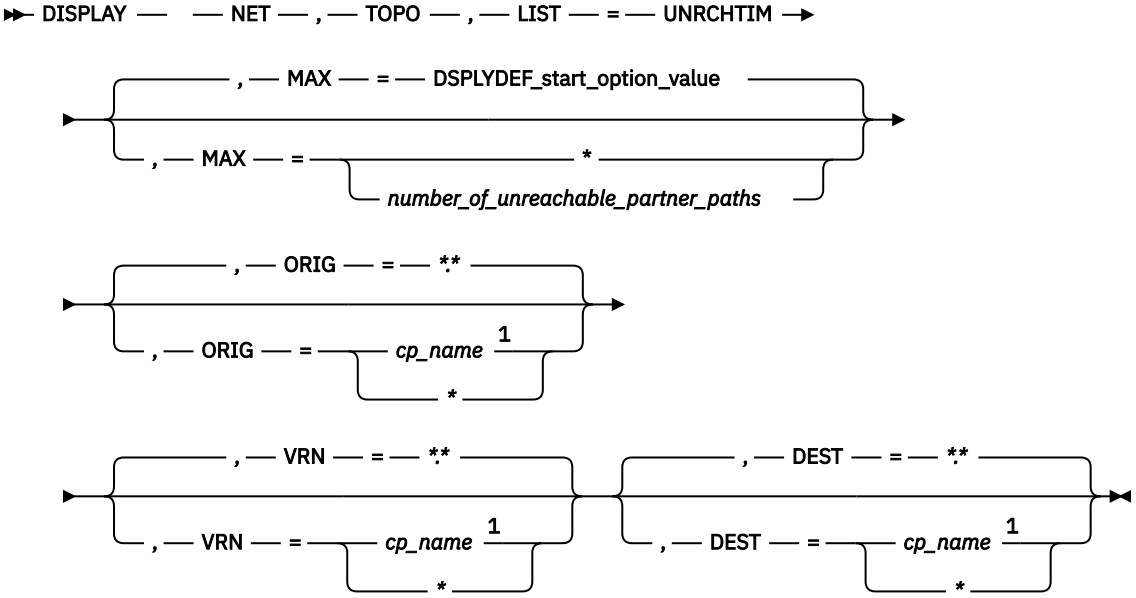
Display TDU statistics information:



Display a specific TG or TGs:



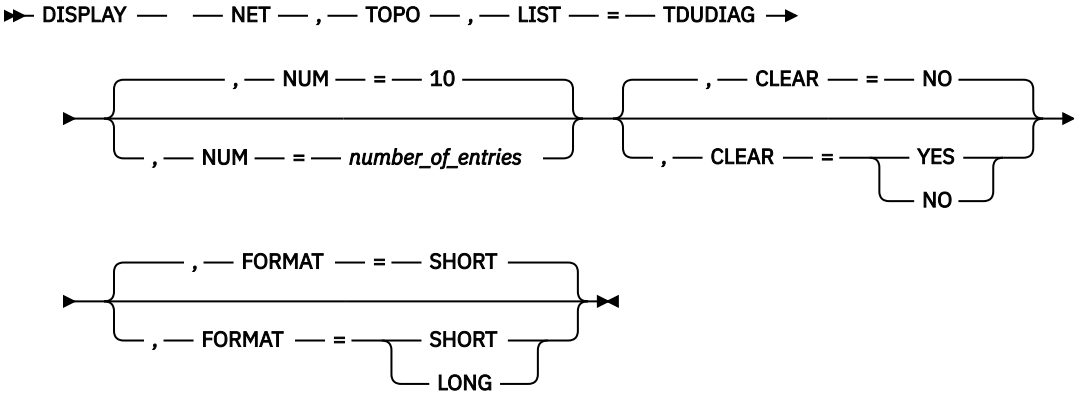
Display Enterprise Extender connection network unreachable partner information on a network node:



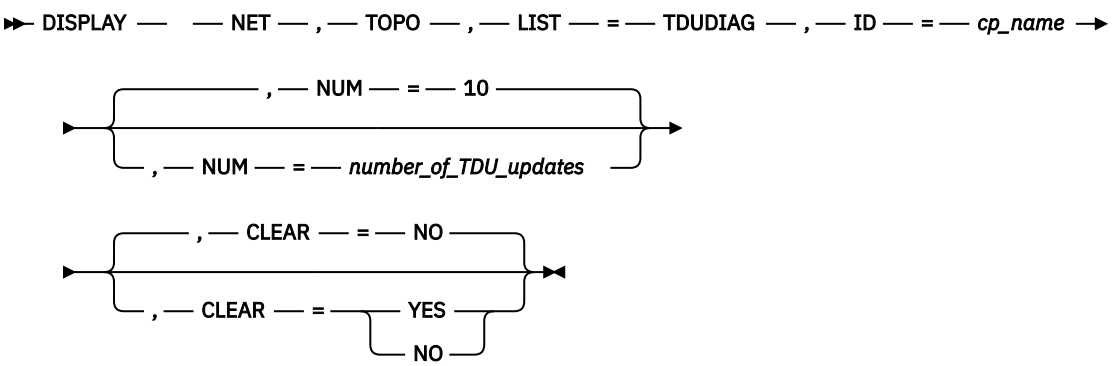
Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

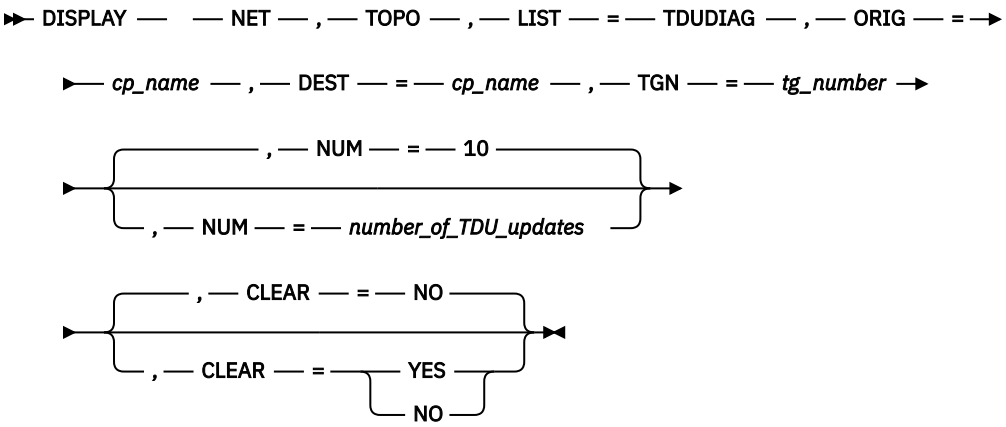
Display a summary of topology database update (TDU) diagnostic information:



Display TDU diagnostic information for a node:



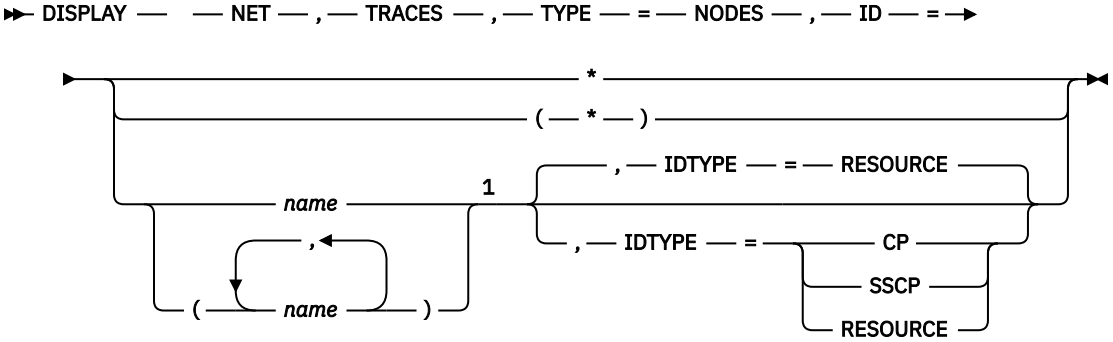
Display TDU diagnostic information for a TG:



Rule: The values LIST=UNRCHTIM and LIST=TDUDIAG are valid on the DISPLAY NET,TOPO command only when the command is issued on a network node.

D TRACES command

Display the status of BUF, GPT, IO, LINE, QDIOSYNC, SIT, STATE, and TG traces:

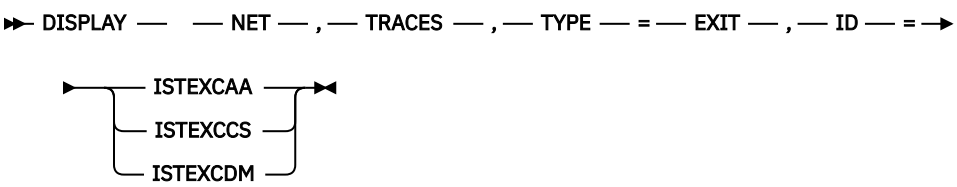


Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

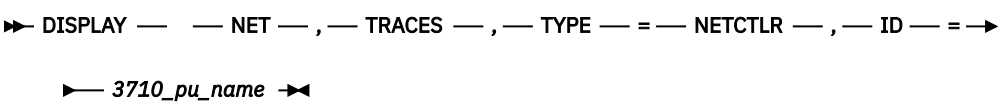
Display the status of communication network management traces:

Display the status of the user Exit buffer trace:



Display the status of a module trace:

Display the status of a network controller line trace:

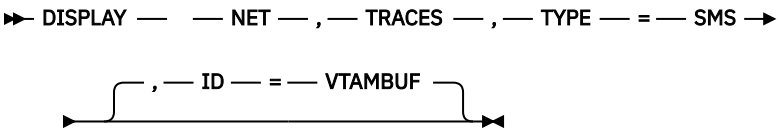


Display the status of the APPN route selection trace in a network node:

Notes:

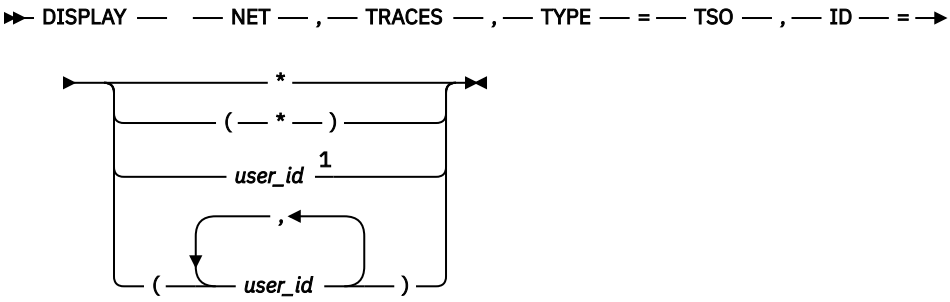
[1] TYPE=ROUTE is allowed only in a network node.

Display the status of an SMS (buffer use) trace:



Display the status of a resource state trace:

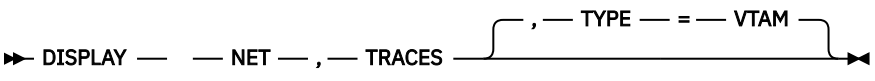
Display the status of a TSO user trace:



Notes:

[1] Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

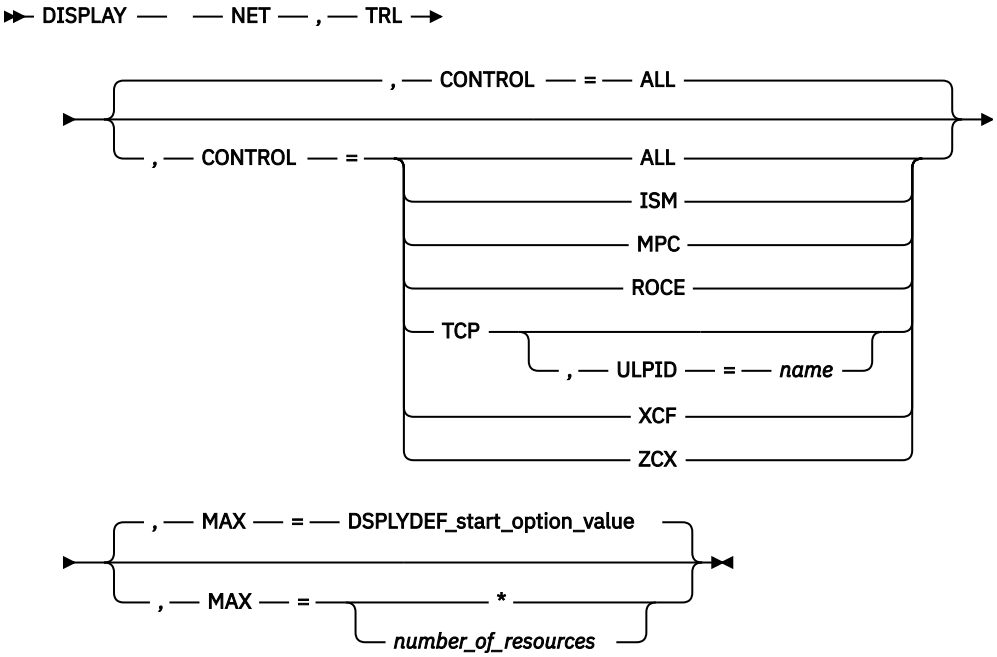
Display the status of the VTAM internal trace:



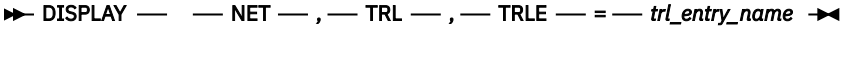
Display the status of all active traces:

D TRL command

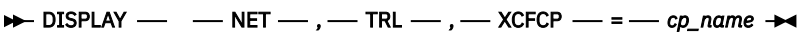
Display the entries in the TRL major nodes:



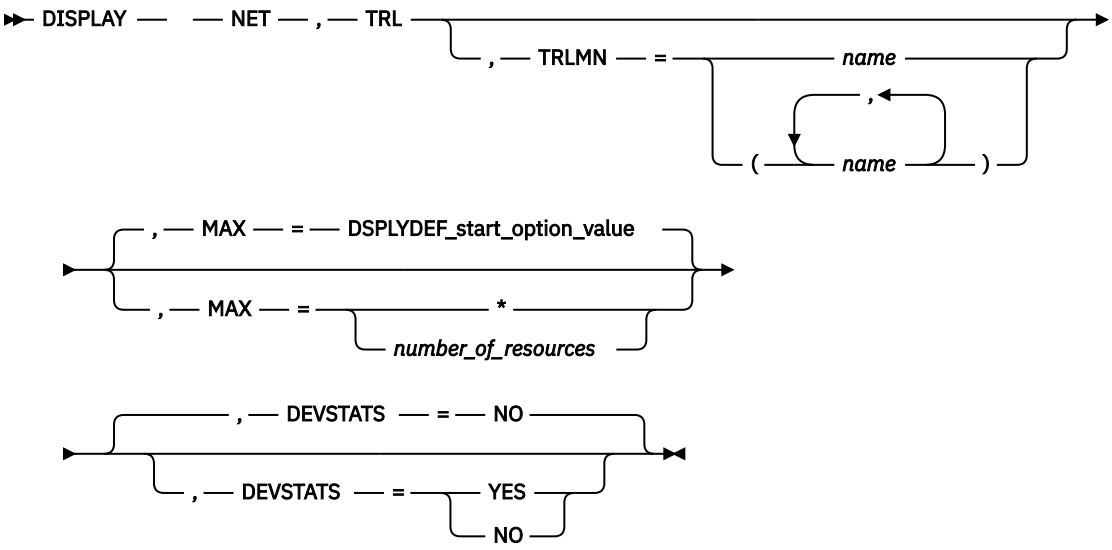
Display information about a specific user-defined TRLE:



Display information about a dynamic XCF TRLE:



Display the entries in one or more specific TRL major nodes:

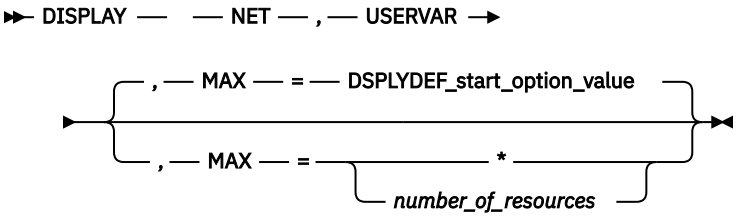


D TSOUSER command

Display the status of a TSO user ID:

D USERVAR command

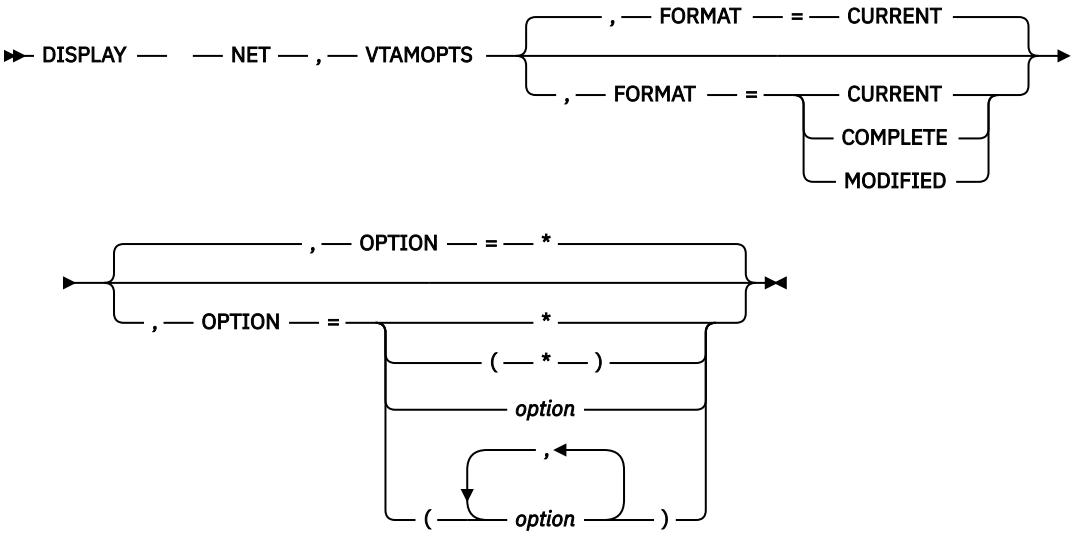
Display all USERVARs:



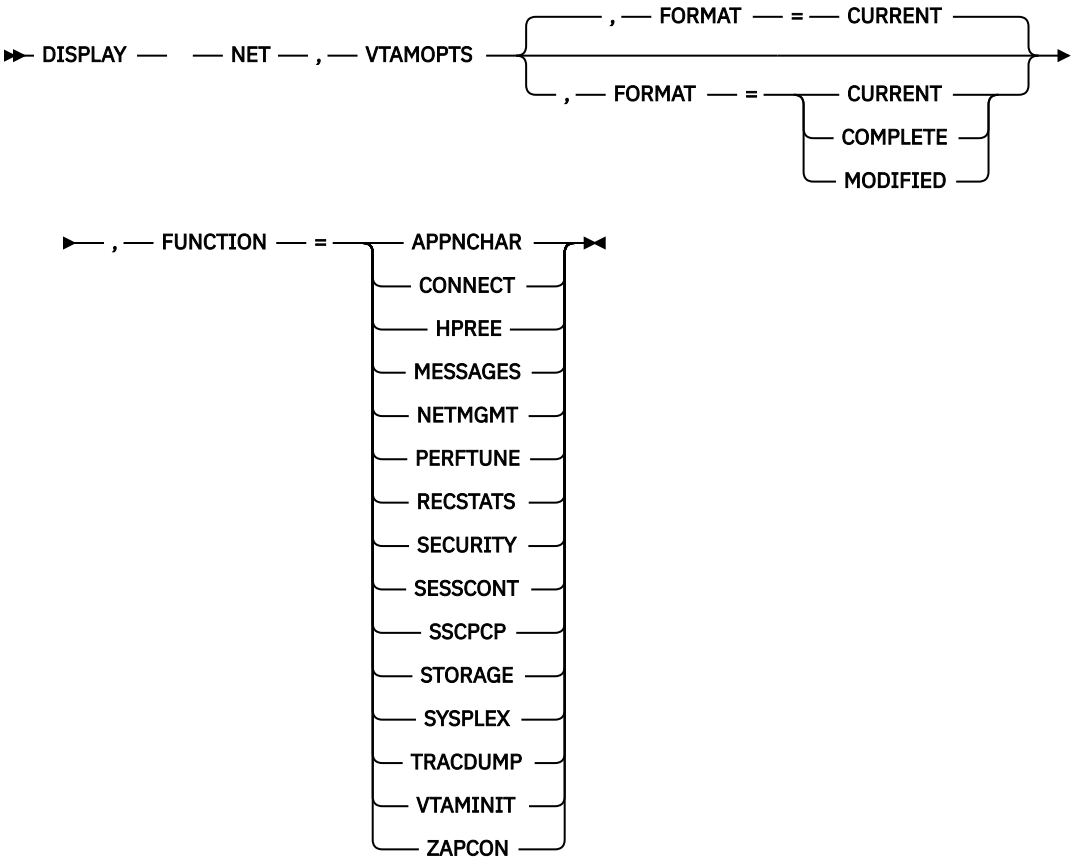
Display a specific USERVAR:

D VTAMOPTS command

Display selected start options:

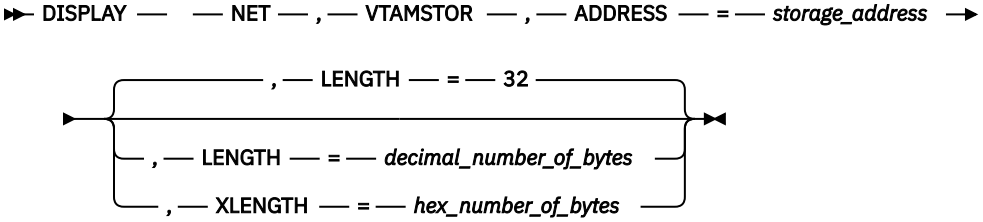


Display a group of related start options:

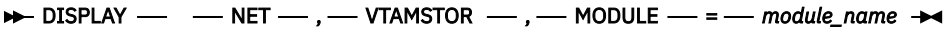


D VTAMSTOR command

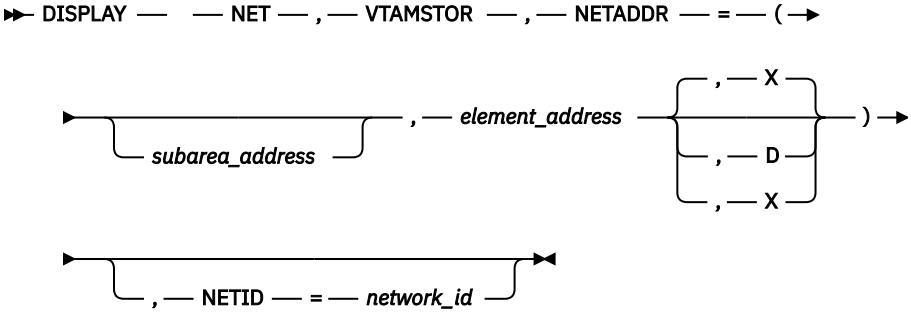
Display storage contents associated with a storage address:



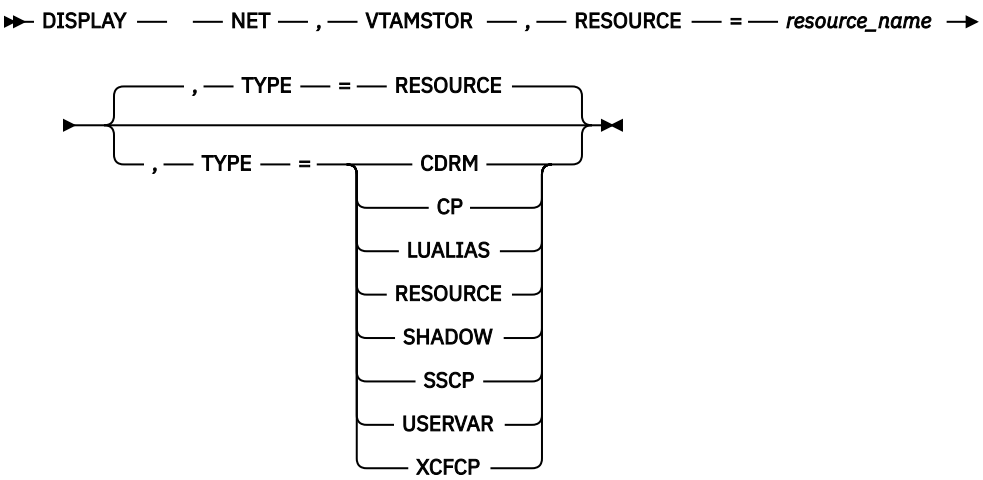
Display storage contents associated with a module:



Display storage contents associated with a network address:



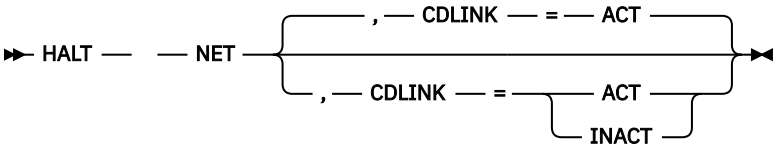
Display storage contents associated with a resource name:



Operator halt commands

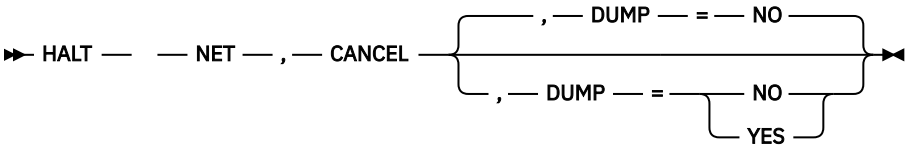
HALT (Z) command

Request a normal halt of VTAM without disrupting active LU-LU sessions:



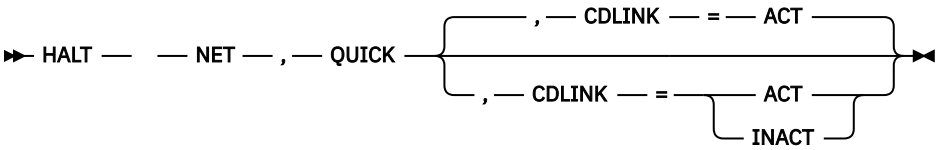
Z CANCEL command

Request a halt of VTAM via abend:



Z QUICK command

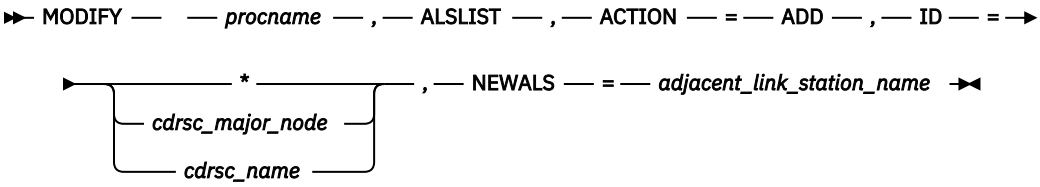
Request a halt of VTAM disrupting active LU-LU sessions:



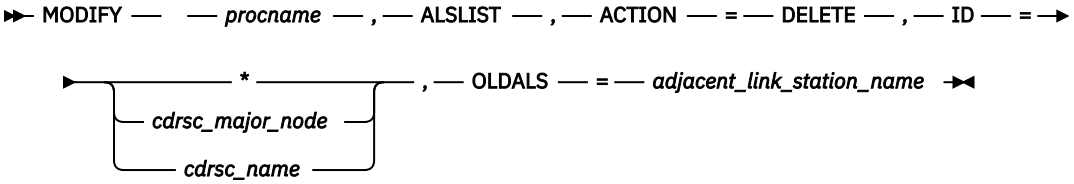
Operator modify commands

F ALSLIST command

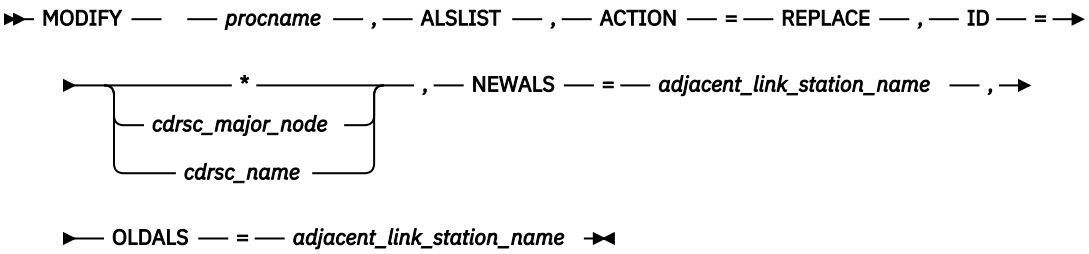
Add an entry to an adjacent link station list:



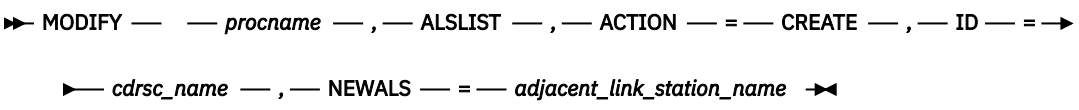
Delete an entry from an adjacent link station list:



Replace an entry in an adjacent link station list:

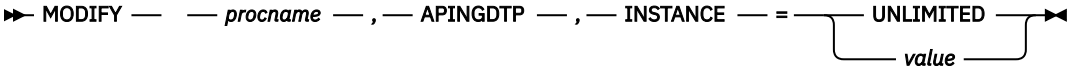


Create a clone CDRSC or a dynamic CDRSC and add entry in adjacent link station list:



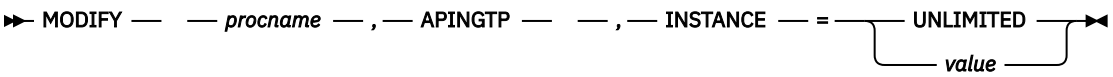
F APINGDTP command

Change the number of APINGD transaction programs permitted to run concurrently for responding to APING requests from other nodes:



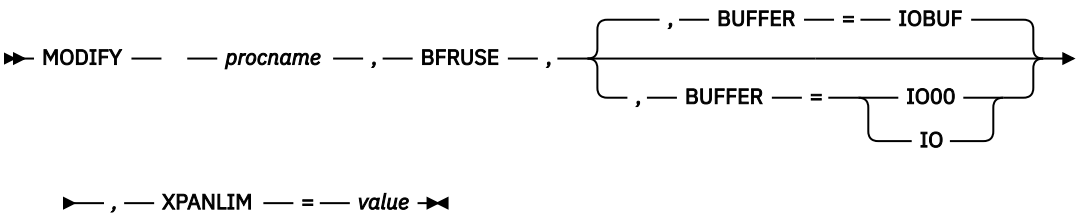
F APINGTP command

Change the number of APING transaction programs permitted to run concurrently for sending APING command requests to other nodes:



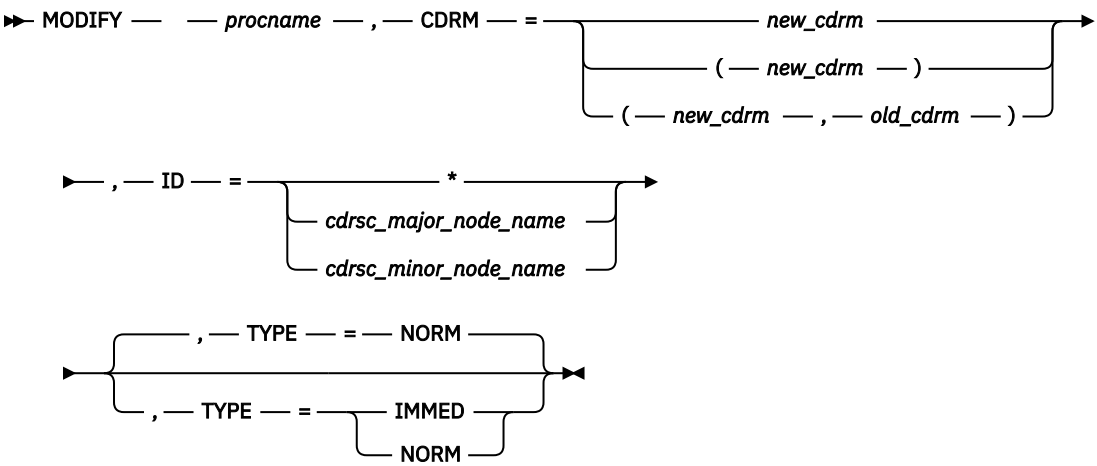
F BFRUSE command

Dynamically change the total amount of common service area (CSA) storage that VTAM is allowed to use for the IO buffer pool:



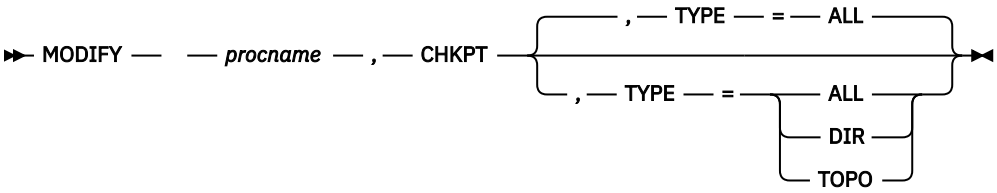
F CDRM command

Change the owner (external CDRM) of a particular cross-domain resource (CDRSC) or set of CDRSCs:



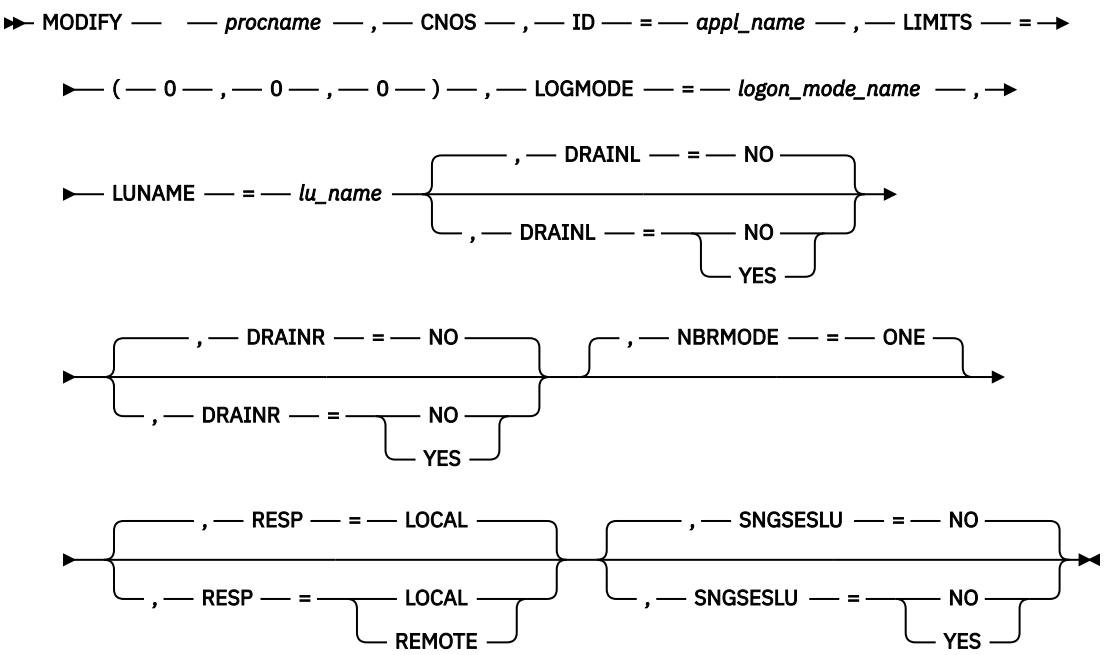
F CHKPT command

Save a copy of the directory database or the topology database (or both) to a checkpoint data set:

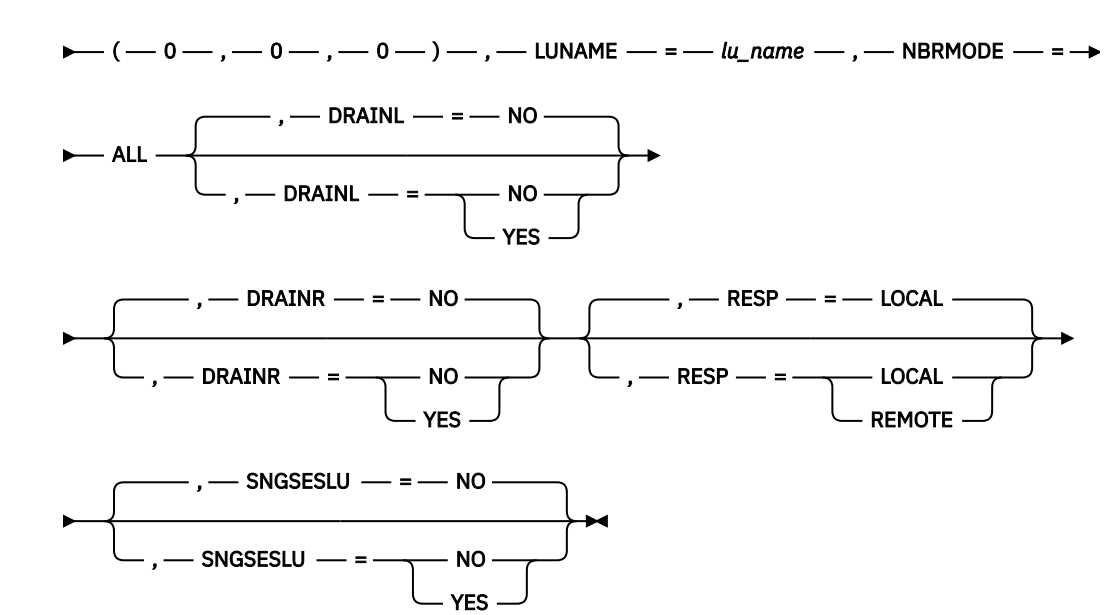


F CNOS command

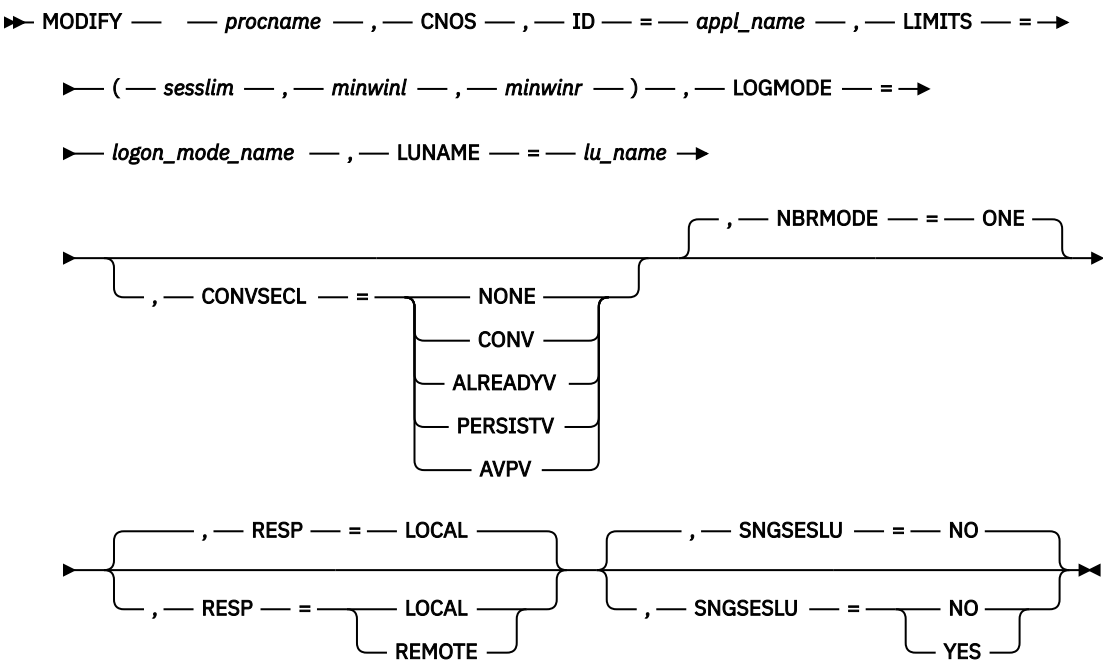
Set session limits to zero for one logon mode:



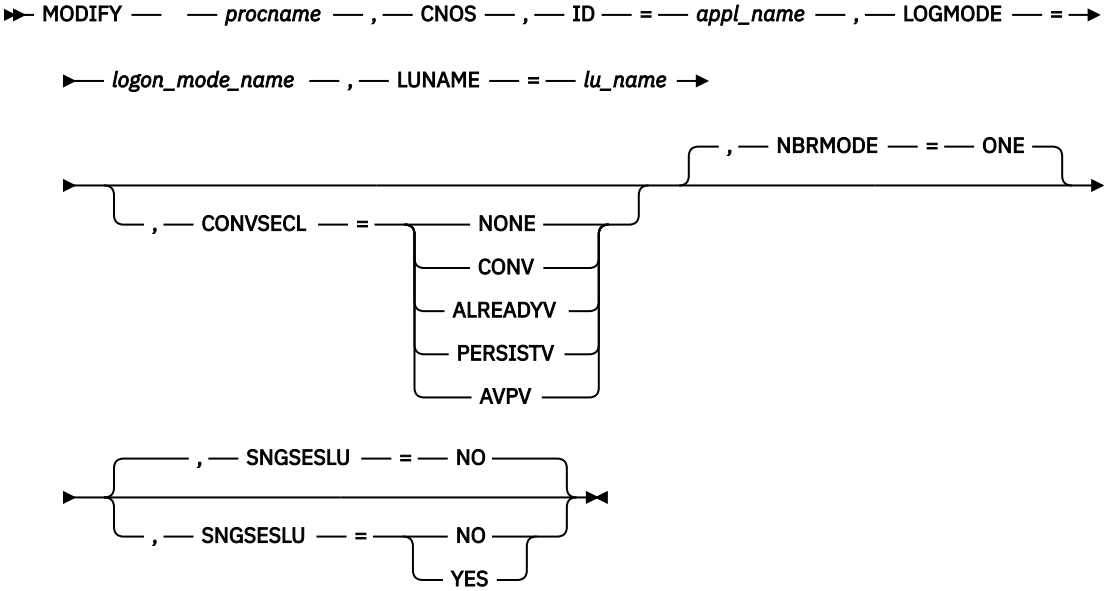
Set session limits to zero for all logon modes:



Set session limits to nonzero:

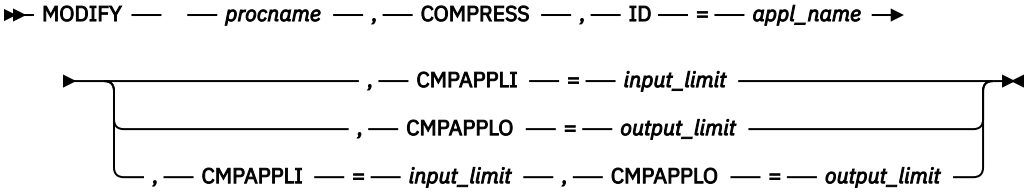


Use existing session limits:



F COMPRESS command

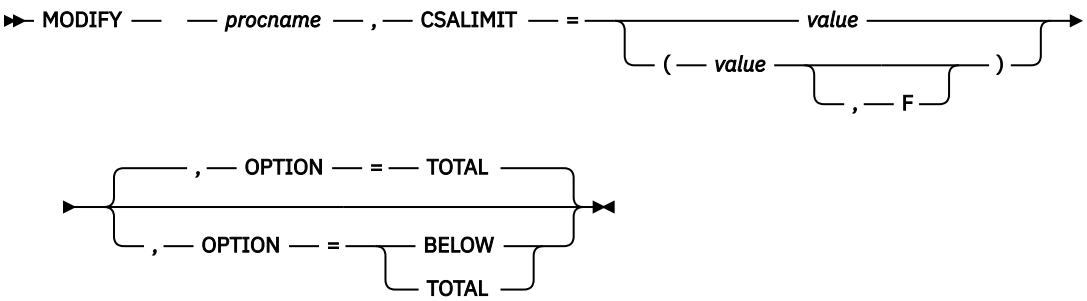
Change the compression levels set by the APPL definition statement:



Change the compression level set by start option:

F CSALIMIT command

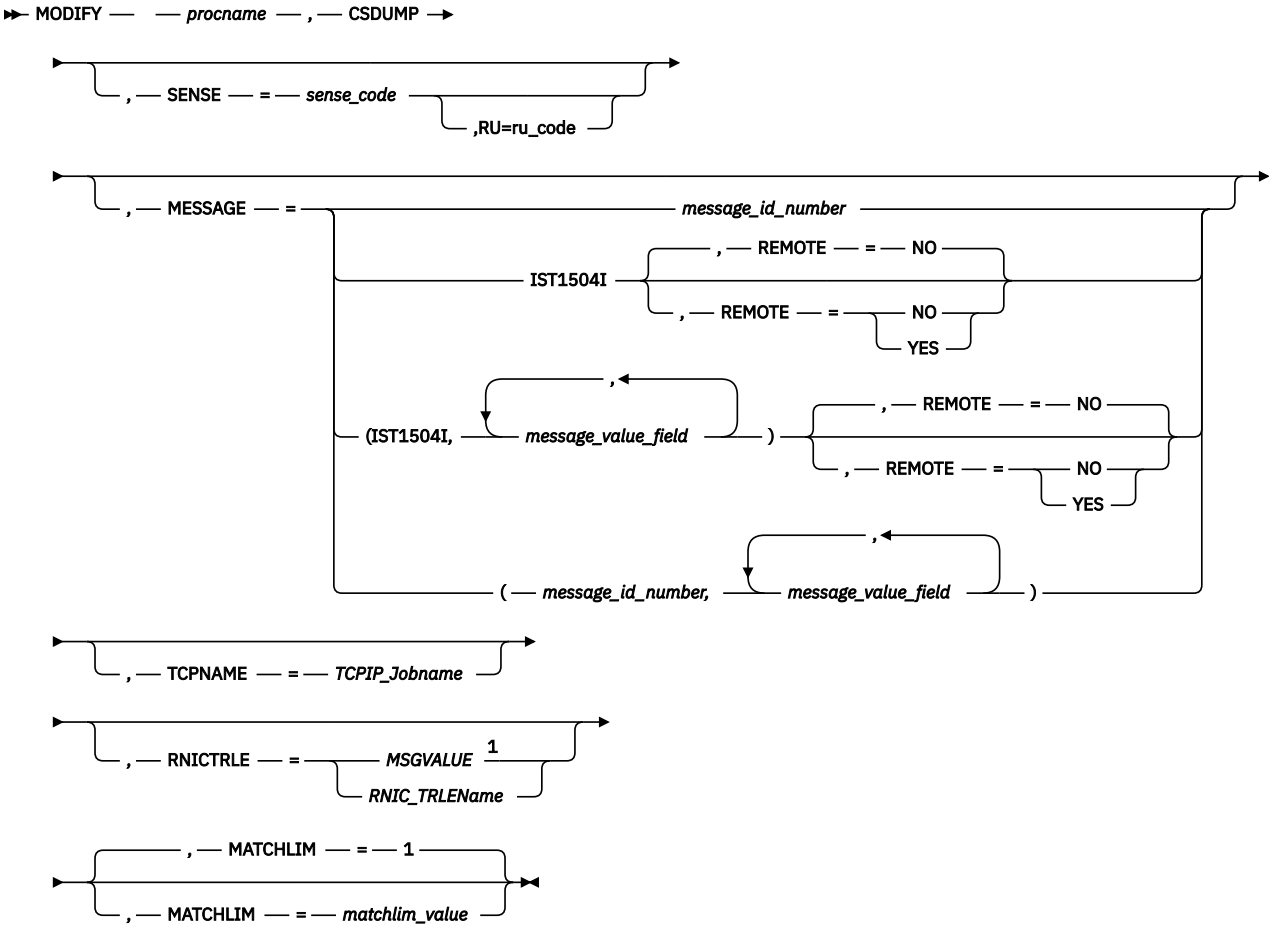
Dynamically change the amount of common service area (CSA) storage that VTAM is allowed to use:



F CSDUMP command

Dump the current address space and VIT data space now, or set up a trigger that invokes a dump of the current address space and VIT data space and possibly a dump of a remote VTAM, when either a particular sense code or a particular message is issued:

Set the CSDUMP trigger:



Notes:

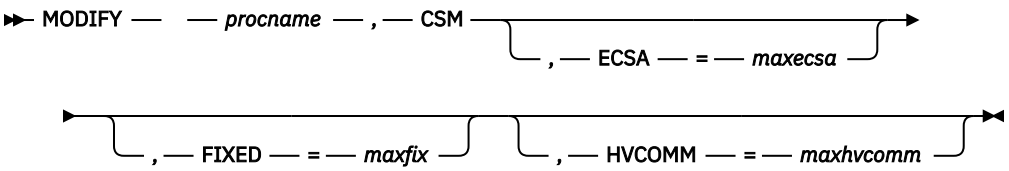
[1] MSGVALUE is valid only when the MESSAGE operand is used and specifies either message IST2391I, IST2406I or IST2419I.

Tip: You can use the CSDUMP start option to set a CSDUMP message trigger, a sense code trigger, or both.

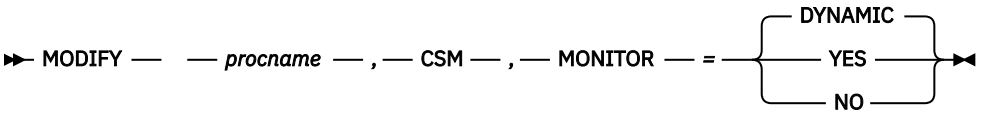
Remove the CSDUMP trigger:

F CSM command

Dynamically change the amount of storage used by the communications storage manager (CSM) or activate changes made to the CSM parmlib member without requiring an IPL:

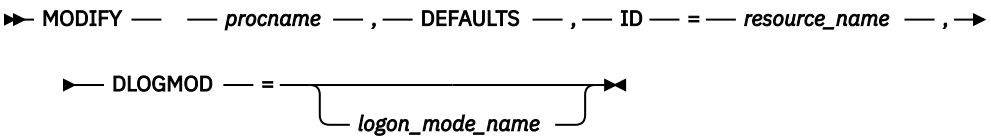


Modify CSM Monitoring as follows:

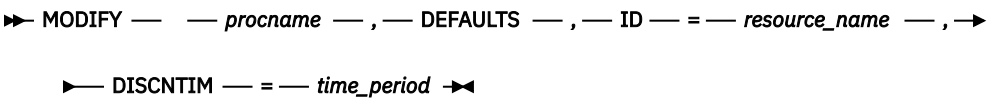


F DEFAULTS command

Modify the DLOGMOD value for a resource:

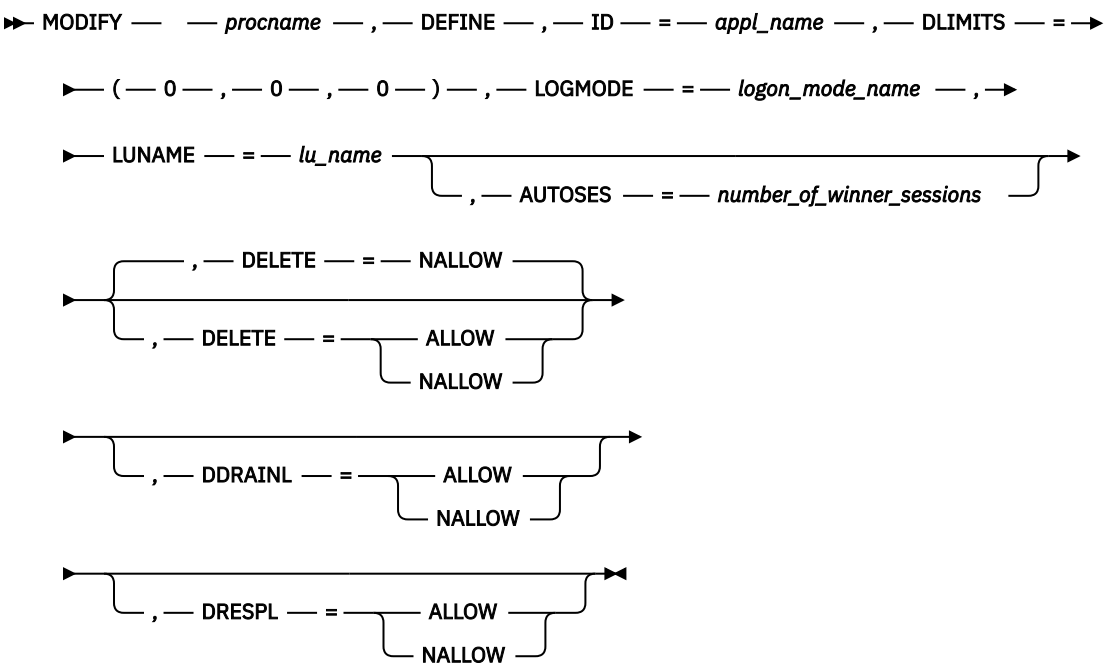


Change the delay timer for disconnection of a switched PU:

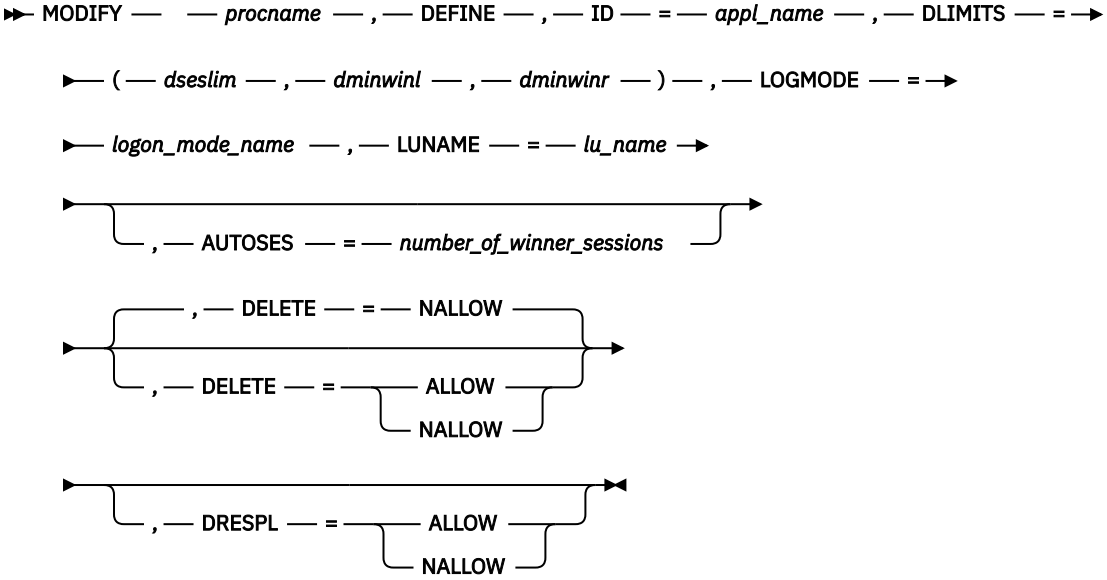


F DEFINE command

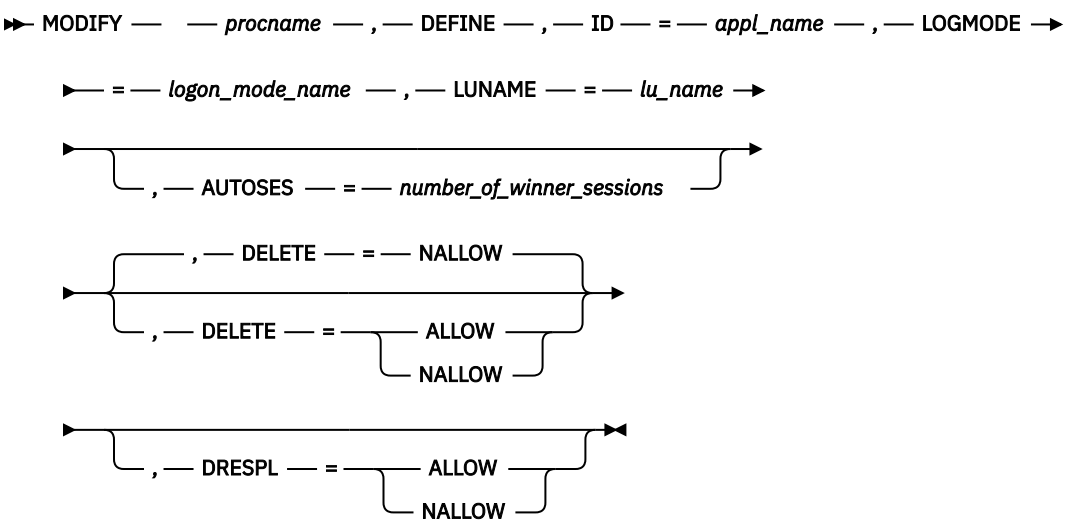
Set session limits to zero:



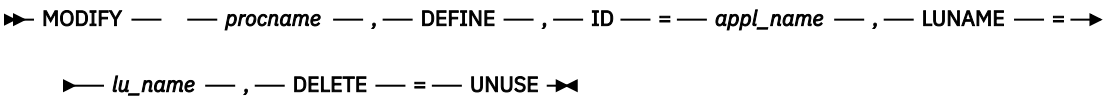
Set session limits to nonzero:



Use existing session limits:

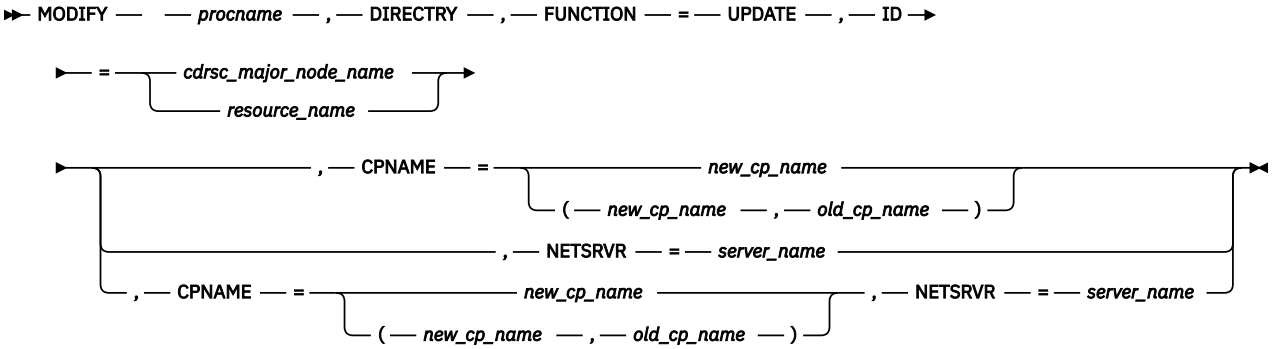


Delete an unusable LU-mode entry:

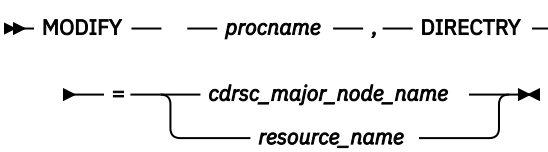


F DIRECTRY command

Change the ownership of APPN resources in the directory database:

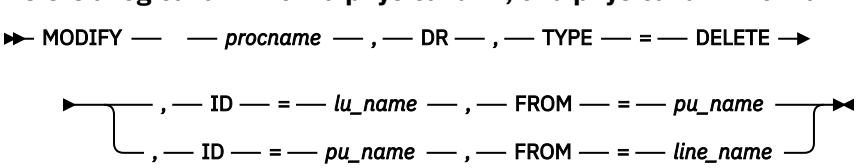


Delete a resource from the directory database:

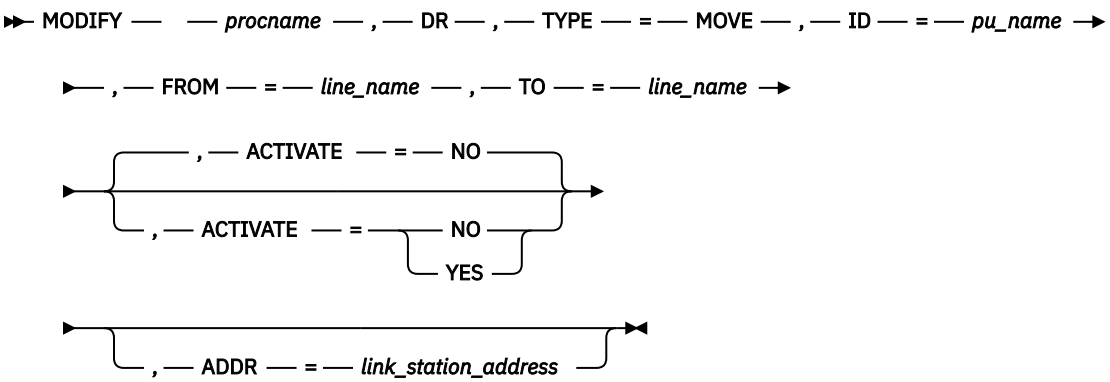


F DR command

Delete a logical unit from a physical unit, or a physical unit from a line:

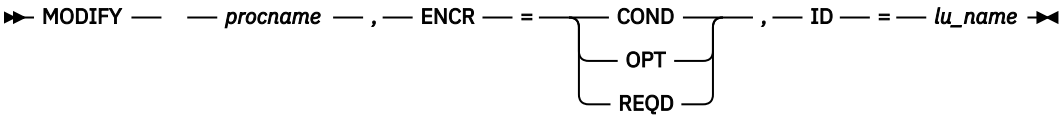


Move a physical unit:



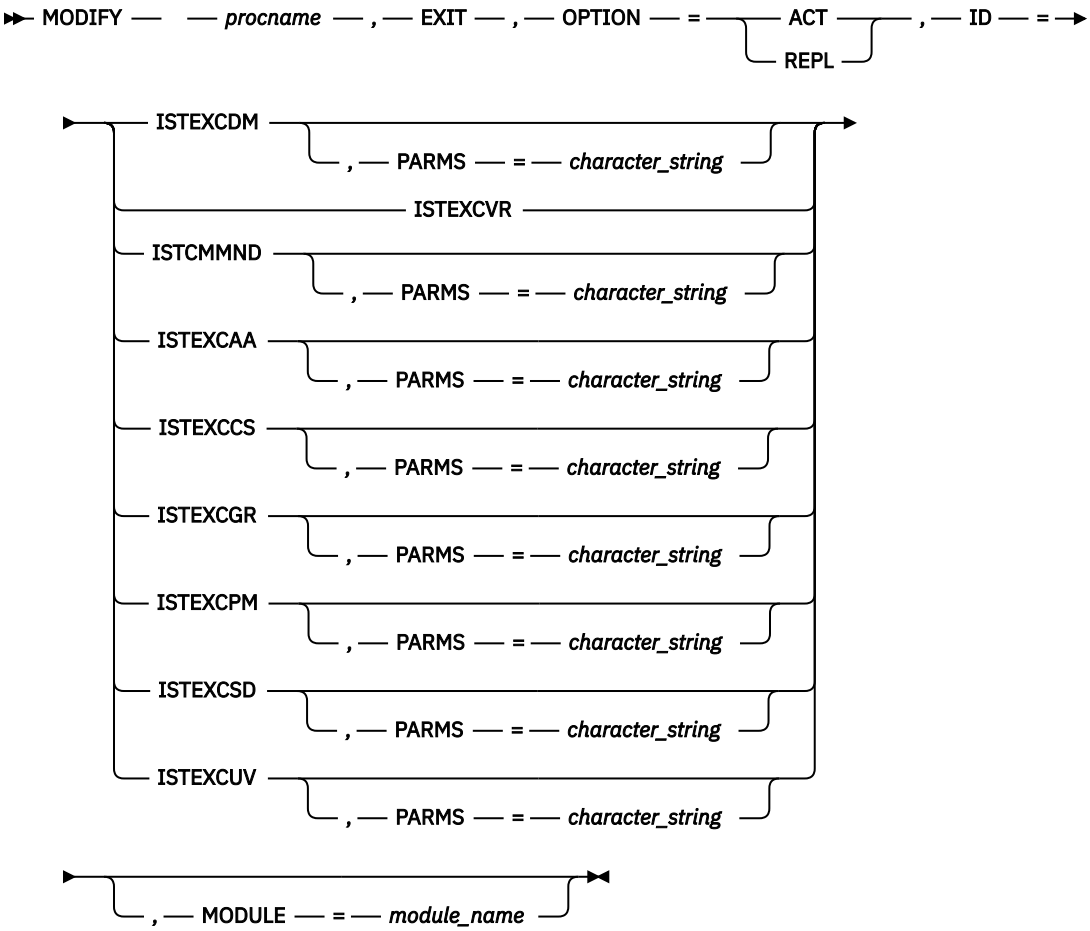
F ENCR command

Change the cryptography specifications for logical units:

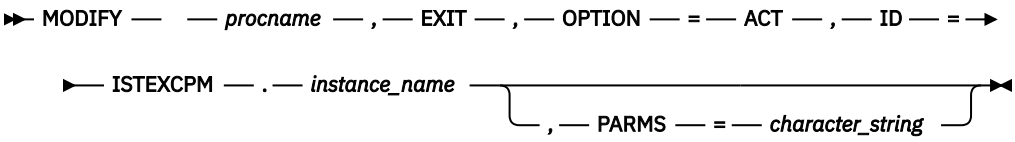


F EXIT command

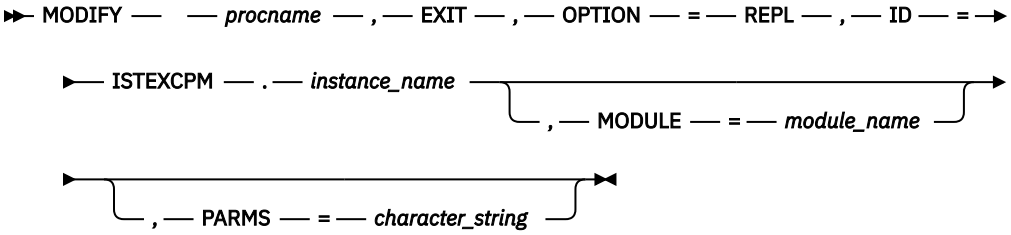
Activate or replace an exit routine:



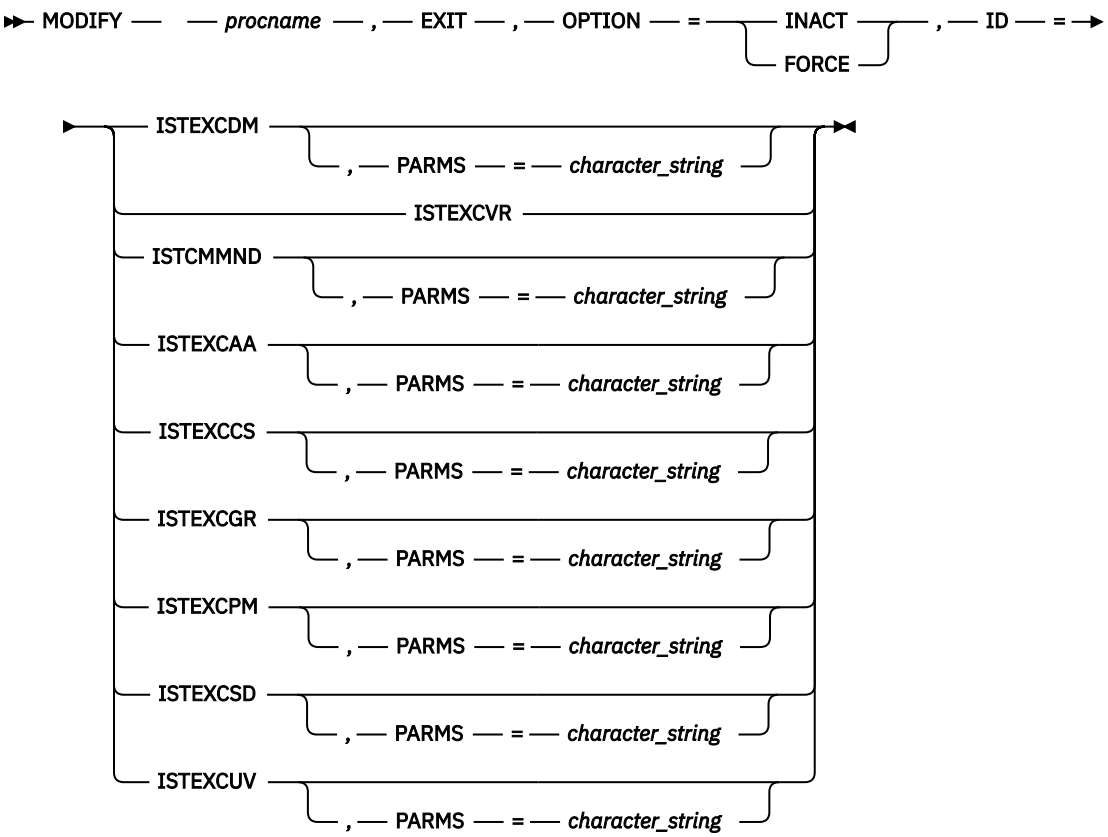
Activate a multiple instance of ISTEXCPM:



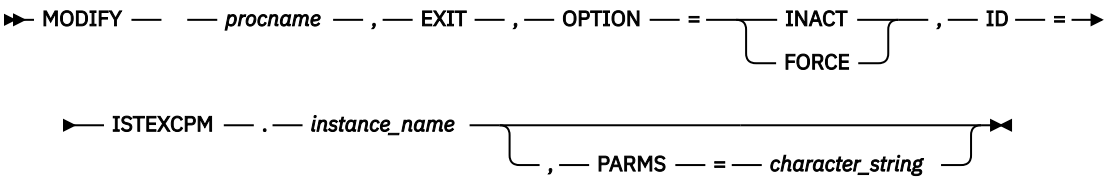
Replace a multiple instance of ISTEXCPM:



Deactivate an exit routine:

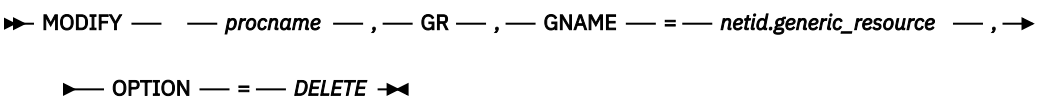


Deactivate a multiple instance of ISTEXCPM:



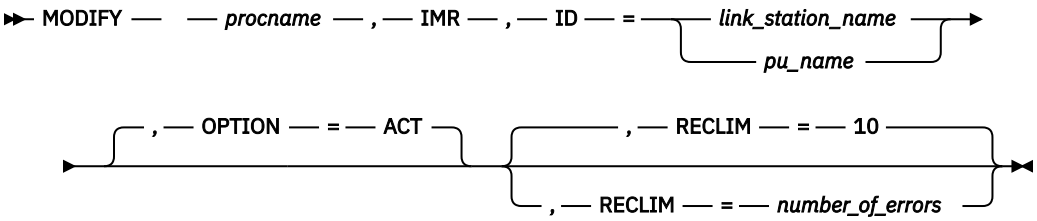
F GR command

Delete a generic resource:

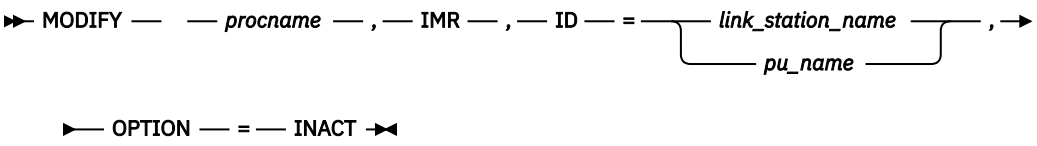


F IMR command

Start intensive mode recording:

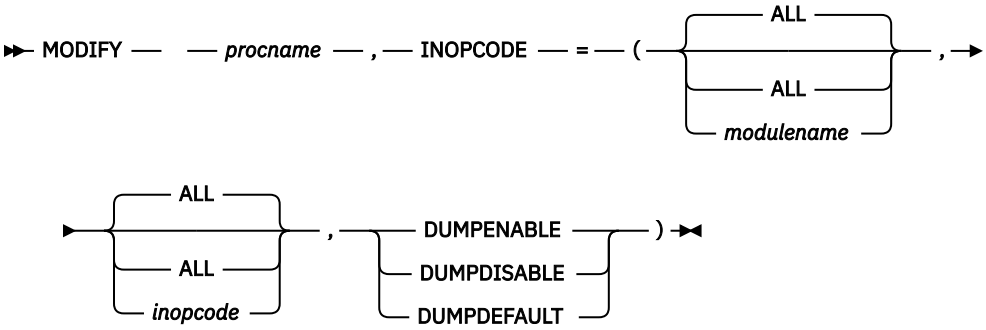


Stop intensive mode recording:



F INOPCODE command

Controls the dump attribute of VTAM INOPCODEs:

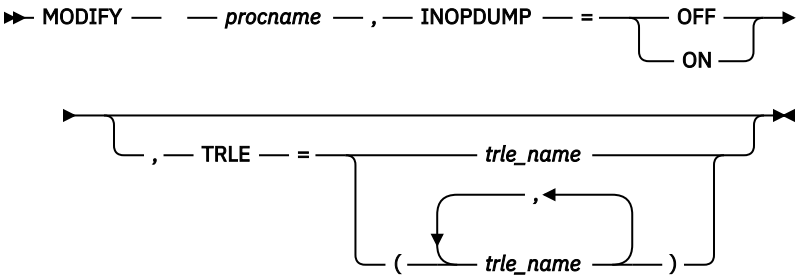


Notes:

1. When specifying an InOpCode for the second parameter, always specify three digits by including any leading zeros.
2. If an InOpCode is specified for the second parameter, the first parameter cannot be ALL.

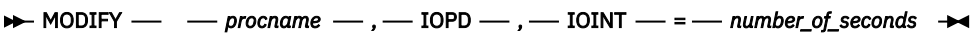
F INOPDUMP command

Controls the automatic dumping of VTAM when an inoperative condition occurs in one of VTAMs data link control layers:



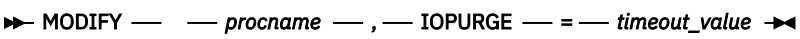
F IOPD command

Change the I/O problem determination (IOPD) time-out interval:



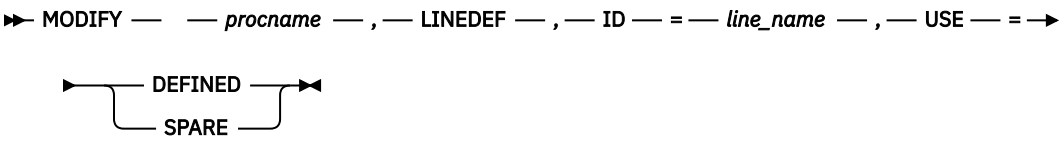
F IOPURGE command

Set a time interval after which outstanding I/O is assumed to be lost and recovery steps are taken:



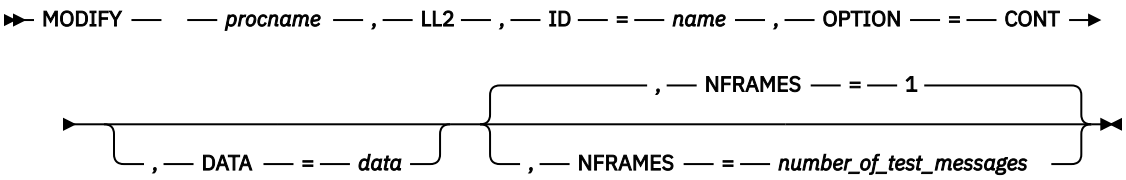
F LINEDEF command

Dynamically change the definition of a redefinable line:

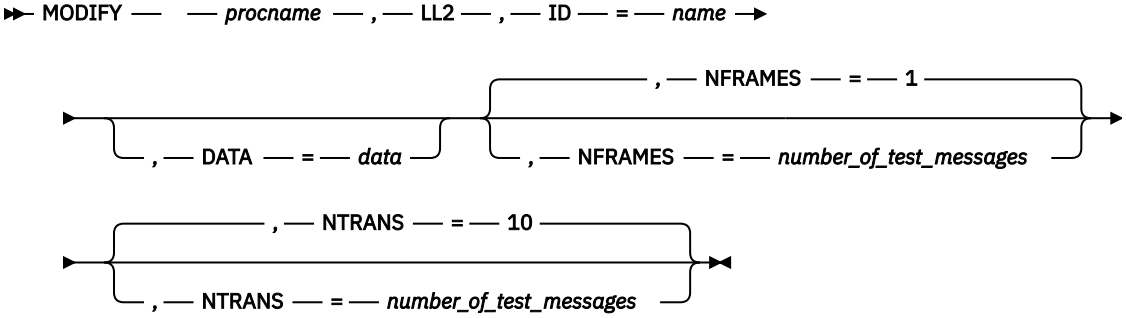


F LL2 command

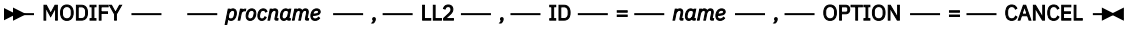
Start a continuous link level 2 test:



Start a brief link level 2 test:

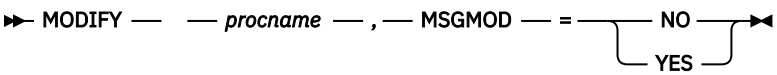


Stop a link level 2 test:



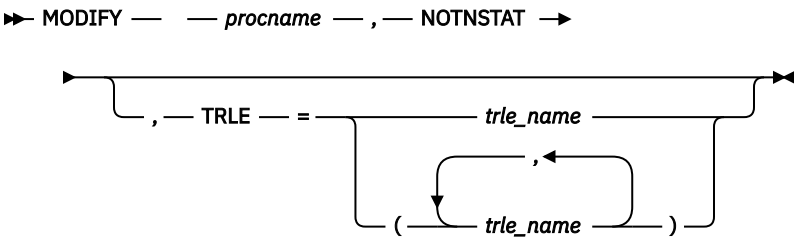
F MSGMOD command

Specify whether VTAM messages contain an identifier that indicates the VTAM module that originated the message:



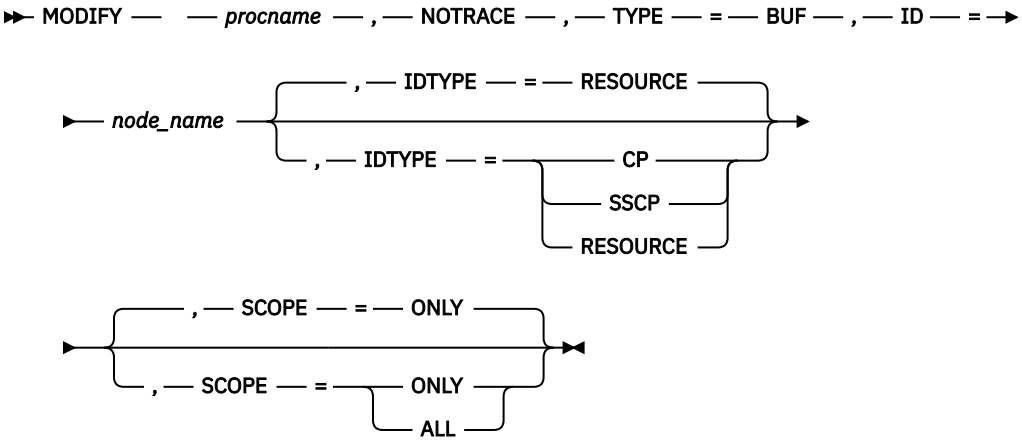
F NOTNSTAT command

Terminate global or TRLE tuning statistics:

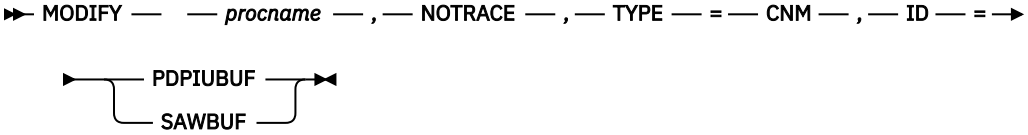


F NOTRACE command

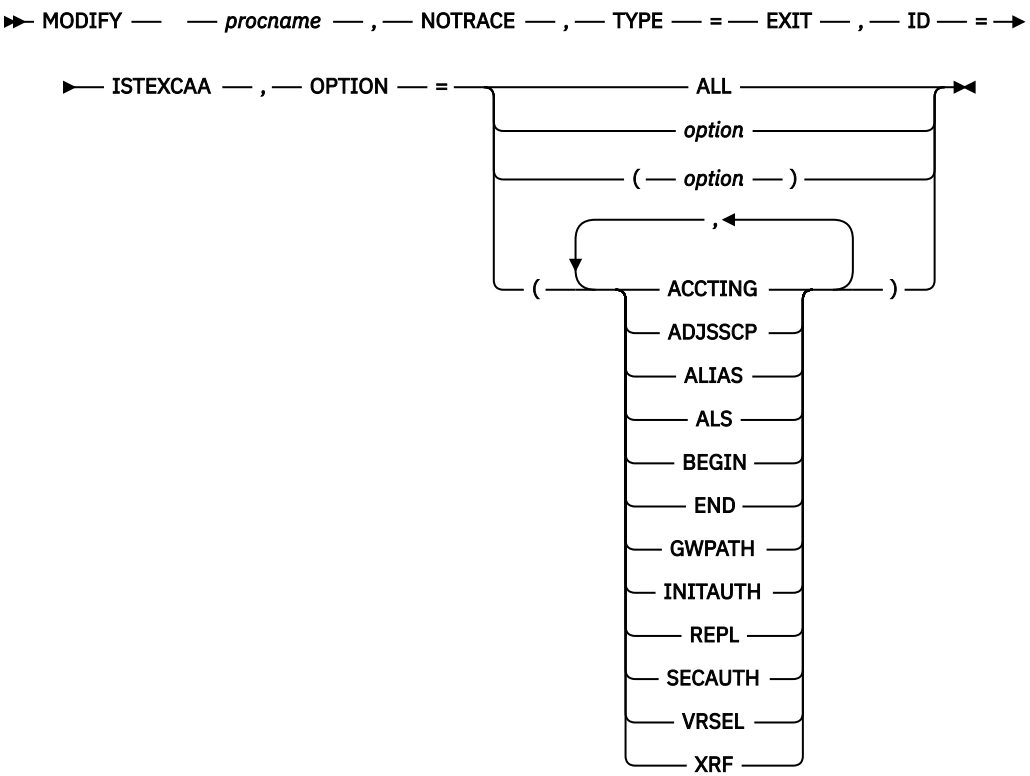
Stop a buffer contents trace:

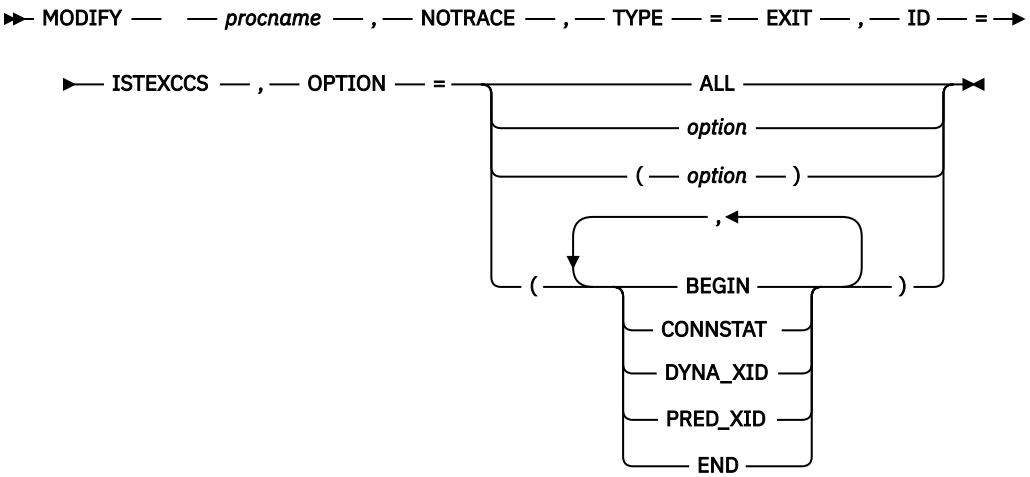


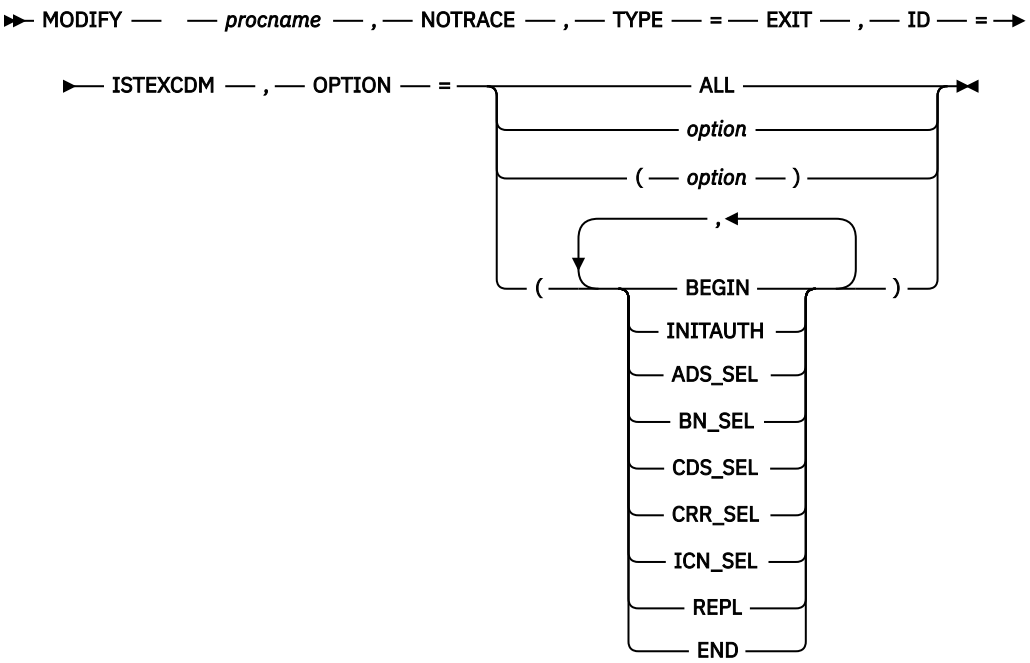
Stop a communication network management trace:



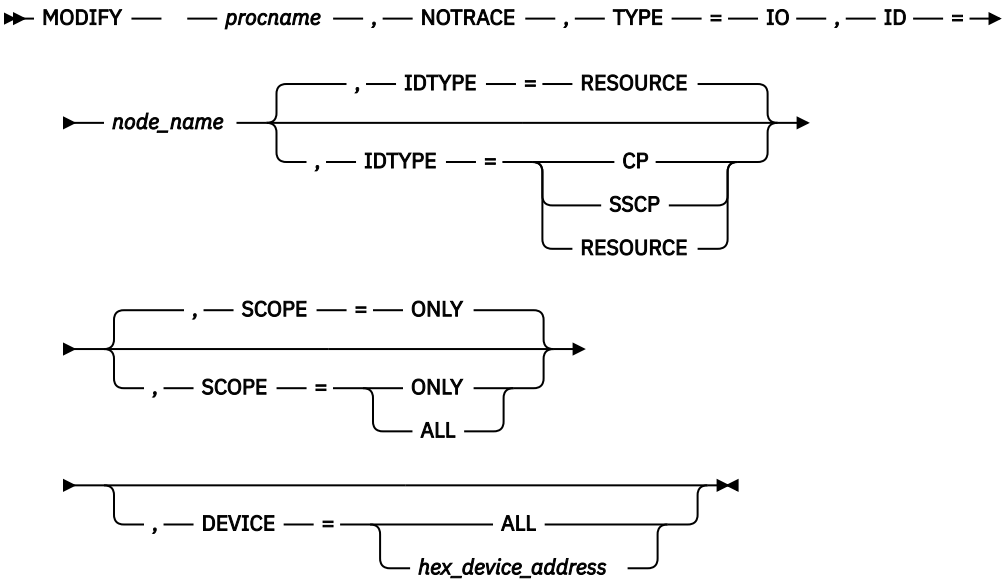
Stop a user Exit buffer trace:



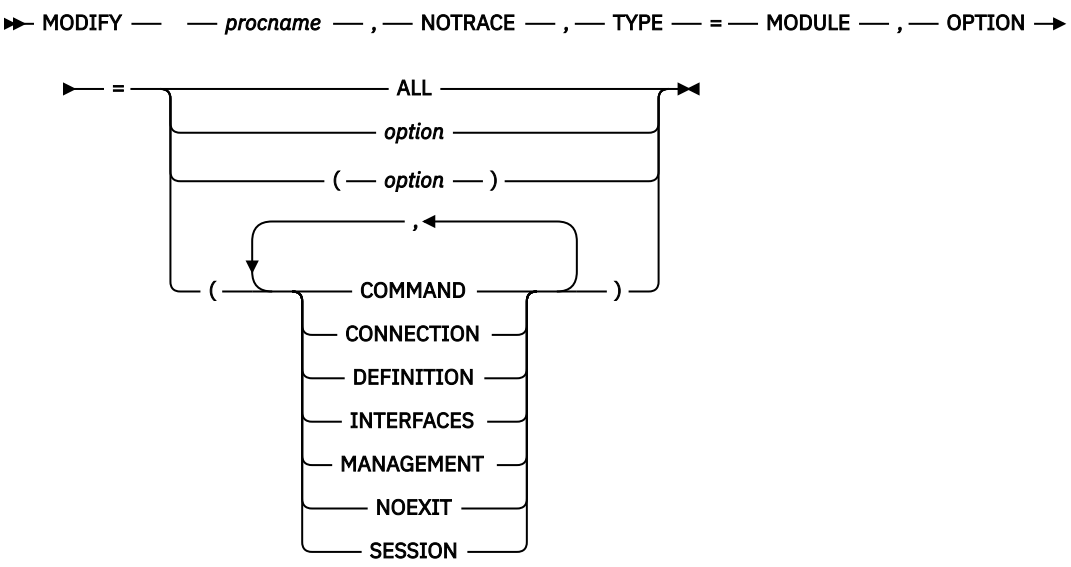




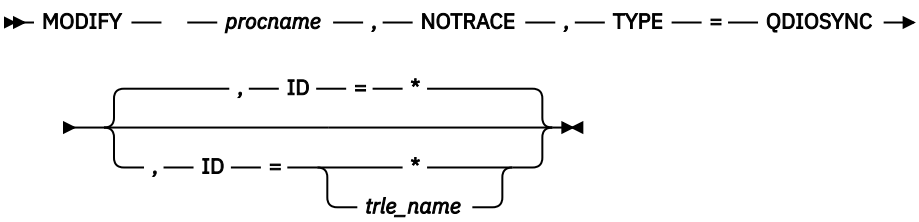
Stop an input/output trace:



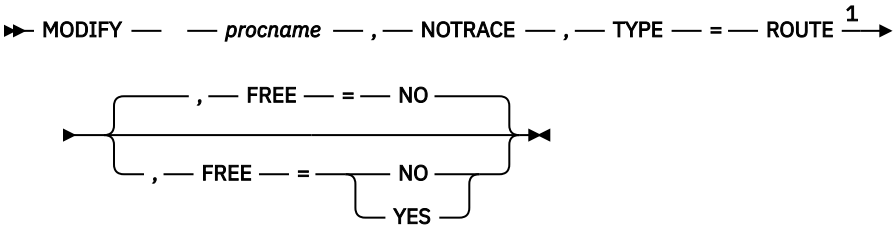
Stop a module trace:



OSA-Express2 adapter:



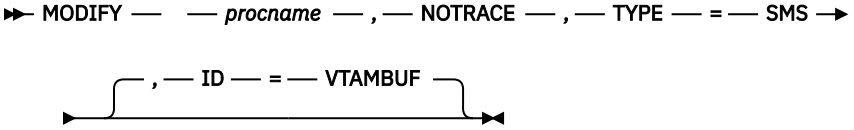
Stop the APPN route selection trace in a network node:



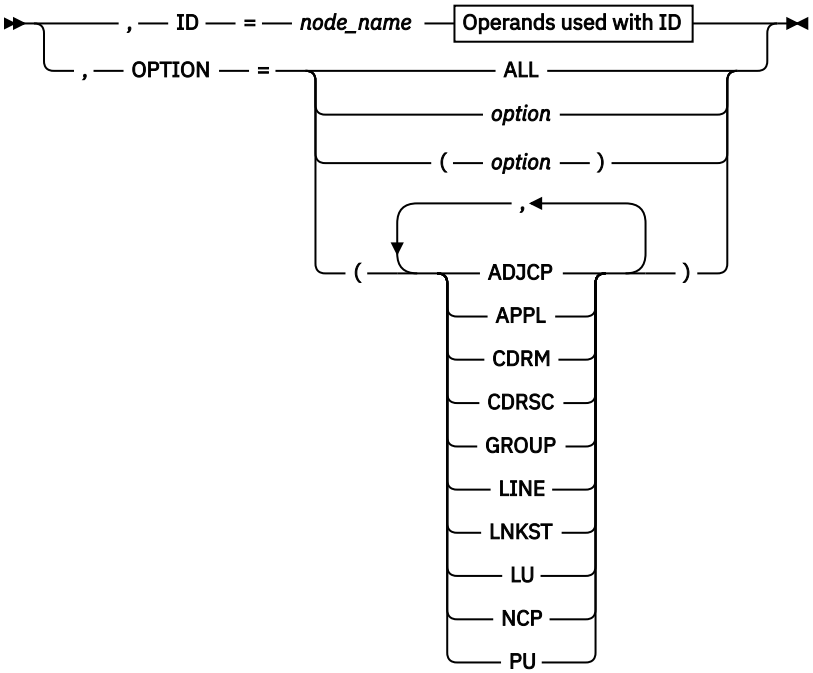
Notes:

[1] TYPE=ROUTE is allowed only in a network node.

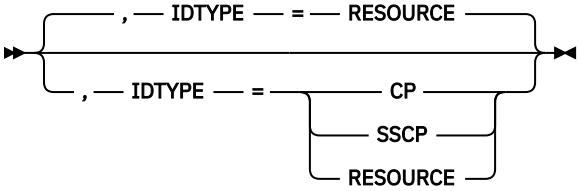
Stop an SMS (buffer use) trace:



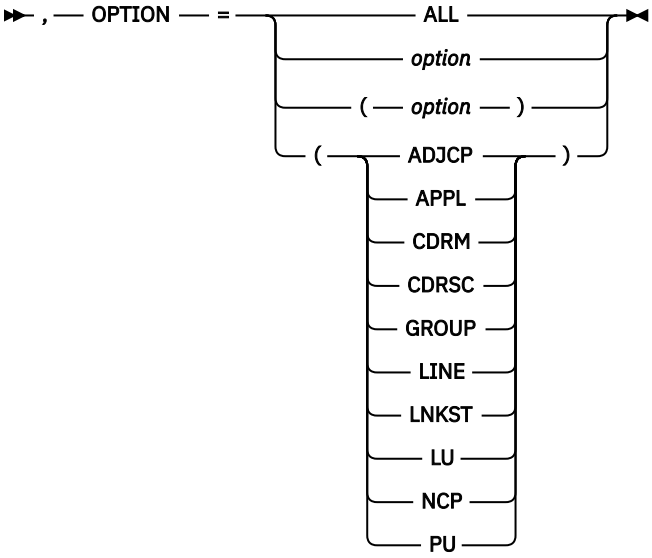
Stop a resource state trace:



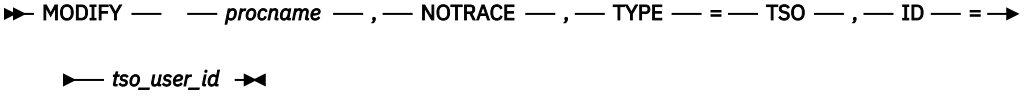
Operands used with ID



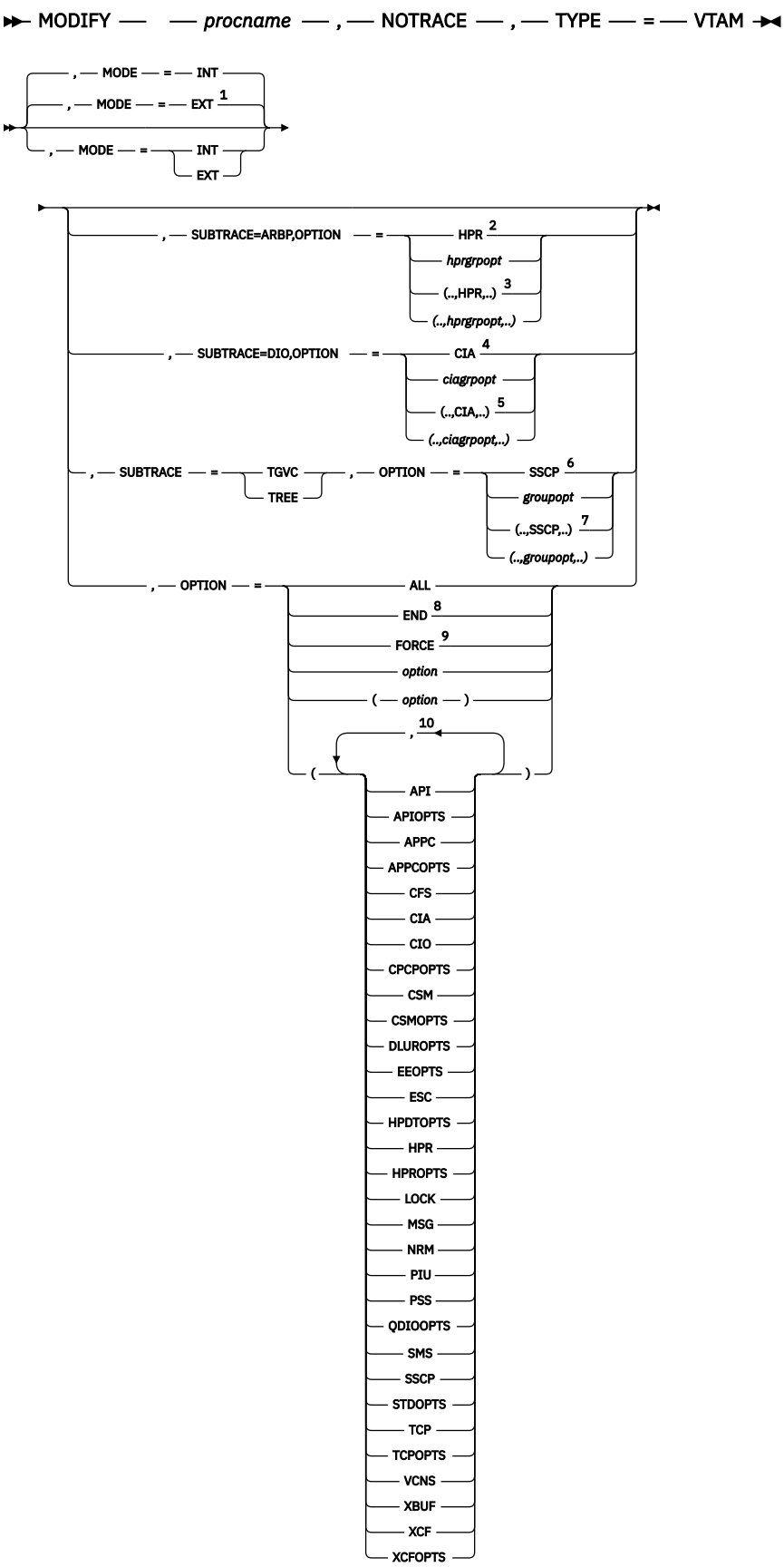
OPTION Operand



Stop a TSO user ID trace:



Stop a VTAM internal trace:



Notes:

[1] If you do not specify the mode, both internal and external recording are stopped. However, when operating with VITCTRL=BASE any default options that you have stopped are immediately restarted by VTAM and recorded on the internal trace table.

[2] When you specify SUBTRACE=ARBP and you code a single OPTION value, the OPTION value must be either HPR or one of the group options (*hprgrpopt*) that include HPR as an individual option equivalent. The applicable group options are DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, and XCFOPTS.

[3] When you code SUBTRACE=ARBP and you code multiple trace options in parentheses, you must code either HPR or one of the group options (*hprgrpopt*) that include HPR as an individual option equivalent inside the parentheses.

[4] When you specify SUBTRACE=DIO and you code a single OPTION value, the OPTION value must be either CIA or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent. The applicable group options are EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, TCPOPTS, and XCFOPTS.

[5] When you code SUBTRACE=DIO and you code multiple trace options in parentheses, you must code either CIA or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent inside the parentheses.

[6] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code a single OPTION value, the OPTION value must be either SSCP or one of the group options (*groupopt*), all of which include SSCP as an individual option equivalent. The group options are APIOPTS, APPCOPTS, CPCPOPTS, CSMOPTS, DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, STDOPTS, TCPOPTS, and XCFOPTS.

[7] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code multiple trace options in parentheses, you must code either SSCP or one of the group options (*groupopt*) inside the parentheses.

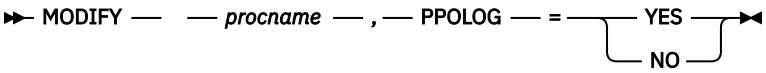
[8] To stop external recording with OPTION=END, MODE=EXT must be explicitly specified.

[9] OPTION=FORCE is not valid when MODE=EXT is specified.

[10] For internal recording (MODE=INT), VTAM manages and displays the setting of the API, CIO, MSG,NRM, PIU and SSCP VIT options based on the level of VIT control being used. See z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for details.

F PPOLOG command

Request that VTAM start or stop sending copies of VTAM operator commands and VTAM messages to the primary program operator (PPO):

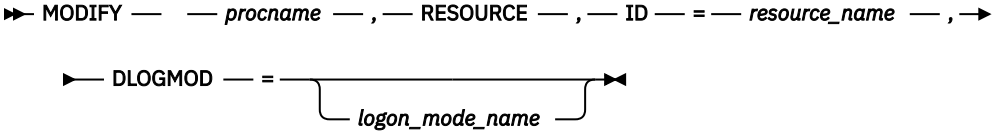


F PROFILES command

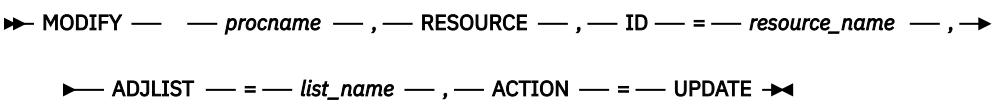
Refresh an active application's set of RACF® profiles:

F RESOURCE command

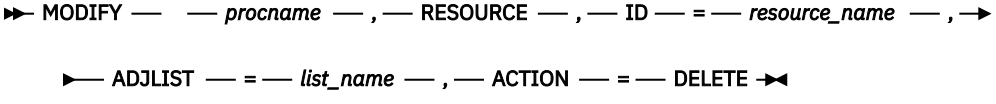
Modify the DLOGMOD value for a resource:



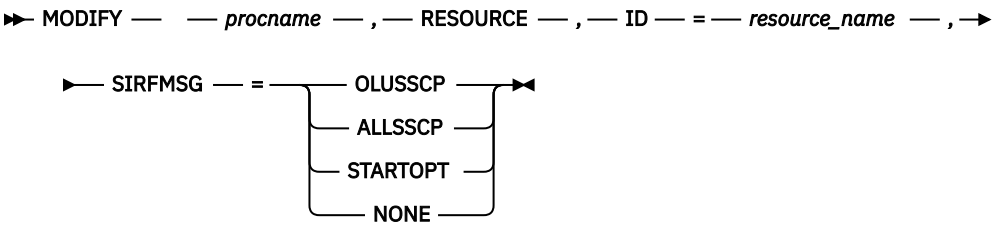
Add or change the ADJLIST value for a cross-domain resource:



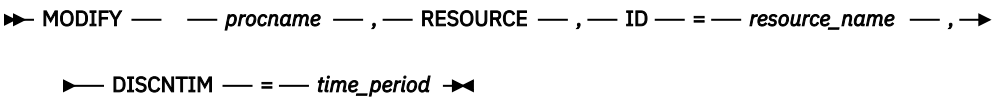
Delete the ADJLIST value for a cross-domain resource:



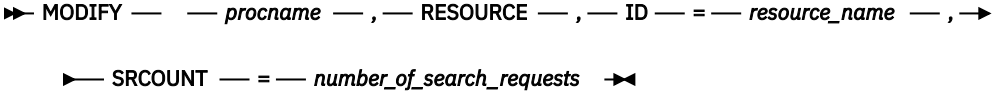
Change the error message display option for an APPL or CDRSC:



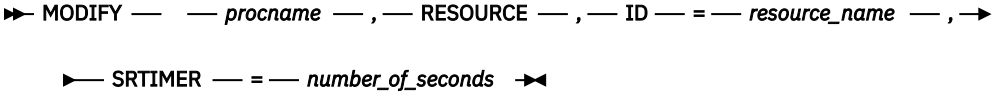
Change the delay timer for disconnection of a switched PU:



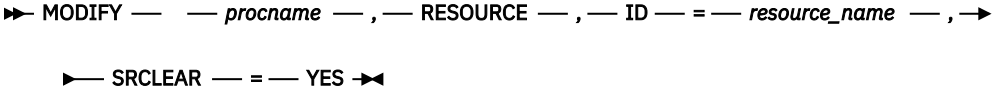
Change the number of search requests for a resource:



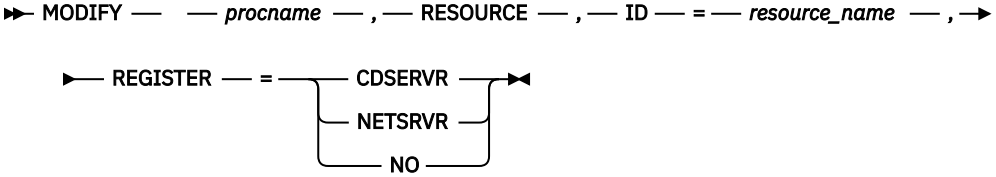
Change the value of the search reduction timer for a resource:



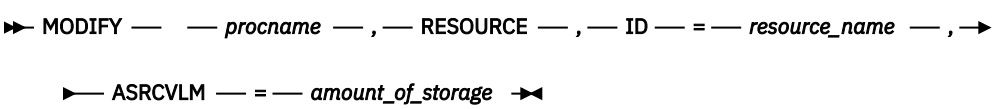
Reset the search reduction entry for a resource:



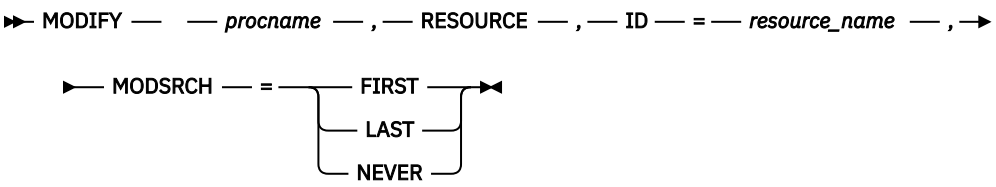
Modify the registration value for a resource:



Modify the ASRCVLM value for an application program:



Modify the MODSRCH value for a model application program:

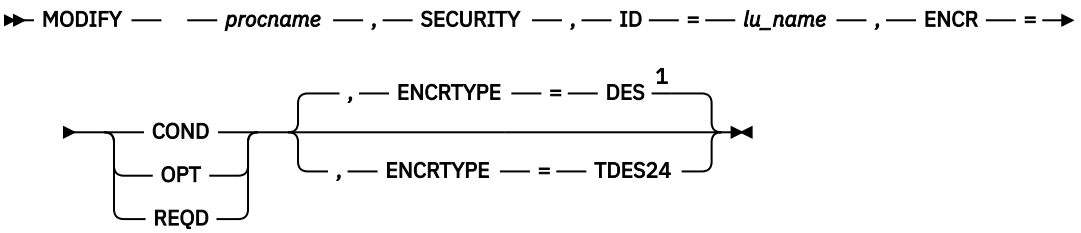


F RTP command

Request that VTAM search for the best high performance routing (HPR) route, based on transmission group weight, between the two endpoints of a rapid transport protocol (RTP) connection:

F SECURITY command

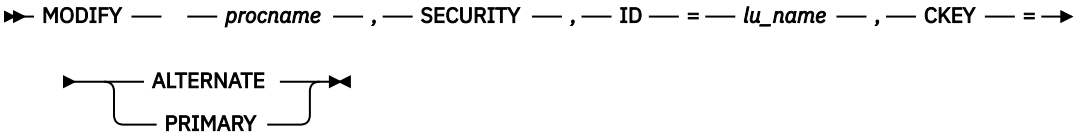
Increase the cryptography specification for an LU:



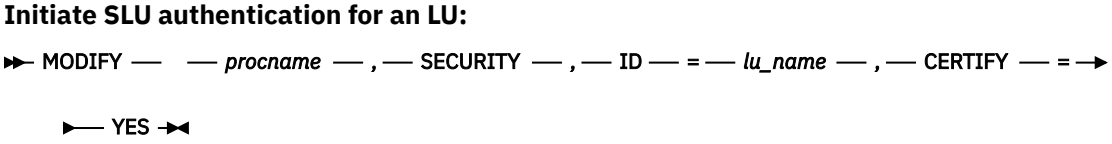
Notes:

[1] ENCRTYPE cannot be downlevel. If the current value is TDES24, MODIFY SECURITY ENCRTYPE=DES will not be allowed.

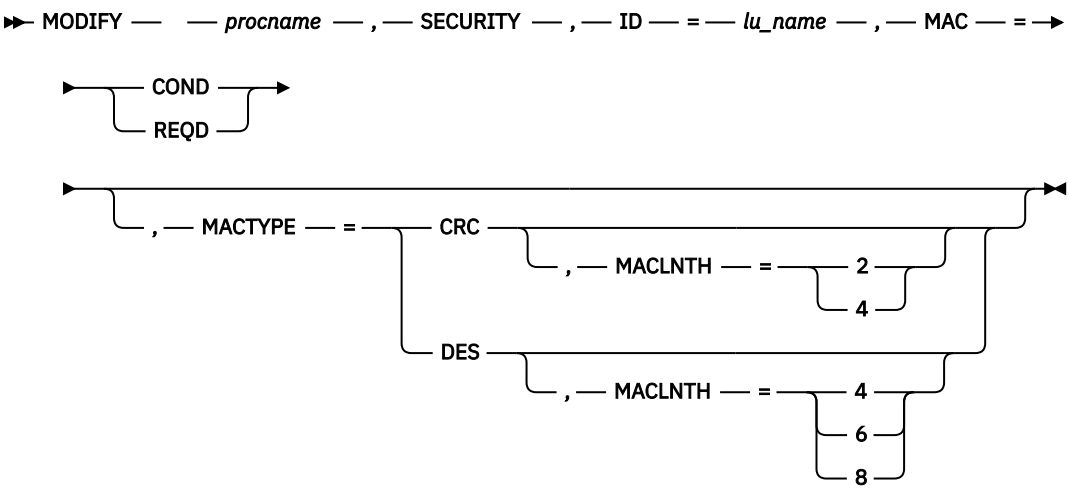
Modify which cryptographic key name is used for an LU:



Initiate SLU authentication for an LU:

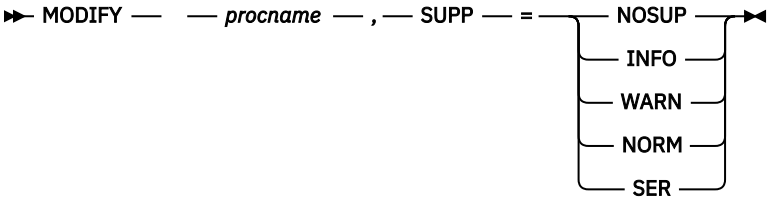


Increase the message authentication specification for an LU:



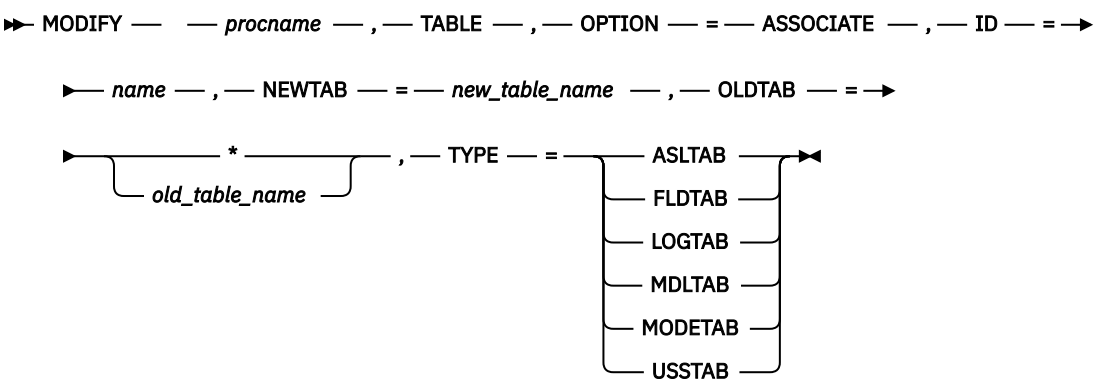
F SUPP command

Change the message suppression level after VTAM has been started:

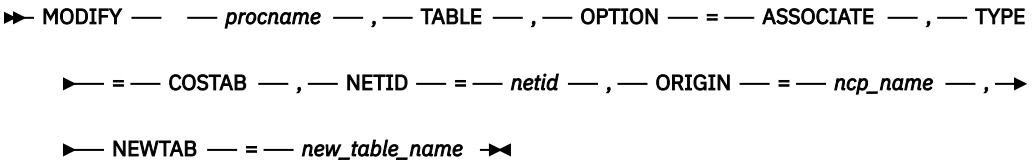


F TABLE command

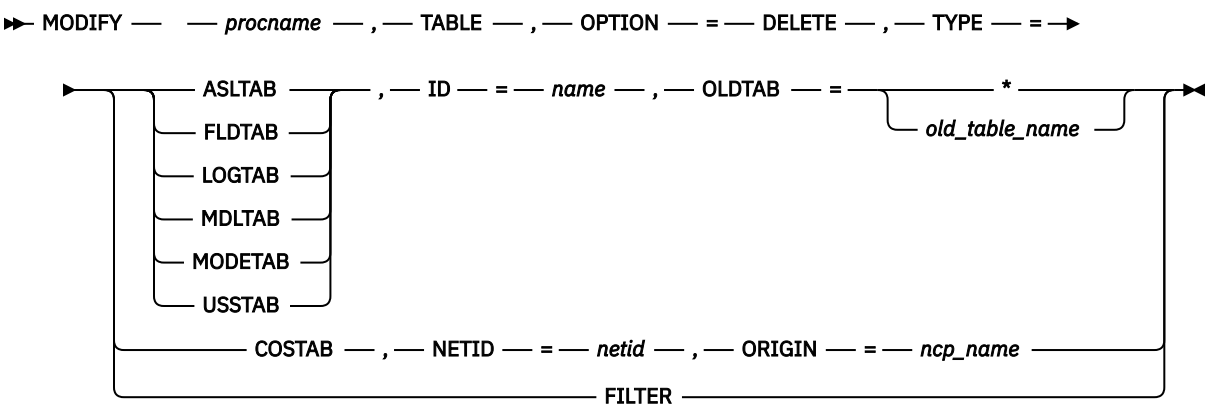
Change resource associations or load a new table and associate it with a resource (other than a CoS table):



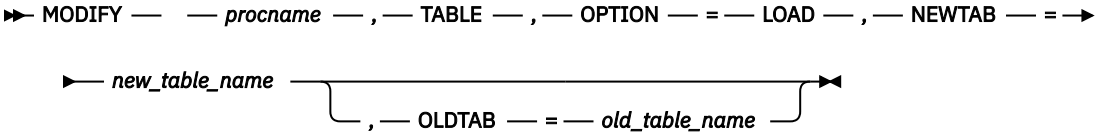
Change resource association with a CoS table or load a new CoS table and associate it with a resource:



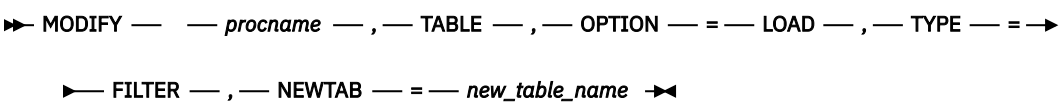
Delete resource associations:



Load a table to replace an existing table (other than a filter table):

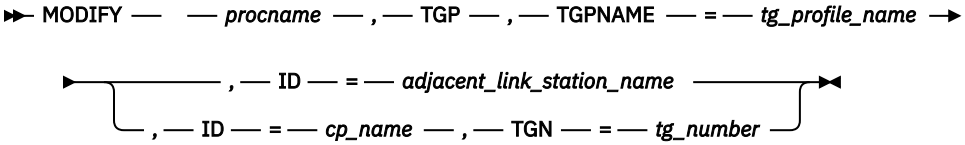


Load a filter table to replace an existing filter table:



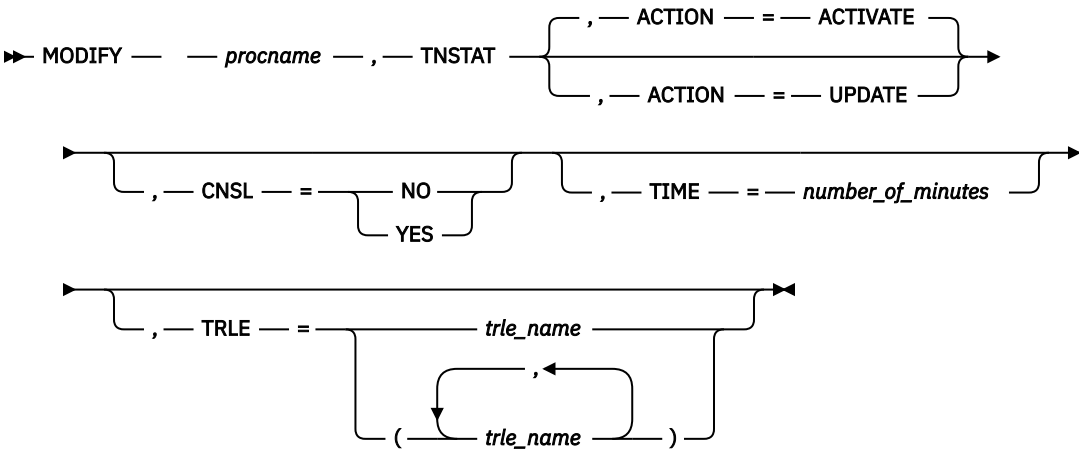
F TGP command

Change the transmission group (TG) profile associated with a 2.1 connection:



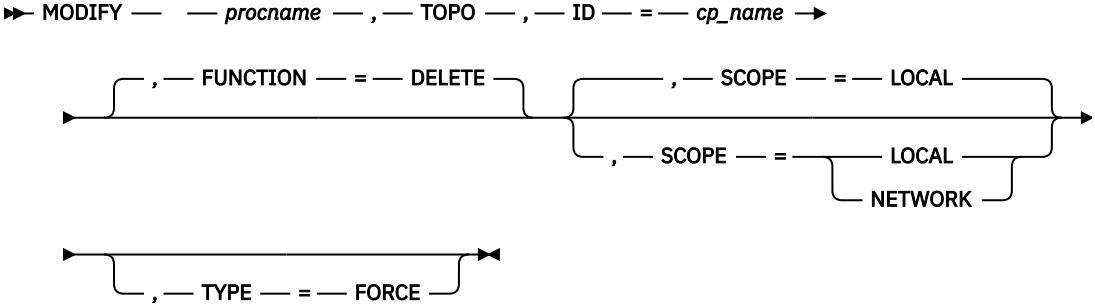
F TNSTAT command

Initiate global or TRLE tuning statistics. Also used to alter the CNSL and TIME tuning statistics values.

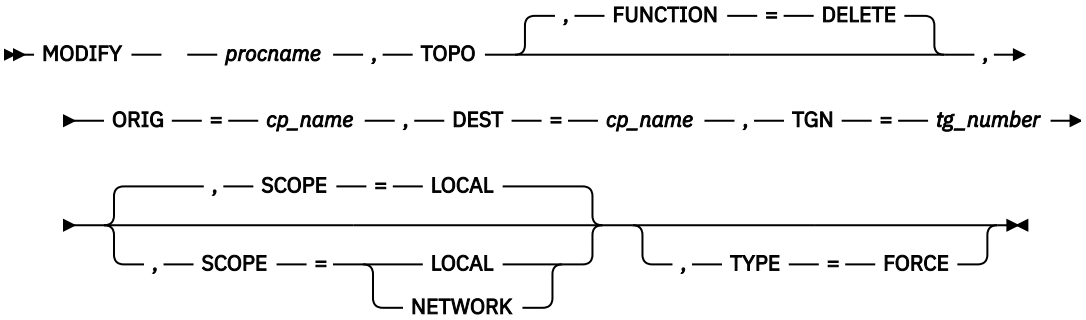


F TOPO command

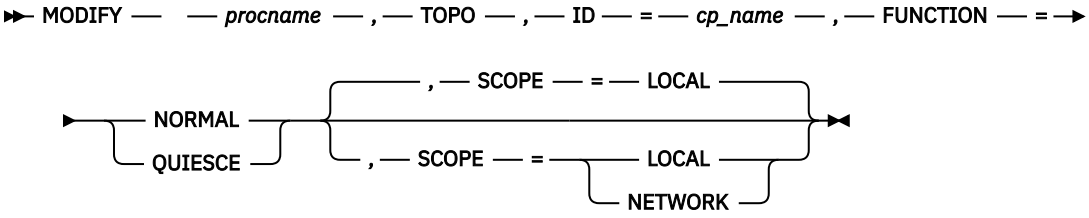
Delete a node at a network node:



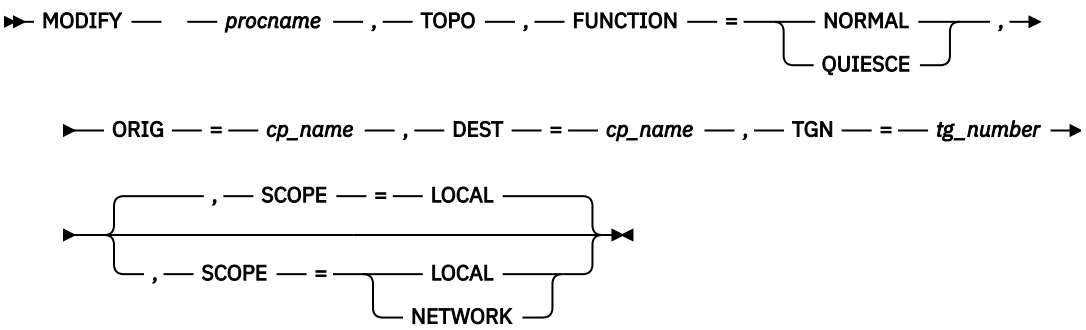
Delete a transmission group:



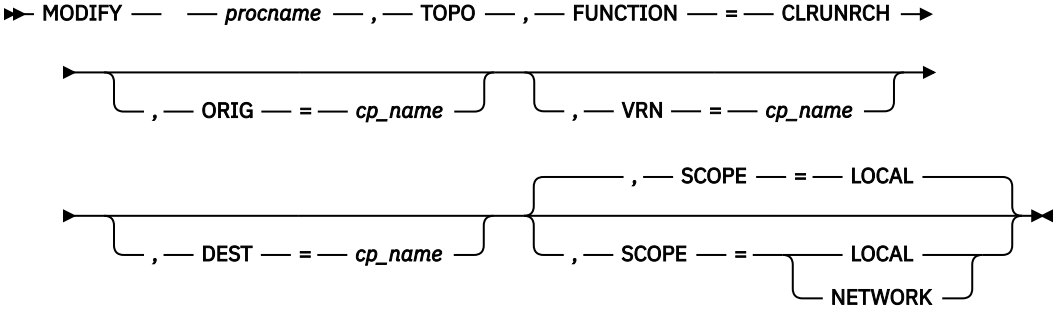
Modify the status of a node for route calculation at a network node:



Modify the status a transmission group for route calculation:

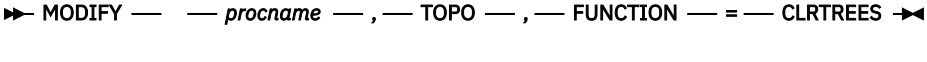


Clear Enterprise Extender connection network unreachable partner information on a network node:



Rule: The ORIG, VRN, and DEST operands are optional on the MODIFY *procname*,TOPO,FUNCTION=CLRUNRCH command; however, at least one of these three operands must be specified.

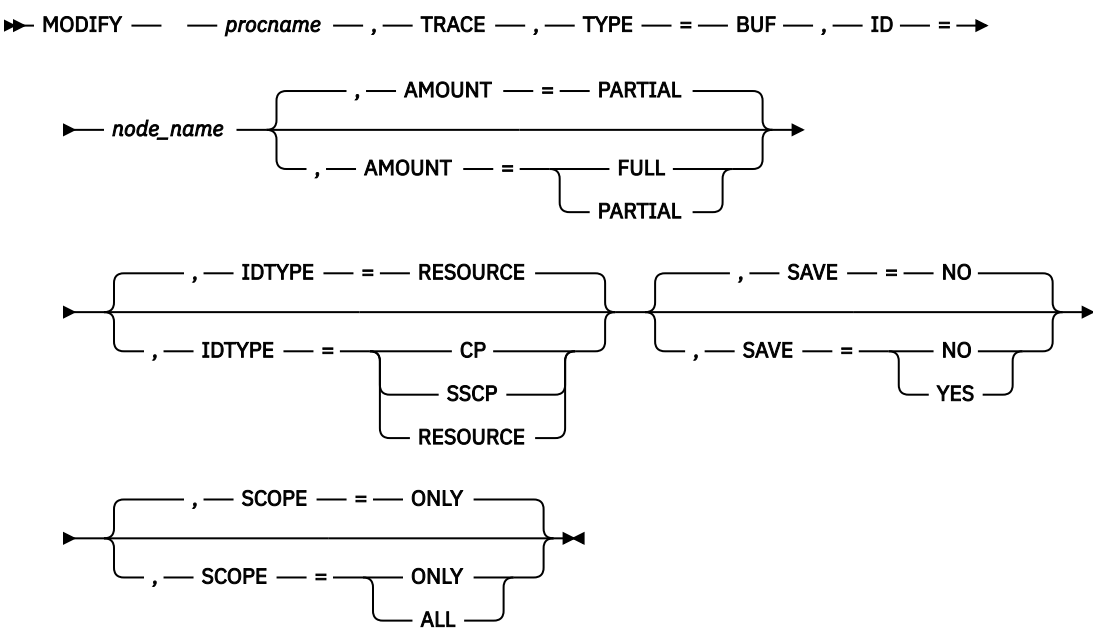
Clear APPN routing tree information:



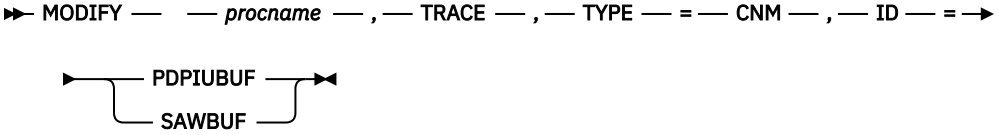
Rule: The values FUNCTION=CLRUNRCH and FUNCTION=CLRTREES are valid on the MODIFY*procname*,TOPO command only when the command is issued on a network node.

F TRACE command

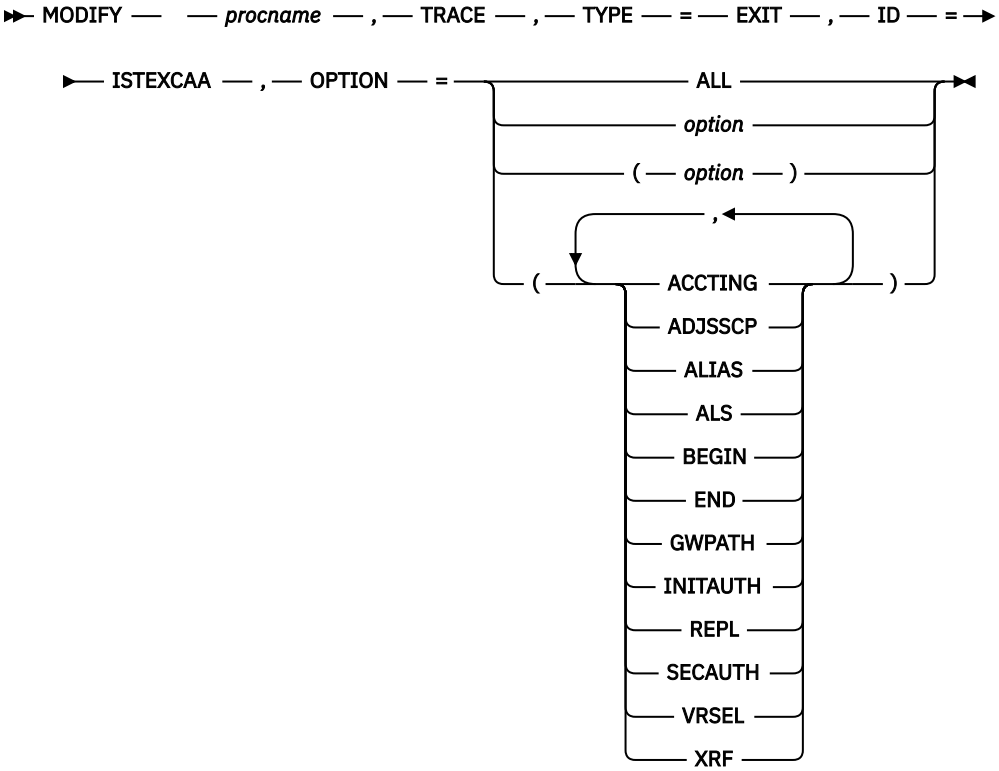
Start or modify a buffer contents trace:

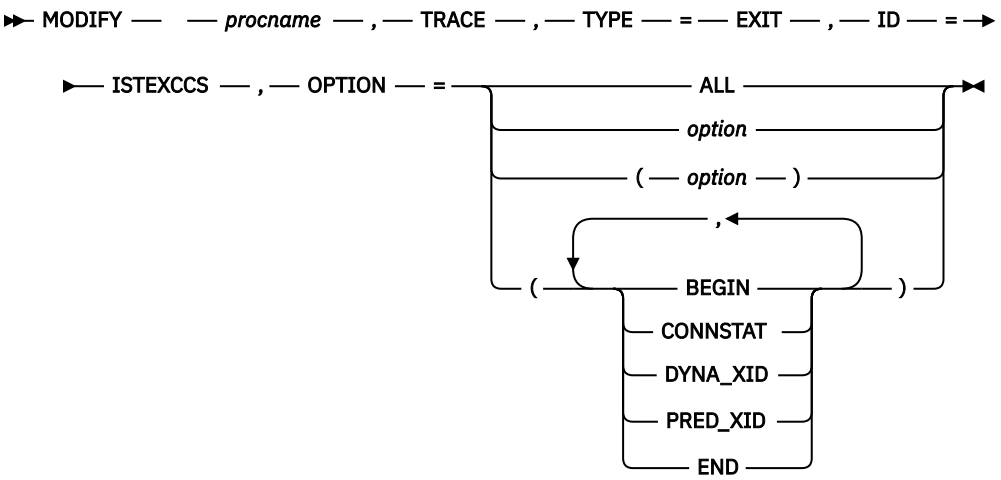


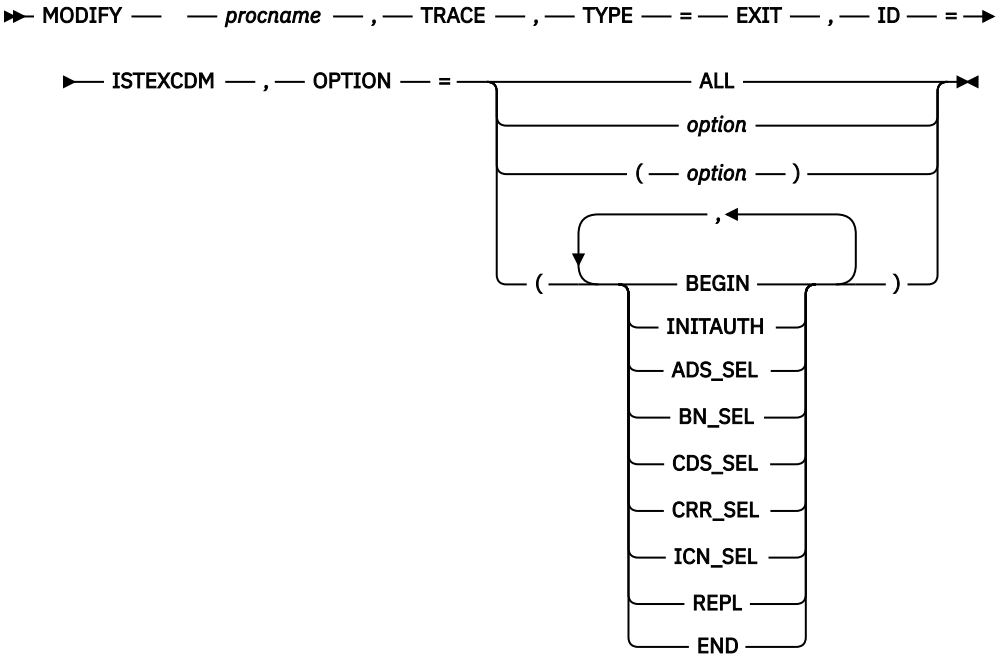
Start or modify a communication network management trace:



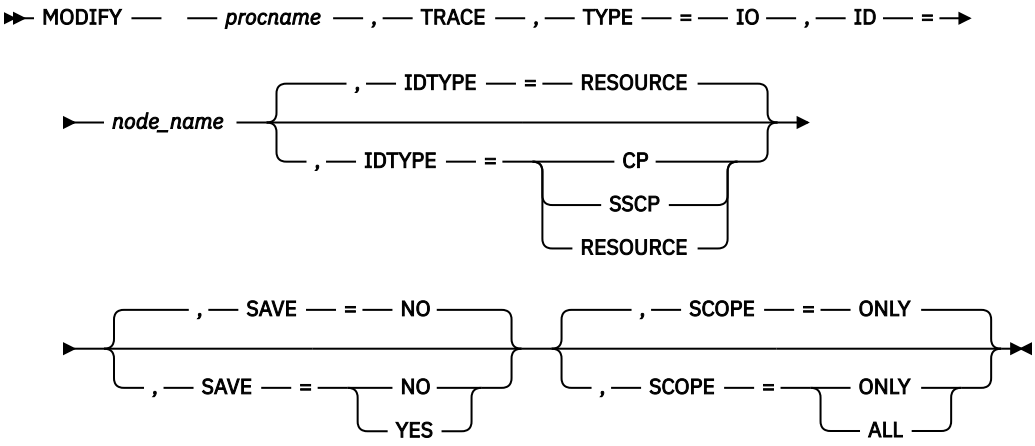
Start or modify a user Exit buffer trace:



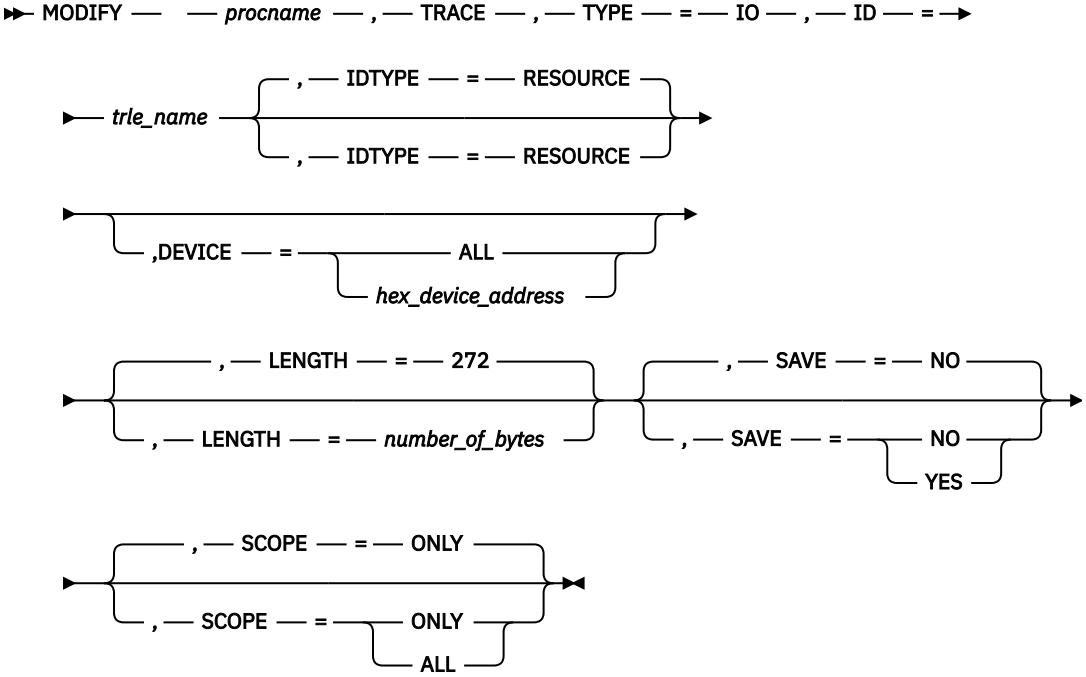




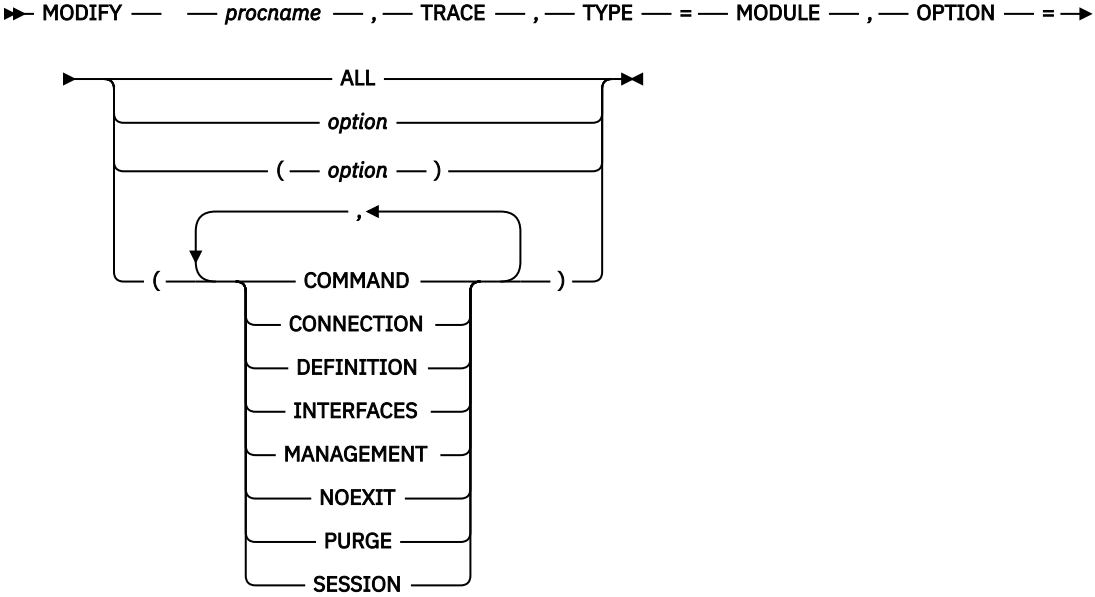
Start or modify an input/output trace:



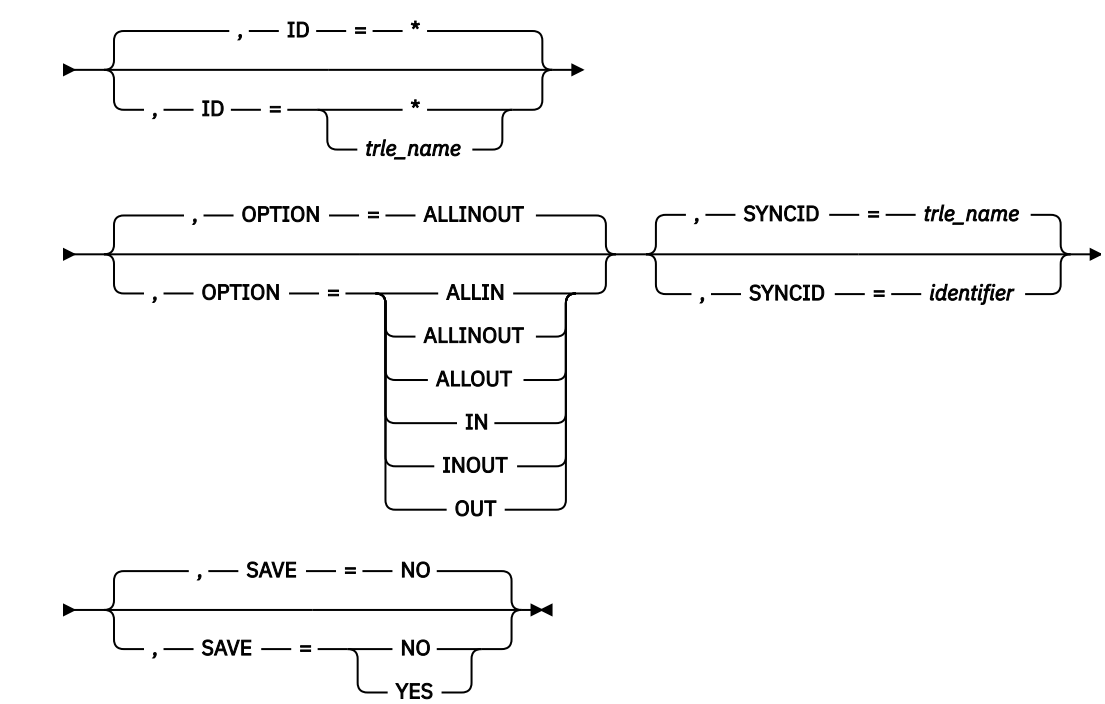
Start or modify an input/output trace for a TRLE with the DATAPATH operand coded:



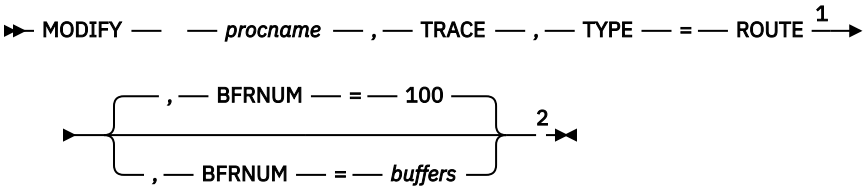
Start or modify a module trace:



Start or modify OSA-Express2 diagnostic data synchronization for an OSA-Express2 adapter:



Start the APPN route selection trace in a network node:

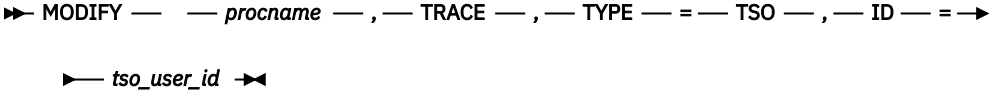


Notes:

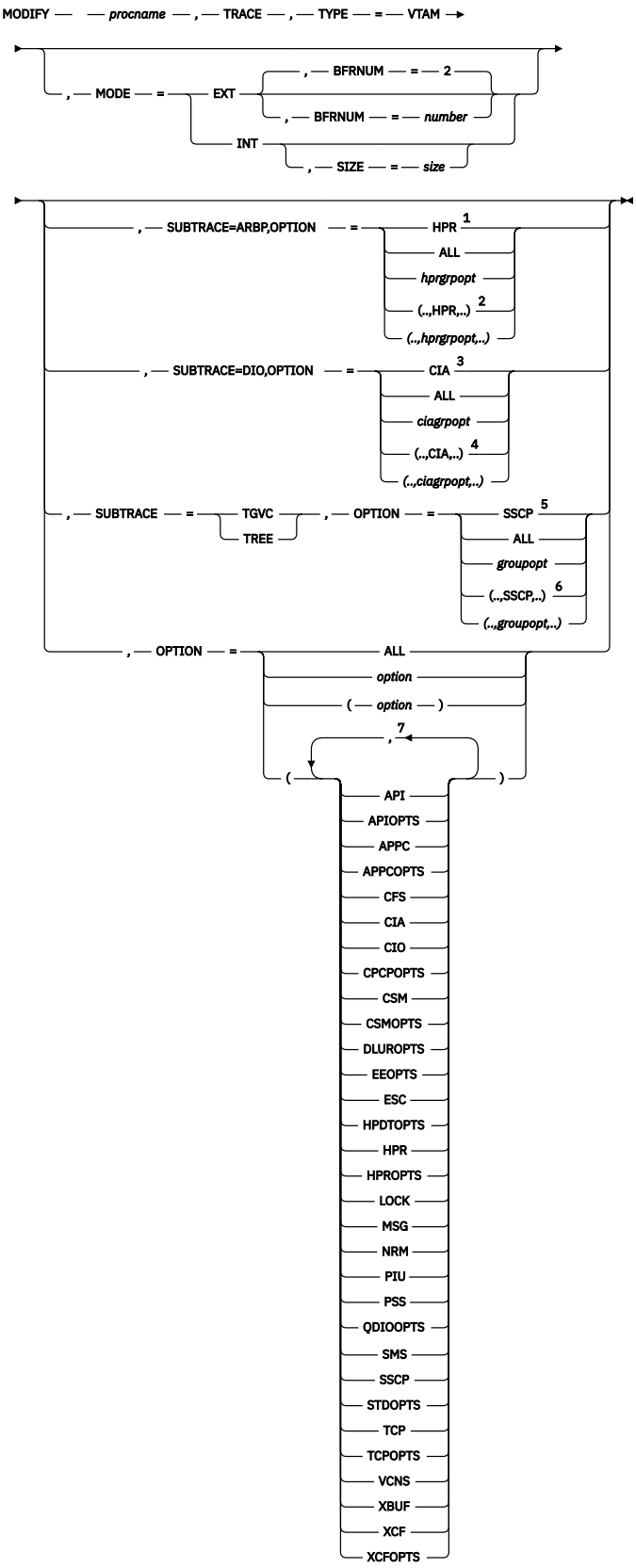
[1] TYPE=ROUTE is allowed only in a network node.

[2] The initial default value for BFRNUM is 100. When the initial value has been set, it remains until the value is changed with BFRNUM specified on another MODIFY TRACE command.

Start or modify a TSO user ID trace:



Start or modify the VTAM internal trace:



Notes:

[1] When you specify SUBTRACE=ARBP and you code a single OPTION value, the OPTION value must be HPR, ALL, or one of the group options (*hprgrpopt*) that include HPR as an individual option

equivalent. The applicable group options are DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, and XCFOPTS.

[2] When SUBTRACE=ARBP is coded and you code multiple trace options in parentheses, you must code either HPR or one of the group options (*hprgrpopt*) that include HPR as an individual option equivalent inside the parentheses.

[3] When you specify SUBTRACE=DIO and you code a single OPTION value, the OPTION value must be CIA, ALL, or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent. The applicable group options are EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, TCPOPTS and XCFOPTS.

[4] When SUBTRACE=DIO is coded and you code multiple trace options in parentheses, you must code either CIA or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent inside the parentheses.

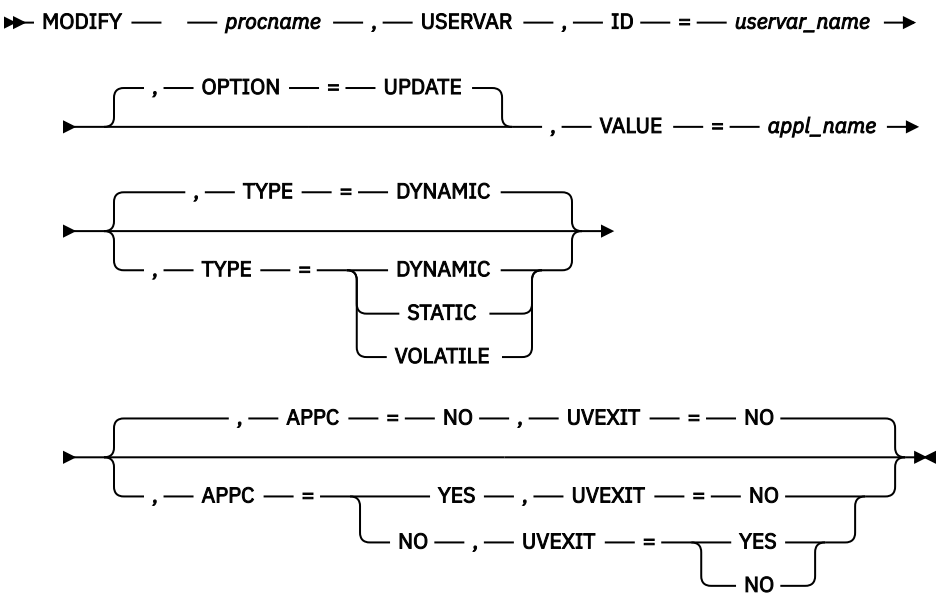
[5] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code a single OPTION value, the OPTION value must be either SSCP, ALL, or one of the group options (*groupopt*), all of which include SSCP as an individual option equivalent. The group options are APIOPTS, APPCOPTS, CPCPOPTS, CSMOPTS, DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, STDOPTS, TCPOPTS, and XCFOPTS.

[6] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code multiple trace options in parentheses, you must code either SSCP or one of the group options (*groupopt*) inside the parentheses.

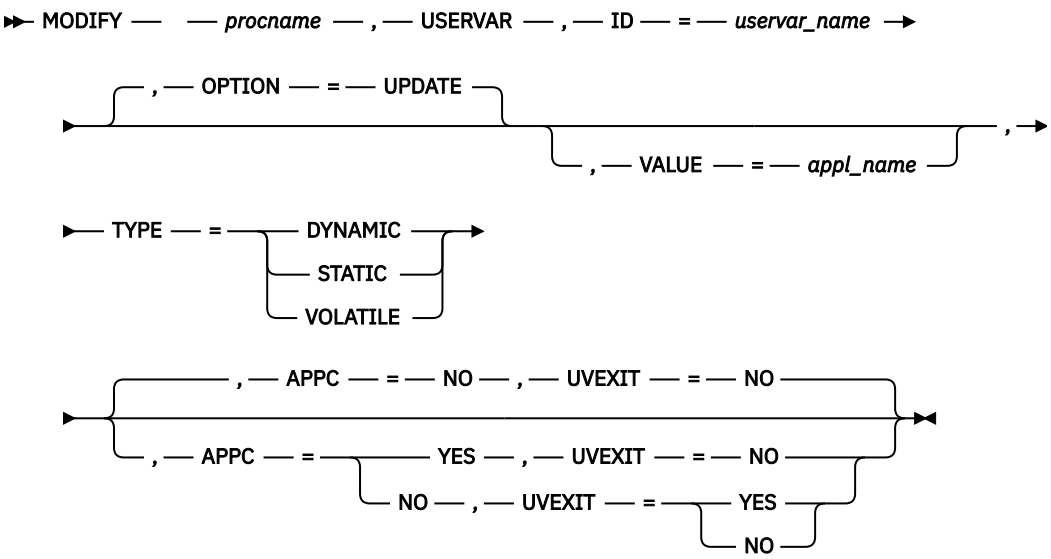
[7] If you are operating in VIT Control FULL mode and you specify any of the group options (*groupopt*), the STDOPTS group option is also started. See z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for more information on VIT control options.

F USERVAR command

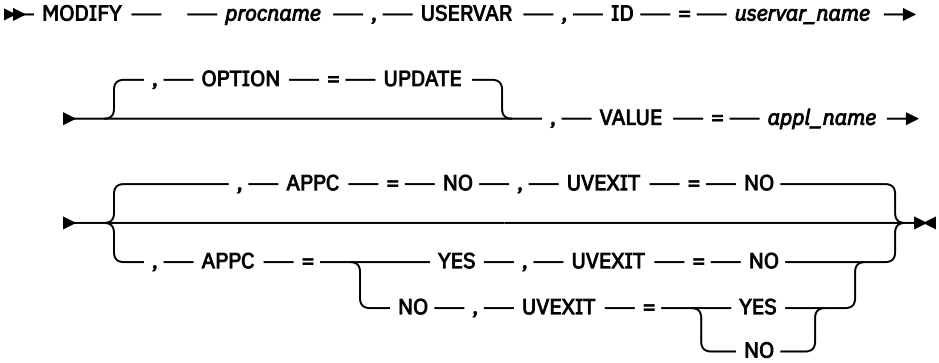
Create a new USERVAR:



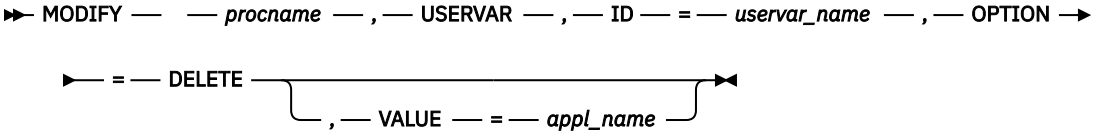
Update an existing USERVAR and change the TYPE:



Update an existing USERVAR, leaving the TYPE unchanged:

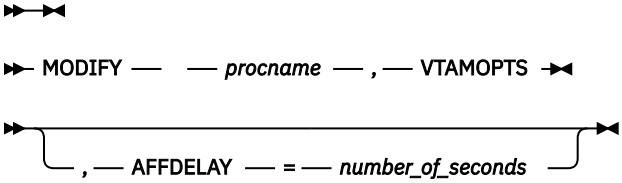


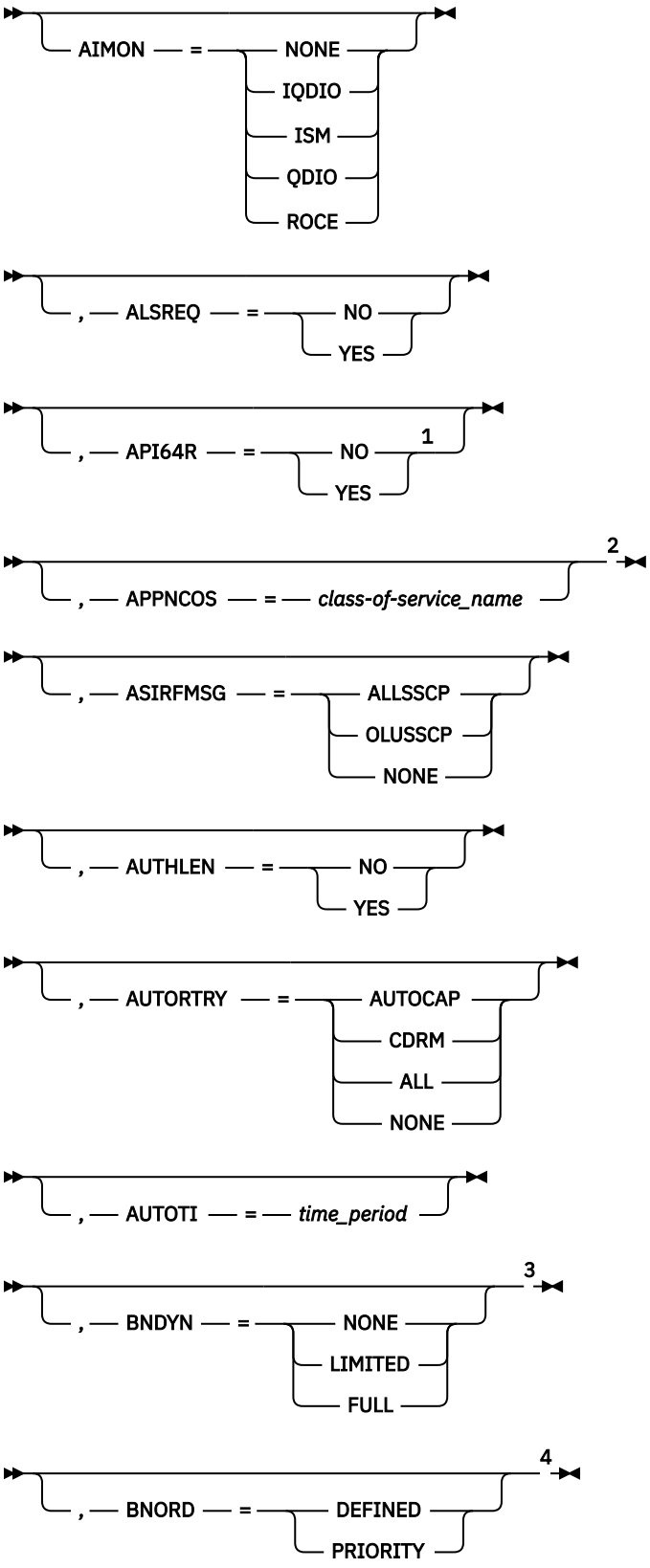
Delete a USERVAR:

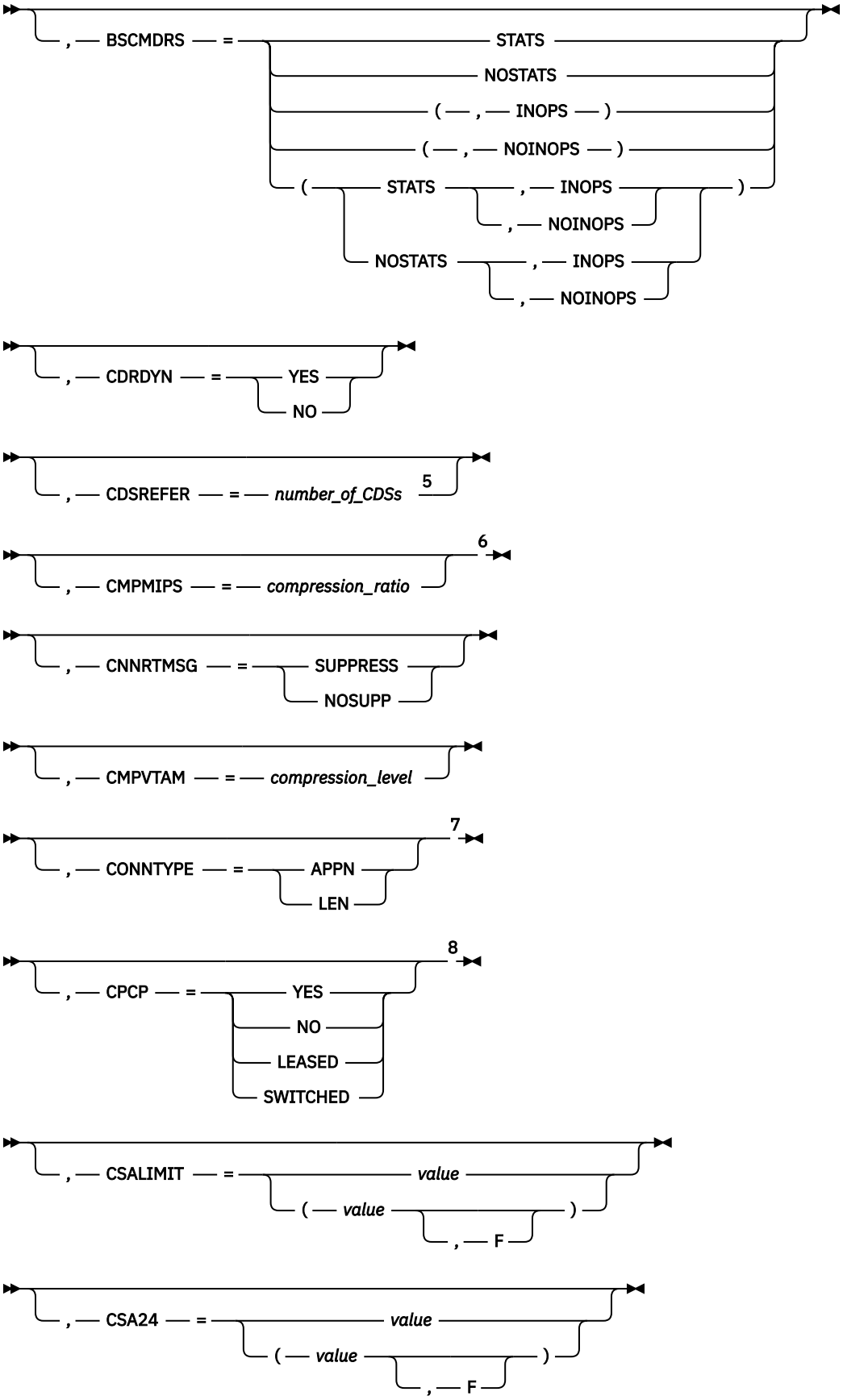


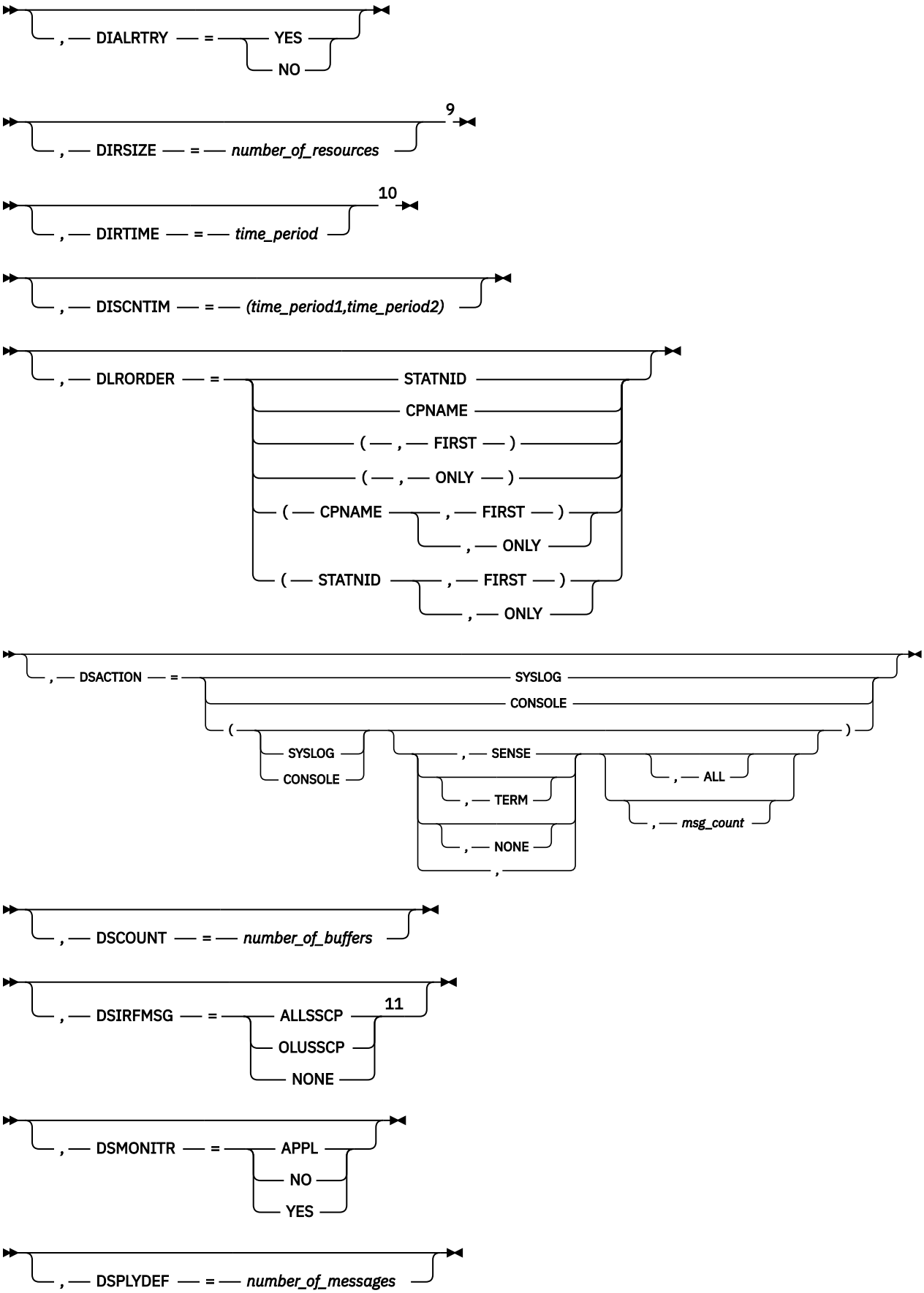
F VTAMOPTS command

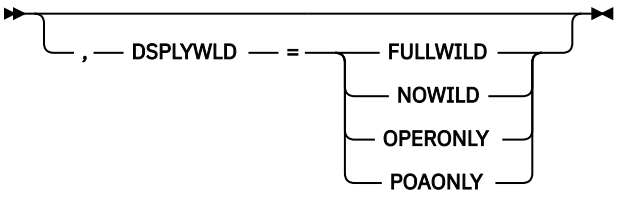
Change certain values that might have been specified on VTAM start options:

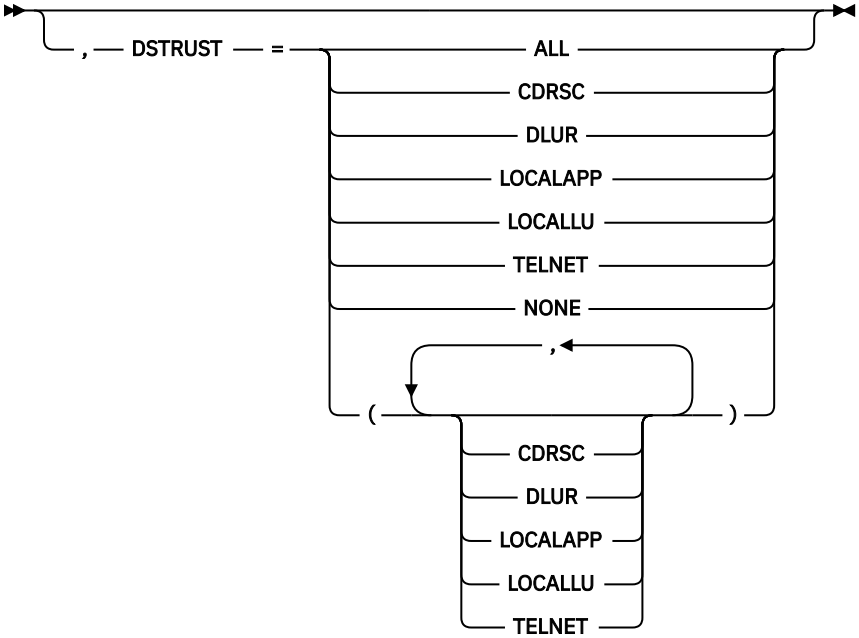


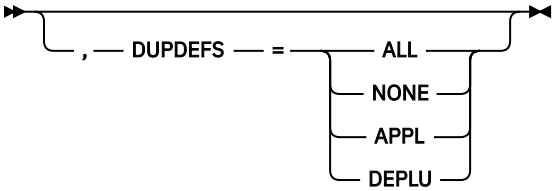

AIMON = NONE
IQDIO
ISM
QDIO
ROCE
, ALSREQ = NO
YES
, API64R = NO 1
YES
, APPNCOS = class-of-service_name 2
, ASIRFMSG = ALLSSCP
OLUSSCP
NONE
, AUTHLEN = NO
YES
, AUTORTRY = AUTOCAP
CDRM
ALL
NONE
, AUTOTI = time_period
, BNDYN = NONE 3
LIMITED
FULL
, BNORD = DEFINED 4
PRIORITY

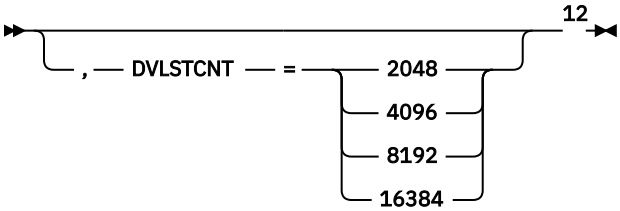

, BSCMDRS = STATS
NOSTATS
(, INOPS)
(, NOINOPS)
(STATS , INOPS)
, NOINOPS
NOSTATS , INOPS
, NOINOPS
, CDRDYN = YES
NO
, CDSREFER = number_of_CDSs 5
, CMPMIPS = compression_ratio 6
, CNNRTMSG = SUPPRESS
NOSUPP
, CMPVTAM = compression_level
, CONNTYPE = APPN 7
LEN
, CPCP = YES 8
NO
LEASED
SWITCHED
, CSALIMIT = value
(value)
, F
, CSA24 = value
(value)
, F

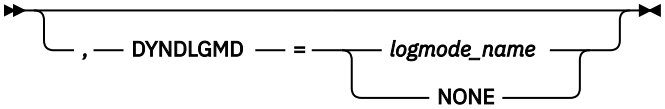

, DIALRTRY = YES
NO
, DIRSIZE = number_of_resources
9
, DIRTIME = time_period
10
, DISCNTIM = (time_period1,time_period2)
, DLRORDER = STATNID
CPNAME
(, FIRST)
(, ONLY)
(CPNAME , FIRST)
, ONLY
(STATNID , FIRST)
, ONLY
, DSACTION = SYSLOG
CONSOLE
(SYSLOG
CONSOLE
, SENSE
, TERM
, NONE
,
, ALL
, msg_count
)
, DSCOUNT = number_of_buffers
, DSIRFMSG = ALLSSCP
OLUSSCP
NONE
11
, DSMONITR = APPL
NO
YES
, DSPLYDEF = number_of_messages

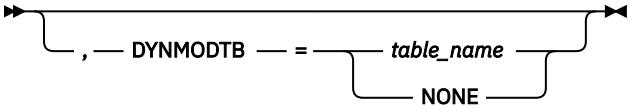

, DSPLYWLD = FULLWILD
NOWILD
OPERONLY
POAONLY

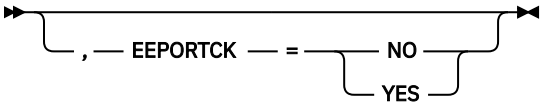

, DSTRUST = ALL
CDRSC
DLUR
LOCALAPP
LOCALLU
TELNET
NONE
(,) CDRSC DLUR LOCALAPP LOCALLU TELNET

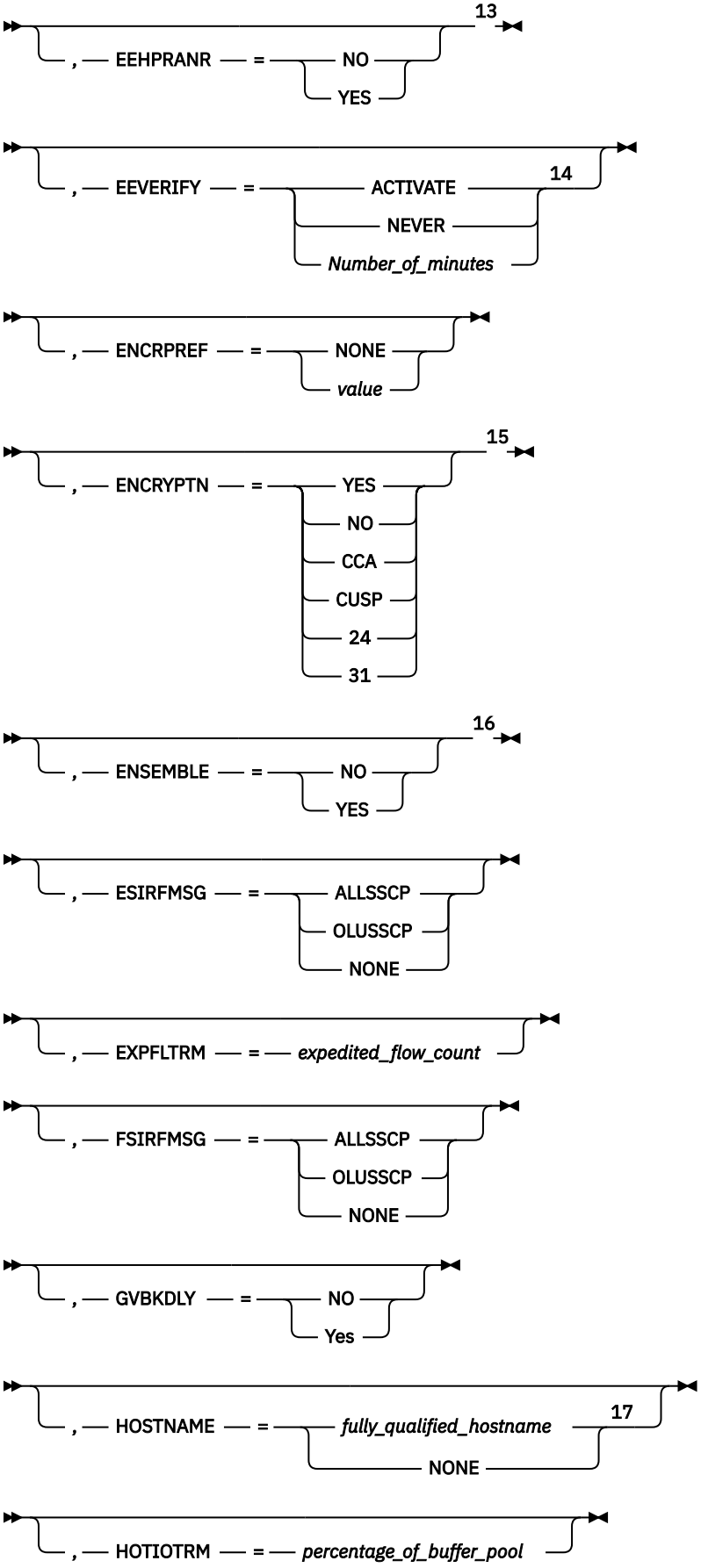

, DUPDEFS = ALL
NONE
APPL
DEPLU

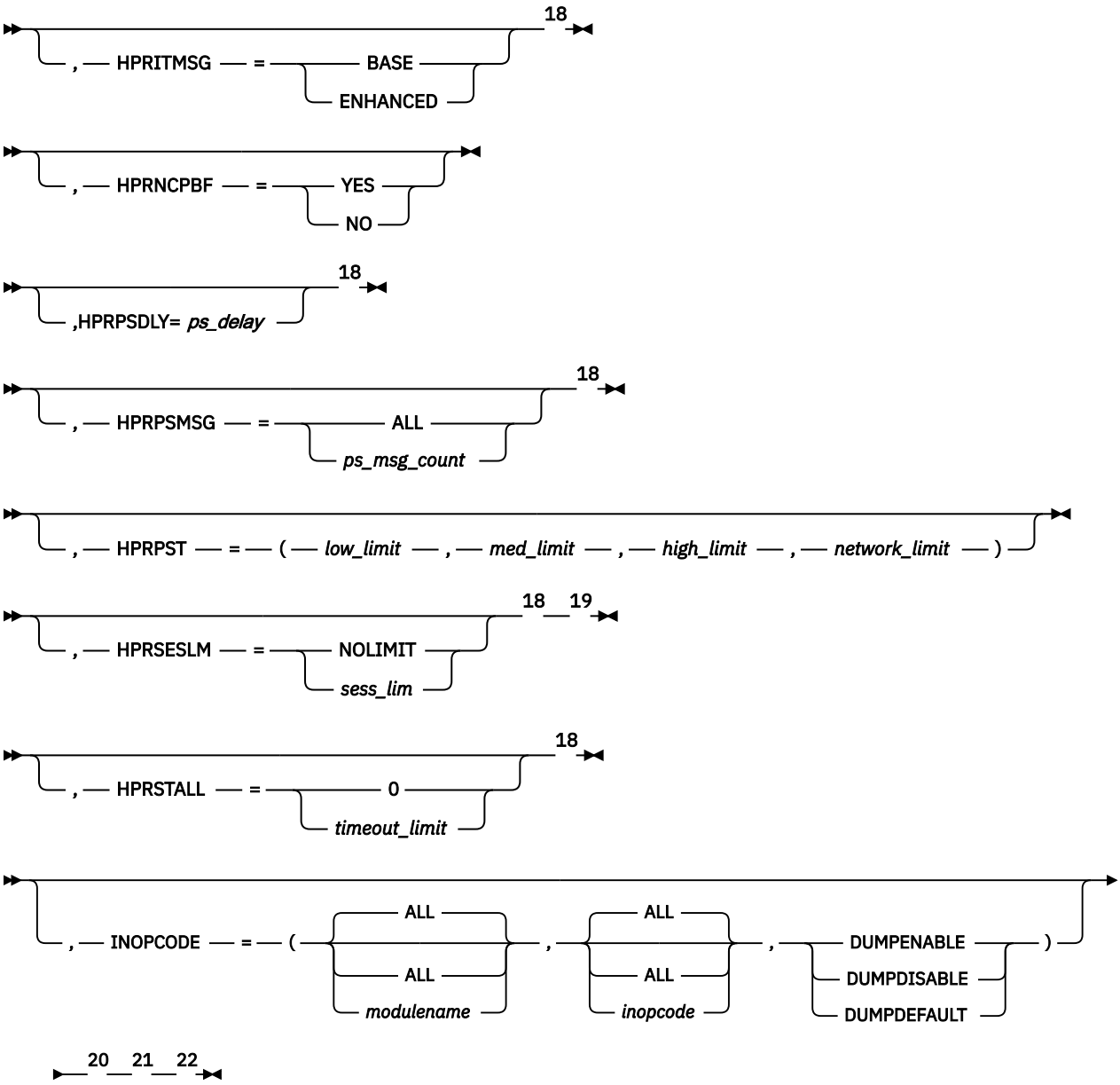

12
, DVLSTCNT = 2048
4096
8192
16384

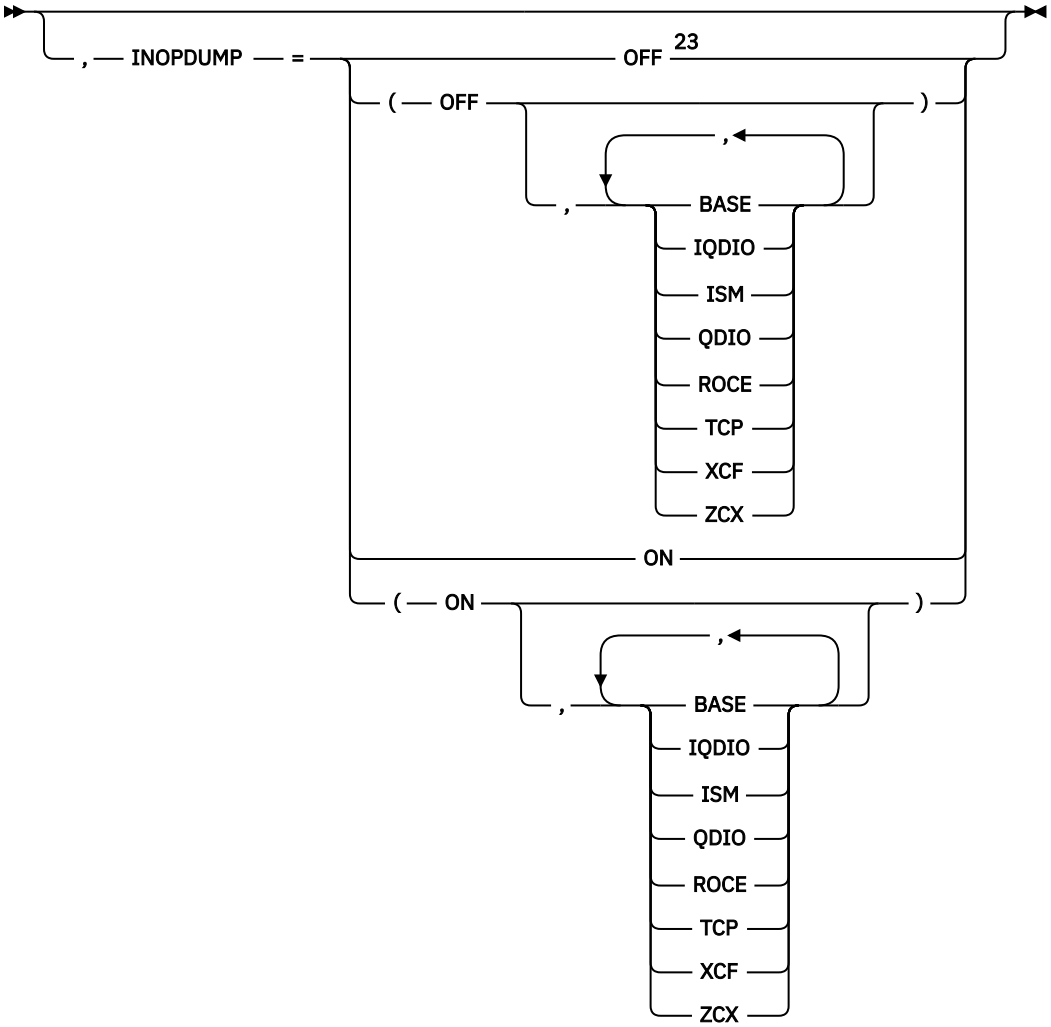

, DYNDLGMD = logmode_name
NONE

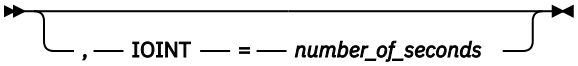

, DYNMODTB = table_name
NONE

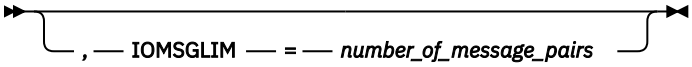

, EEPORTCK = NO
YES

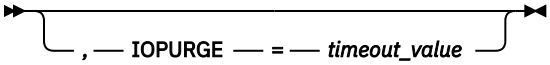

, EEHPRANR = NO YES 13
, EEVERIFY = ACTIVATE NEVER Number_of_minutes 14
, ENCRPREF = NONE value
, ENCRYPTN = YES NO CCA CUSP 24 31 15
, ENSEMBLE = NO YES 16
, ESIRFMSG = ALLSSCP OLUSSCP NONE
, EXPFLTRM = expedited_flow_count
, FSIRFMSG = ALLSSCP OLUSSCP NONE
, GVBKDLY = NO Yes
, HOSTNAME = fully_qualified_hostname NONE 17
, HOTIOTRM = percentage_of_buffer_pool

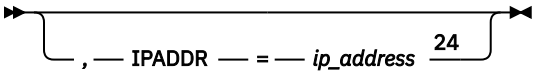

18
, HPRITMSG = BASE
ENHANCED
, HPRNCPBF = YES
NO
18
,HPRPSDLY= ps_delay
18
, HPRPSMSG = ALL
ps_msg_count
, HPRPST = (low_limit , med_limit , high_limit , network_limit)
18 19
, HPRSESLM = NOLIMIT
sess_lim
18
, HPRSTALL = 0
timeout_limit
, INOPCODE = (ALL
ALL
modulename , ALL
ALL
inopcode , DUMPENABLE
DUMPDISABLE
DUMPDEFAULT)
20 21 22

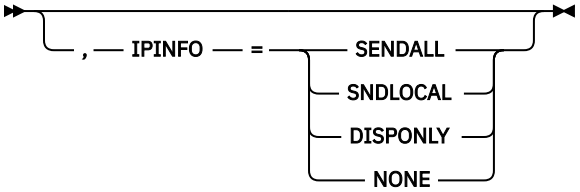

, INOPDUMP = OFF 23
(OFF)
, BASE
IQDIO
ISM
QDIO
ROCE
TCP
XCF
ZCX
ON
(ON)
, BASE
IQDIO
ISM
QDIO
ROCE
TCP
XCF
ZCX

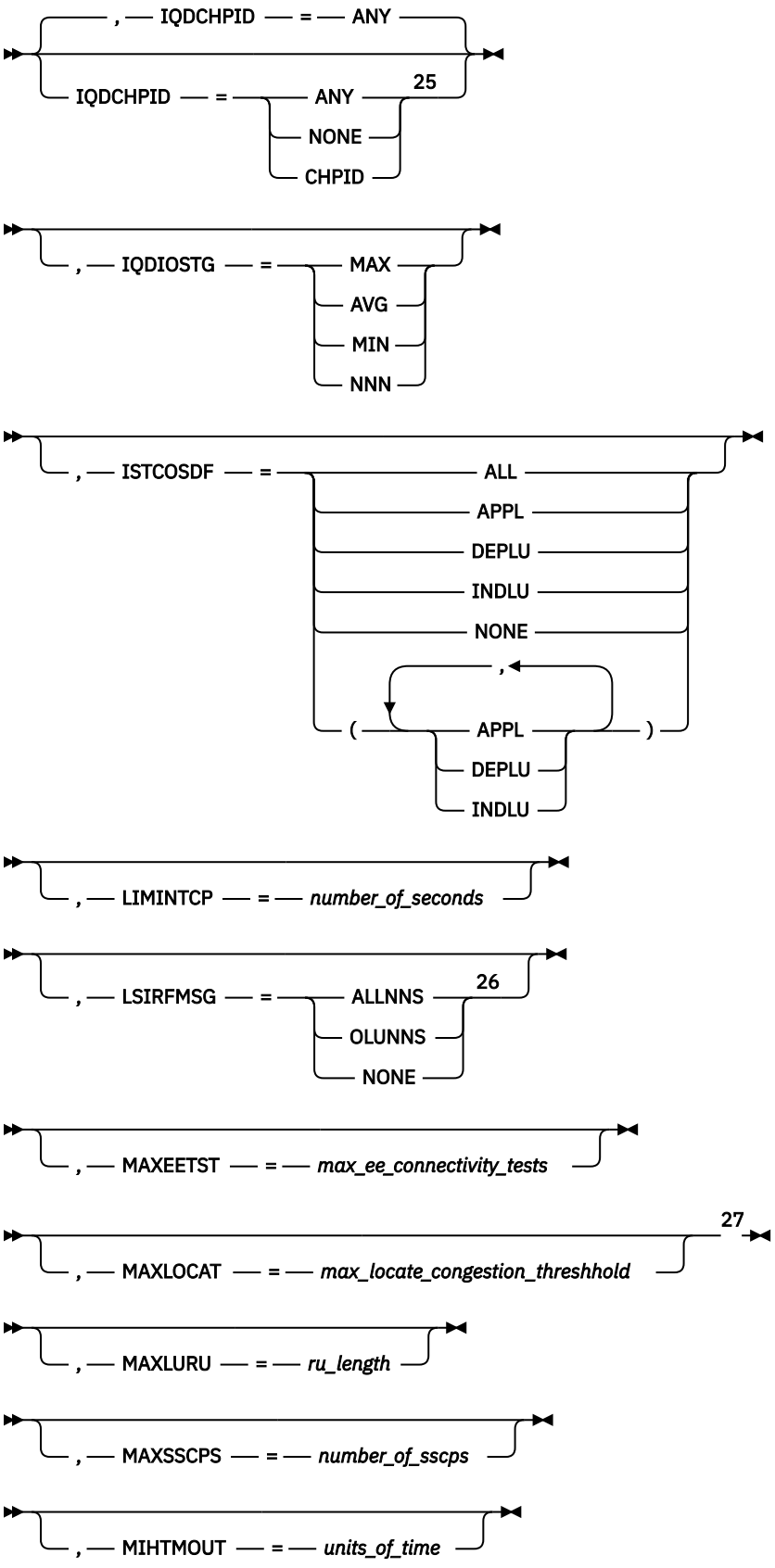

, IOINT = number_of_seconds

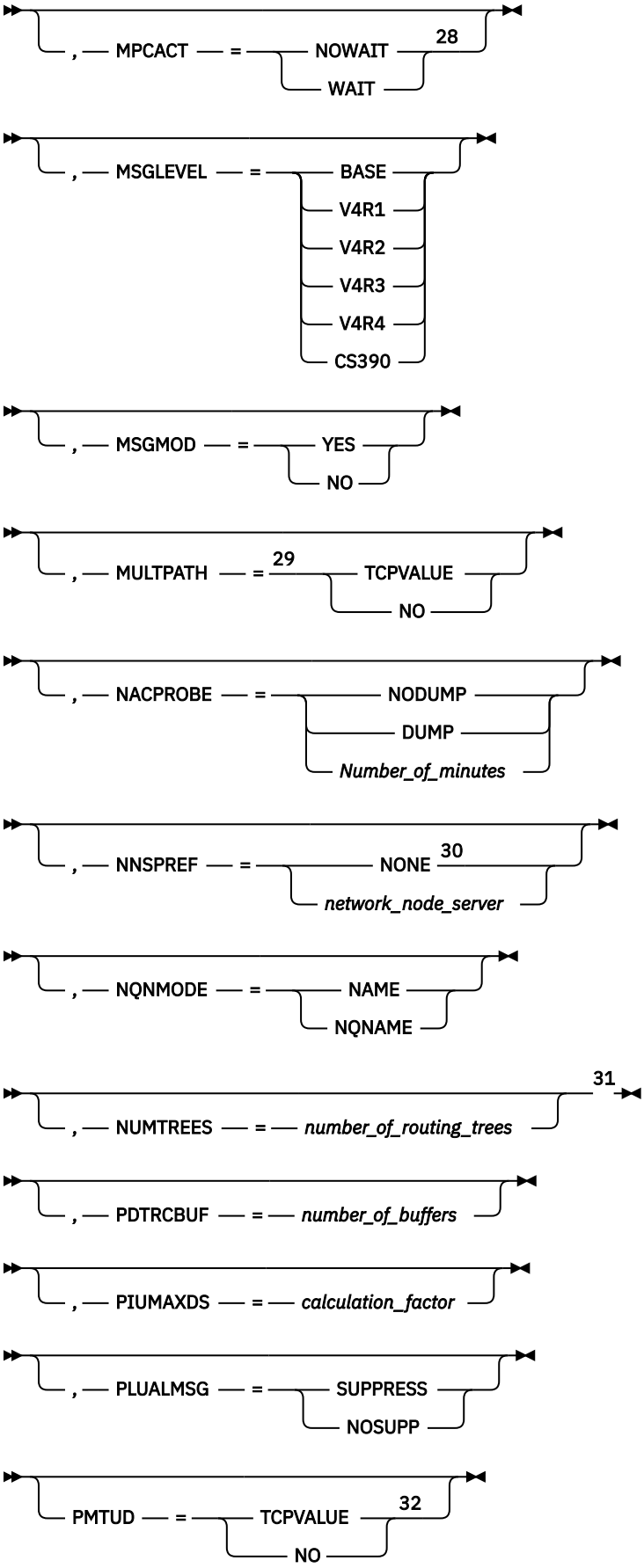

, IOMSGLIM = number_of_message_pairs

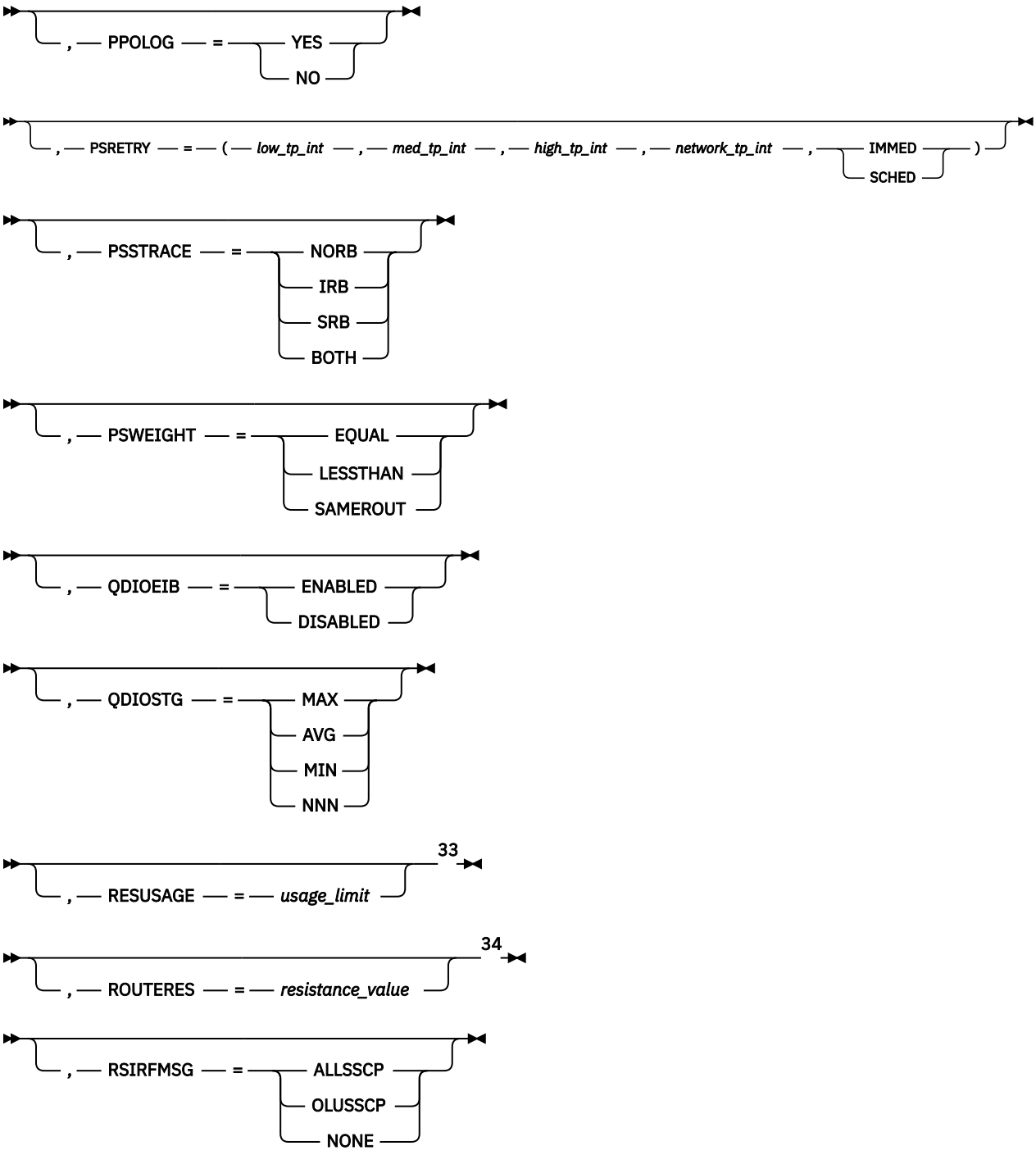

, IOPURGE = timeout_value

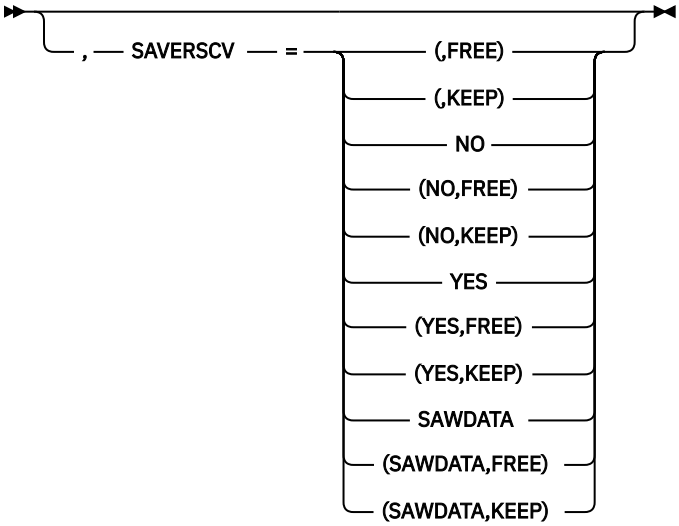

, IPADDR = ip_address 24

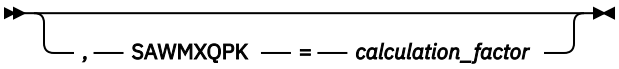

, IPINFO = SENDALL
SNDLOCAL
DISPONLY
NONE

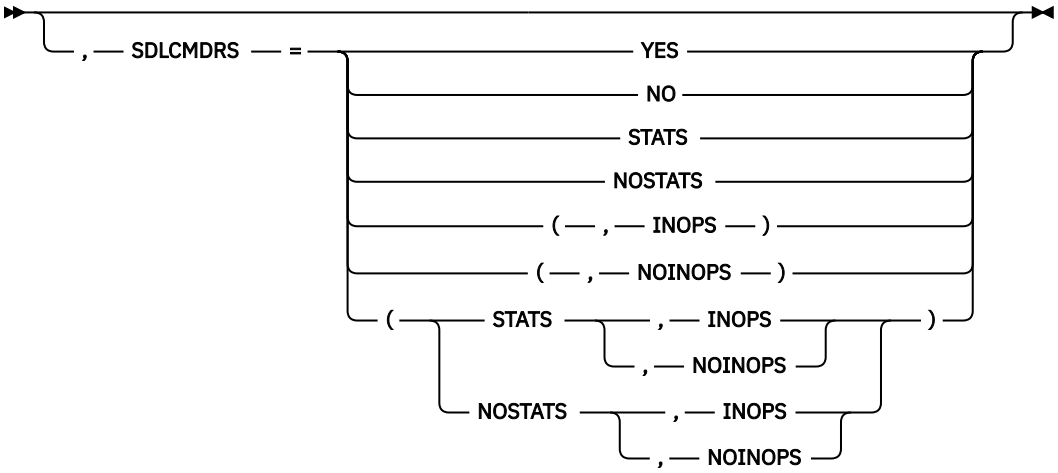

, IQDCHPID = ANY
IQDCHPID = ANY 25
NONE
CHPID
, IQDIOSTG = MAX
AVG
MIN
NNN
, ISTCOSDF = ALL
APPL
DEPLU
INDLU
NONE
(, APPL)
DEPLU
INDLU
, LIMINTCP = number_of_seconds
, LSIRFMSG = ALLNNS 26
OLUNNS
NONE
, MAXEETST = max_ee_connectivity_tests
, MAXLOCAT = max_locate_congestion_threshhold 27
, MAXLURU = ru_length
, MAXSSCPS = number_of_sscps
, MIHTMOUT = units_of_time

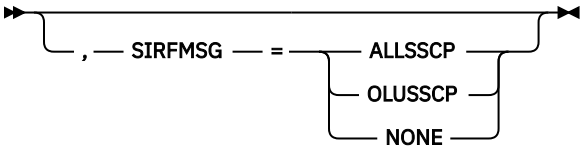

, MPCACT = NOWAIT 28
WAIT
, MSGLEVEL = BASE
V4R1
V4R2
V4R3
V4R4
CS390
, MSGMOD = YES
NO
, MULTPATH = 29 TCPVALUE
NO
, NACPROBE = NODUMP
DUMP
Number_of_minutes
, NNSPREF = NONE 30
network_node_server
, NQNMODE = NAME
NQNAME
, NUMTREES = number_of_routing_trees 31
, PDTRCBUF = number_of_buffers
, PIUMAXDS = calculation_factor
, PLUALMSG = SUPPRESS
NOSUPP
PMTUD = TCPVALUE 32
NO

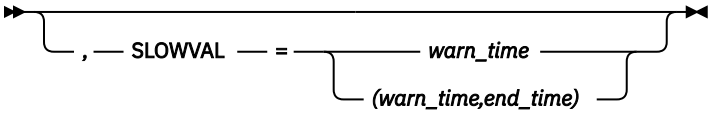

, PPOLOG = YES
NO
, PSRETRY = (low_tp_int , med_tp_int , high_tp_int , network_tp_int , IMMED)
SCHED
, PSSTRACE = NORB
IRB
SRB
BOTH
, PSWEIGHT = EQUAL
LESSTHAN
SAMEROUT
, QDIOEIB = ENABLED
DISABLED
, QDIOSTG = MAX
AVG
MIN
NNN
, RESUSAGE = usage_limit
33
, ROUTERES = resistance_value
34
, RSIRFMSG = ALLSSCP
OLUSSCP
NONE

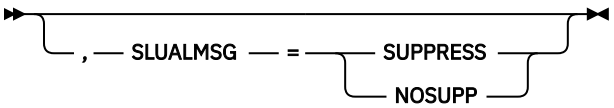

, SAVERSCV = (,FREE)
(,KEEP)
NO
(NO,FREE)
(NO,KEEP)
YES
(YES,FREE)
(YES,KEEP)
SAWDATA
(SAWDATA,FREE)
(SAWDATA,KEEP)

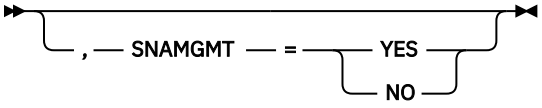

, SAWMXQPK = calculation_factor

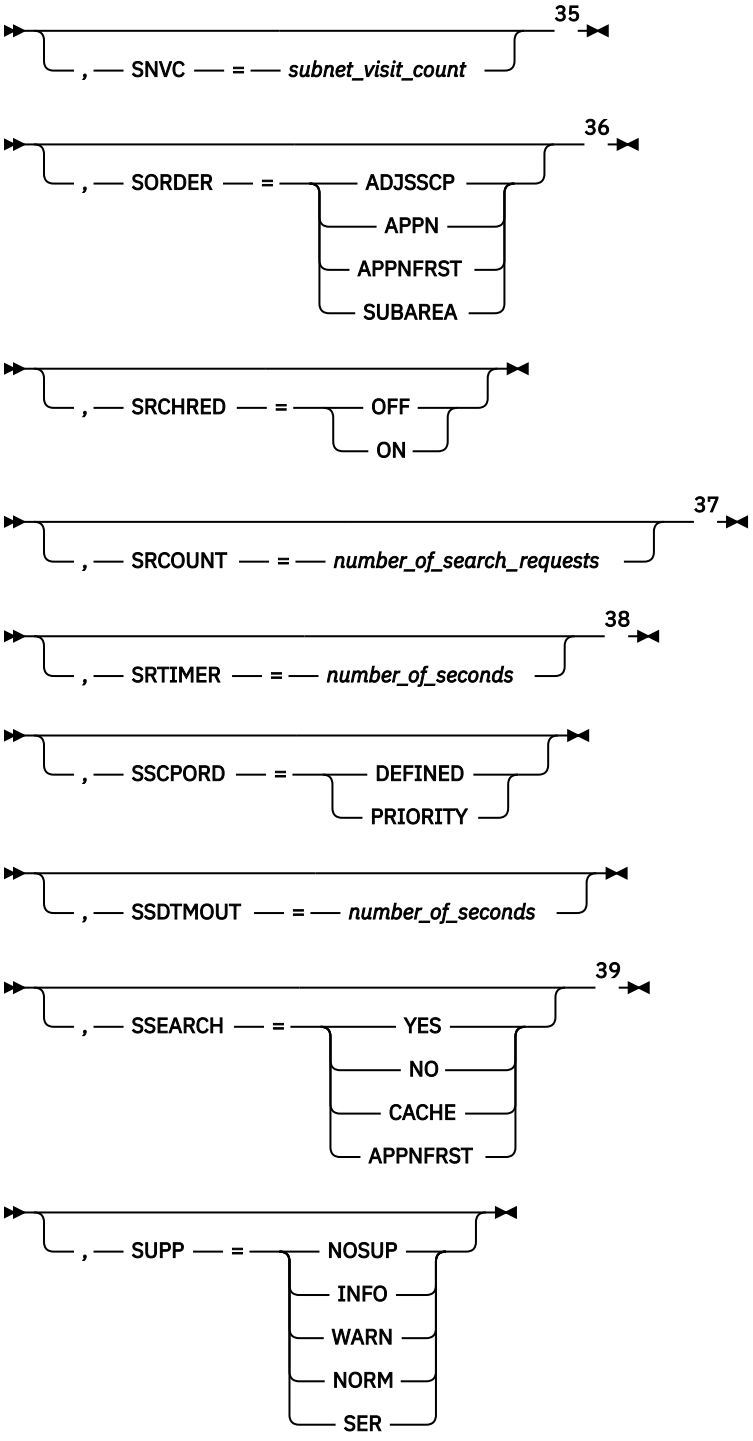

, SDLCMDRS = YES
NO
STATS
NOSTATS
(, INOPS)
(, NOINOPS)
(STATS , INOPS)
, NOINOPS
NOSTATS , INOPS
, NOINOPS

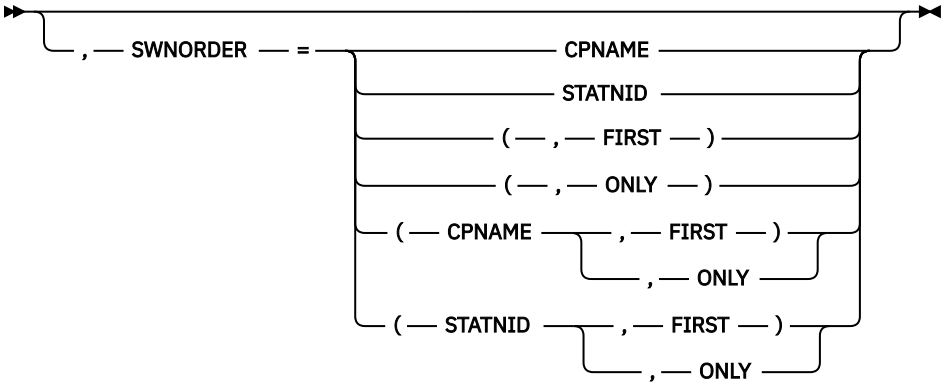

, SIRFMSG = ALLSSCP
OLUSSCP
NONE

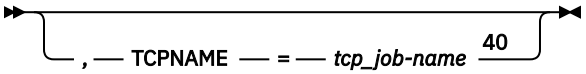

, SLOWVAL = warn_time
(warn_time,end_time)

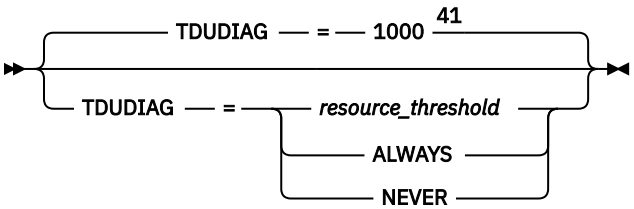

, SLUALMSG = SUPPRESS
NOSUPP

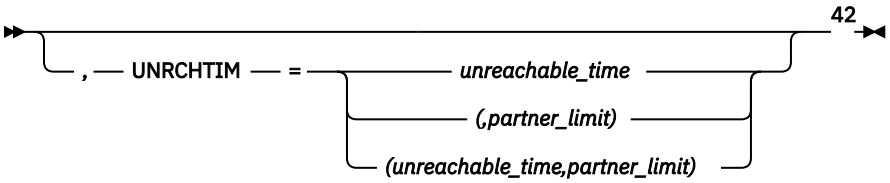

, SNAMGMT = YES
NO

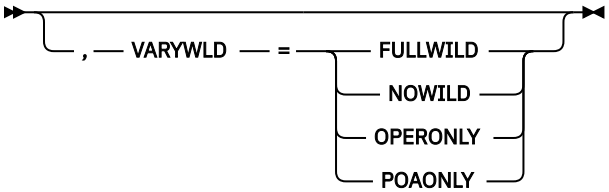

35
, SNVC = subnet_visit_count
36
, SORDER = ADJSSCP
APPN
APPNFRST
SUBAREA
, SRCHRED = OFF
ON
37
, SRCOUNT = number_of_search_requests
38
, SRTIMER = number_of_seconds
, SSCPORD = DEFINED
PRIORITY
, SSDTMOUT = number_of_seconds
39
, SSEARCH = YES
NO
CACHE
APPNFRST
, SUPP = NOSUP
INFO
WARN
NORM
SER

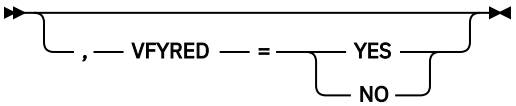

, SWNORDER = CPNAME
STATNID
(, FIRST)
(, ONLY)
(CPNAME , FIRST)
, ONLY
(STATNID , FIRST)
, ONLY

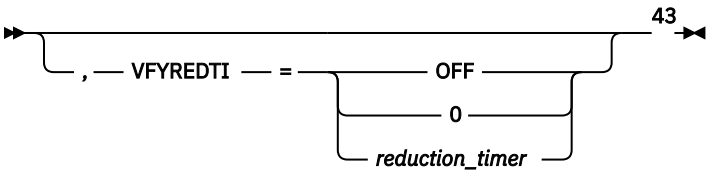

, TCPNAME = tcp_job-name 40

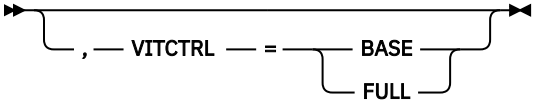

TDUDIAG = 1000 41
TDUDIAG = resource_threshold
ALWAYS
NEVER

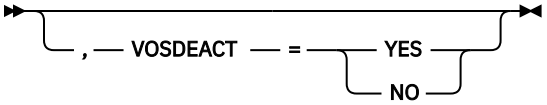

, UNRCHTIM = unreachable_time 42
(,partner_limit)
(unreachable_time,partner_limit)

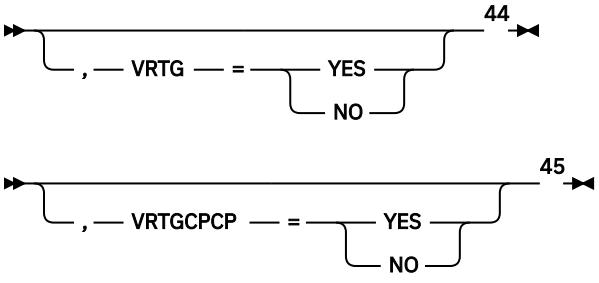

, VARYWLD = FULLWILD
NOWILD
OPERONLY
POAONLY


, VFYRED = YES
NO


, VFYREDTI = OFF 43
0
reduction_timer


, VITCTRL = BASE
FULL


, VOSDEACT = YES
NO



Notes:

[1] API64R can be modified only when running in z/Architecture® mode.

[2] APPNCOS can be modified only if NODETYPE was specified during VTAM START processing.

[3] BNDYN can be modified only if BN=YES was specified during VTAM START processing.

[4] BNORD can be modified only if BN=YES was specified during VTAM START processing.

[5] CDSREFER can be modified only if NODETYPE=NN and CDSERVR=NO were specified during VTAM START processing.

[6] CMPMIPS is meaningful only if the value for CMPVTAM is greater than 1.

[7] CONNTYPE can be modified only if NODETYPE was specified during VTAM START processing.

[8] CPCP can be modified only if NODETYPE was specified during VTAM START processing.

[9] DIRSIZE can be modified only if NODETYPE=NN was specified during VTAM START processing.

[10] DIRTIME can be modified only if NODETYPE=NN was specified during VTAM START processing.

[11] Because of the volume of messages that can be generated, it is not recommended that this option be enabled during normal operation. Instead, it is recommended that this option be enabled (using the MODIFY VTAMOPTS command) on all necessary hosts only when trying to diagnose specific problems. After the problem has been diagnosed or documentation has been collected, this option should be disabled once again (using the MODIFY VTAMOPTS command).

[12] Use the CFSIZER tool to determine the appropriate number of lists for your EZBDVIPA structure, as well as, the suggested INITSIZE and SIZE values for the structure. Before you modify the DVLSTCNT option to increase the number of lists requested for the EZBDVIPA structure, update your CFRM policy with the recommended INITSIZE and SIZE values. Increasing the number of lists requires more storage for the EZBDVIPA structure. Make sure the same DVLSTCNT value is configured in all VTAMs in the sysplex. To enable the modified DVLSTCNT value, issue the following SETXCF MVS command to rebuild the EZBDVIPA structure: **SETXCF START,REBUILD,STRNAME=EZBDVIPA**. See SETXCF command in z/OS MVS System Commands for more information.

[13] EEHPRANR is meaningful only when the NODETYPE=NN start option is also used.

[14] The EEVERIFY start option is meaningful only if VTAM provides RTP-level HPR support. The EEVERIFY start option can be modified only if the NODETYPE start option is specified and the RTP value is specified on the HPR start option.

[15] The ENCRYPTN start option cannot be modified if ENCRYPTN=NO was specified during VTAM START processing.

[16] The ENSEMBLE setting is used to either permit or deny connectivity to the intraensemble data network and the intranode management network. The ensemble setting permits or denies connectivity by either allowing or denying activation of OSX and OSM interfaces. Modifying the ENSEMBLE start option does not cause z/OS Communications Server to take action on active OSX or OSM interfaces.

[17] HOSTNAME can be modified only if NODETYPE was specified during VTAM START processing. Displays of VTAM start options will show the new value immediately; however, the new value will not be used until all Enterprise Extender lines, whose GROUP definition statements do not have HOSTNAME explicitly coded, are inactive. Any subsequent line activation from the Enterprise Extender XCA major node, whose GROUP definition statements do not have HOSTNAME explicitly coded, will make use of the new HOSTNAME start option value. The IPADDR start option, if it is in effect at the time when the MODIFY VTAMOPTS,HOSTNAME=*hostname* is specified, will be reset (that is, set to a value of 0.0.0.0) as part of the MODIFY processing. The value NONE can be used to clear the setting of the HOSTNAME start option. HOSTNAME and IPADDR cannot be modified using one MODIFY

VTAMOPTS command. If both start options are specified on the same MODIFY command, they will both be ignored and message IST1917I will be generated.

[18] This option is meaningful only if VTAM provides RTP-level HPR support.

[19] If the current value of the HPRSESLM start option is DISABLED, then the HPRSESLM value can be changed only by stopping and restarting VTAM.

[20] When specifying an InOpCode for the second parameter, always specify three digits by including any leading zeros.

[21] If an InOpCode is specified for the second parameter, the first parameter cannot be ALL.

[22] INOPCODE has no effect unless INOPDUMP is active for the resource when an inoperative condition is detected. See the section called MODIFY INOPCODE command in z/OS Communications Server: SNA Operation for more details.

[23] When altering the INOPDUMP VTAM start option, the resulting INOPDUMP status is propagated to all TRLEs in the TRL major node if the command is globally set, or it is propogated to a subset of resources that are identified by one or more INOPDUMP control groups. The INOPDUMP setting becomes the default status for any subsequently activated TRLEs.

[24] IPADDR can be modified only if NODETYPE was specified during VTAM START processing. The new value will not be used until all lines, defined with or defaulting to the old value of the IPADDR start option, in the XCA major node used for Enterprise Extender are inactive. However, displays of VTAM start options will show the new value immediately. Any subsequent line activation from the Enterprise Extender XCA major node, whose GROUP definition statement does not specify the IPADDR operand, will make use of the new IPADDR start option value. The HOSTNAME start option, if it is in effect at the time when the MODIFY VTAMOPTS,IPADDR=*ip_address* is specified, will be reset (that is, set to a value of NONE) as part of the MODIFY processing. The value of 0.0.0.0, or an IPv6 address of all zeros, usually written as ::, can be used to clear the setting of the IPADDR start option. HOSTNAME and IPADDR cannot be modified using one MODIFY VTAMOPTS command. If both start options are specified on the same MODIFY command, they will both be ignored and message IST1917I will be generated.

[25] The IQDCHPID option controls which IQD CHPID (and related subchannel devices) VTAM selects to dynamically build the iQDIO (IUTIQDIO) MPC group. The IUTIQDIO MPC group is used for TCP/IP dynamic XCF communications within System z®. Although this option can be modified (and the modification will immediately be displayed) while the IUTIQDIO MPC group is currently active, any modifications have the effects shown in the section called IQD CHPID modifications in z/OS Communications Server: SNA Operation.

[26] Because of the volume of messages that can be generated, it is not recommended that this option be enabled during normal operation. Instead, it is recommended that this option be enabled (using the MODIFY VTAMOPTS command) on all necessary hosts only when trying to diagnose specific problems. After the problem has been diagnosed or documentation has been collected, this option should be disabled once again (using the MODIFY VTAMOPTS command).

[27] MAXLOCAT can be modified only if NODETYPE was specified during VTAM START processing.

[28] The option does not take effect for MPC groups that are in the process of being activated when the command is issued until those MPC groups are deactivated and reactivated.

[29] MULTPATH is meaningful only if the NODETYPE start option is also specified.

[30] NNSPREF can be modified only if NODETYPE=EN was specified during VTAM START processing.

[31] NUMTREES can be modified only if NODETYPE=NN was specified during VTAM START processing.

[32] PMTUD is meaningful only if the NODETYPE start option is also specified.

[33] RESUSAGE can be modified only if NODETYPE=NN was specified during VTAM START processing.

[34] ROUTERES can be modified only if NODETYPE=NN was specified during VTAM START processing.

[35] SNVC can be modified only if BN=YES was specified during VTAM START processing.

[36] SORDER can be modified only if VTAM has been started as an interchange node or a migration data host.

[37] SRCOUNT is meaningful only when SRCHRED=ON.

[38] SRTIMER is meaningful only when SRCHRED=ON.

[39] SSEARCH can be modified only if NODETYPE=NN was specified during VTAM START processing.

[40] TCPNAME can be modified only if NODETYPE was specified during VTAM START processing. The new value will not be used until all lines in the XCA major node used for Enterprise Extender

are inactive. However, displays of VTAM start options will show the new value immediately. Any subsequent line activation from the Enterprise Extender XCA major node will make use of the new TCPNAME value.

[41] TDUDIAG is meaningful only if the NODETYPE=NN start option is also available.

[42] UNRCHTIM is meaningful only if the NODETYPE start option is also used.

[43] VFYREDTI can be modified only if NODETYPE=NN was specified during VTAM START processing.

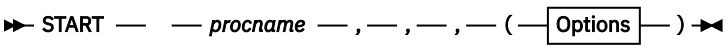
[44] VRTG can be modified only if NODETYPE and HOSTSA are specified.

[45] VRTGCPCP can be modified only if NODETYPE and HOSTSA are specified.

Starting VTAM

START command

Starting VTAM in an MVS environment:

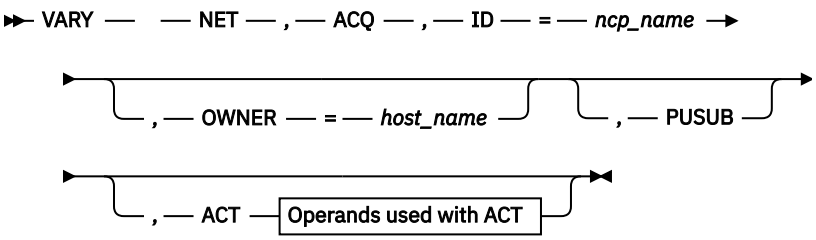


For the syntax of the start options that you can specify on this command, see “Start options” on page 213

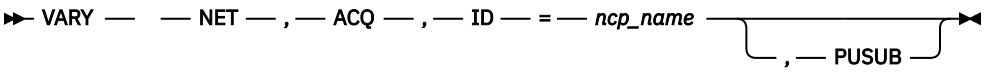
Operator VARY commands

V ACQ command

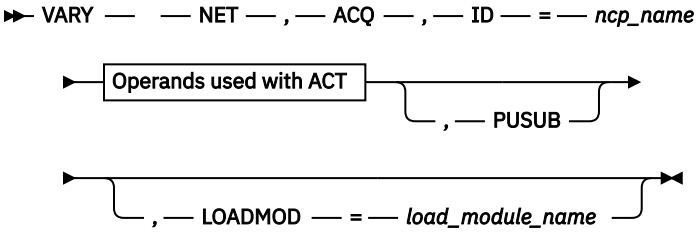
Acquire an NCP, and optionally its subordinate resources, from another host:



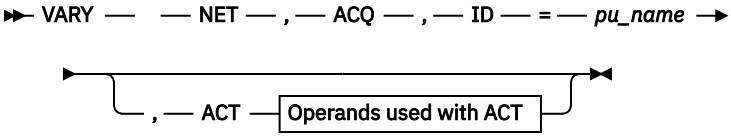
Acquire inactive NCP, and optionally its subordinate resources, without activating them:



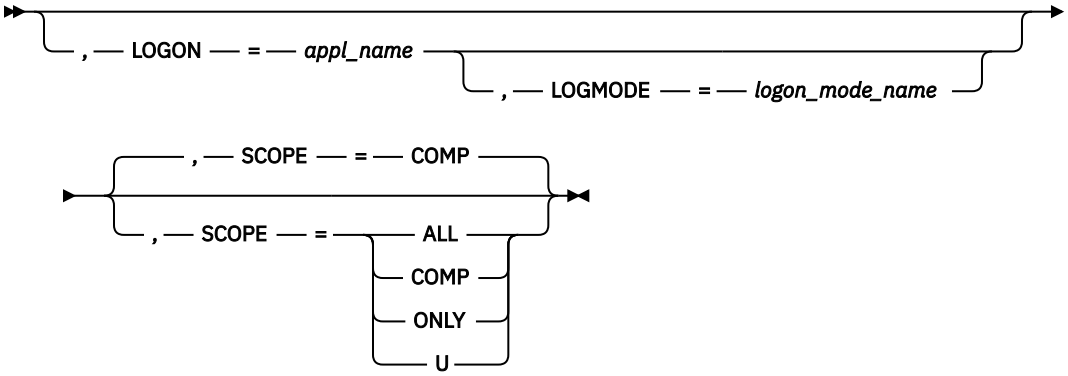
Acquire inactive NCP, and optionally its subordinate resources, and activate them:



Acquire nonswitched PU and its LUs:

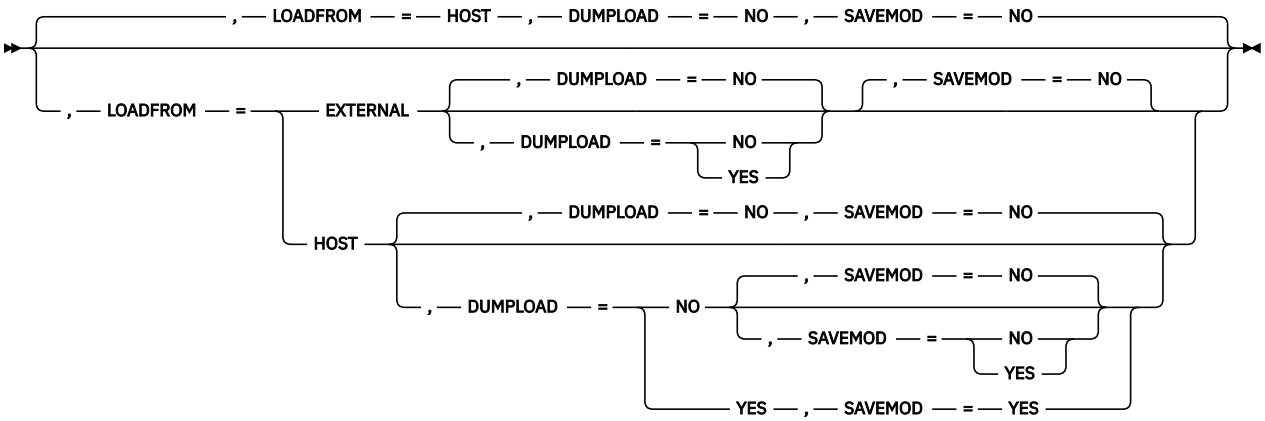


Operands used with ACT

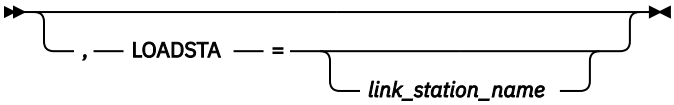


V ACT command

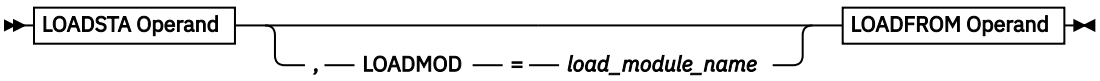
LOADFROM Operand



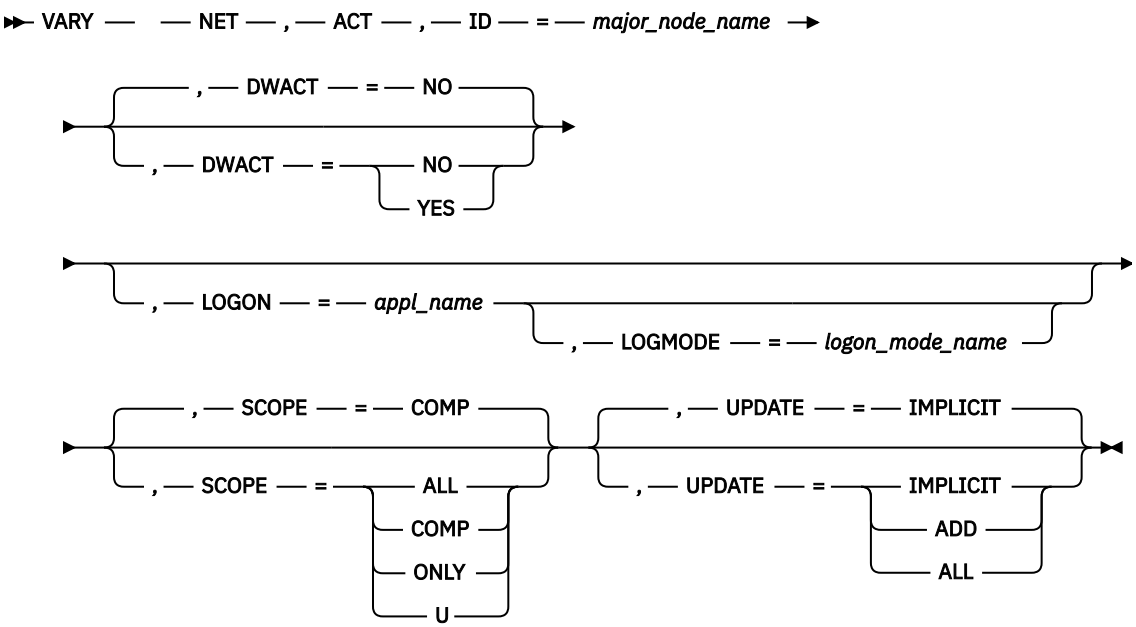
LOADSTA Operand



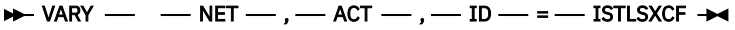
NCP Load Operands



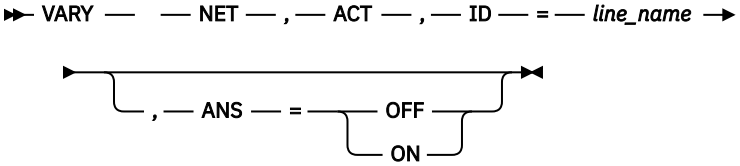
Activate a switched major node:



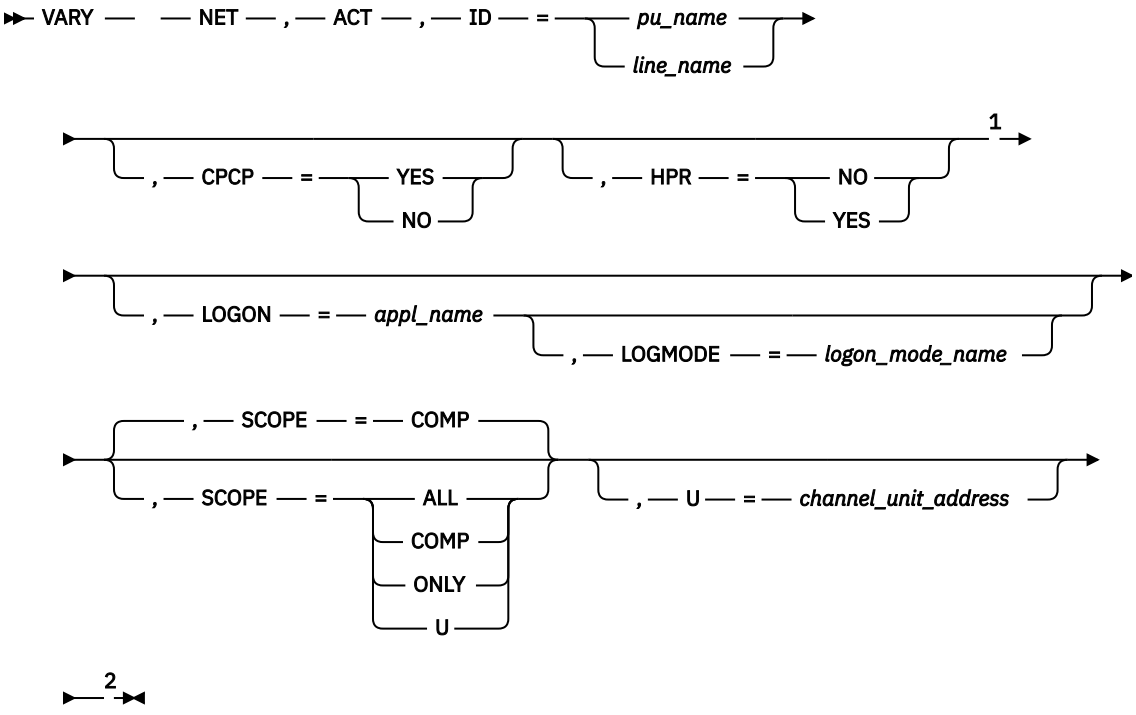
Activate the dynamic XCF local SNA major node:



Activate a switched line:



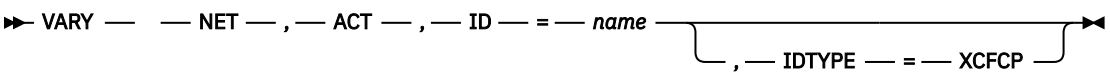
Activate a type 2.1 PU (adjacent link station) or a nonswitched line under an NCP:



Notes:

[1] The HPR operand is valid for HPR-capable resources only.
[2] The U operand is valid for a local SNA PU only.

Activate a dynamic XCF local SNA PU:



Activate a control point (CDRSC minor node or application program minor node):

Activate an SSCP (CDRM minor node):

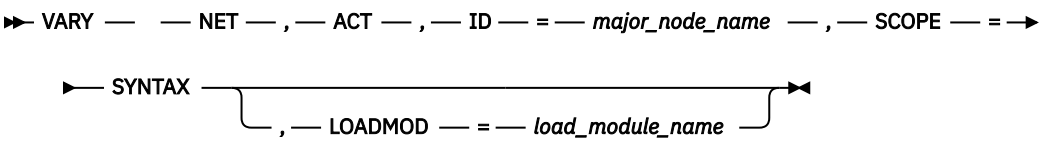
Notes:

[1] HPR and VRTGCPCP are valid only if VRTG=YES is coded for the CDRM, and the CDRM is in an inactive state.
[2] HPR and VRTGCPCP are valid only if VRTG=YES is coded for the CDRM, and the CDRM is in an inactive state.

Warm start a major node:

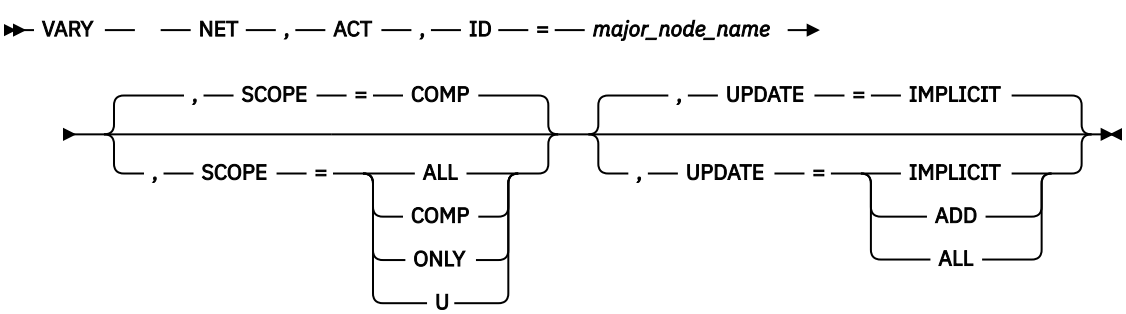
Activate a definition file (a major node with no subordinate resources):

Check the syntax of a definition file (major node):

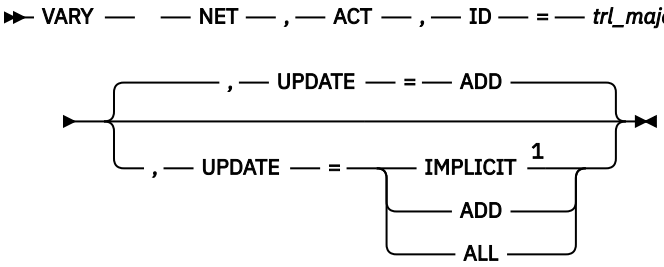


Note: For an NCP major node, follow the syntax diagram for “Activating an NCP major node” and specify the UPDATE operand.

Dynamically reconfigure resources in a major node:



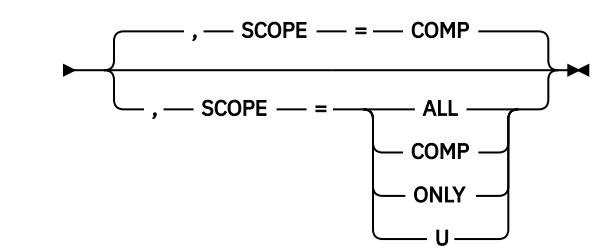
Dynamically reconfigure TRLEs in a TRL major node:



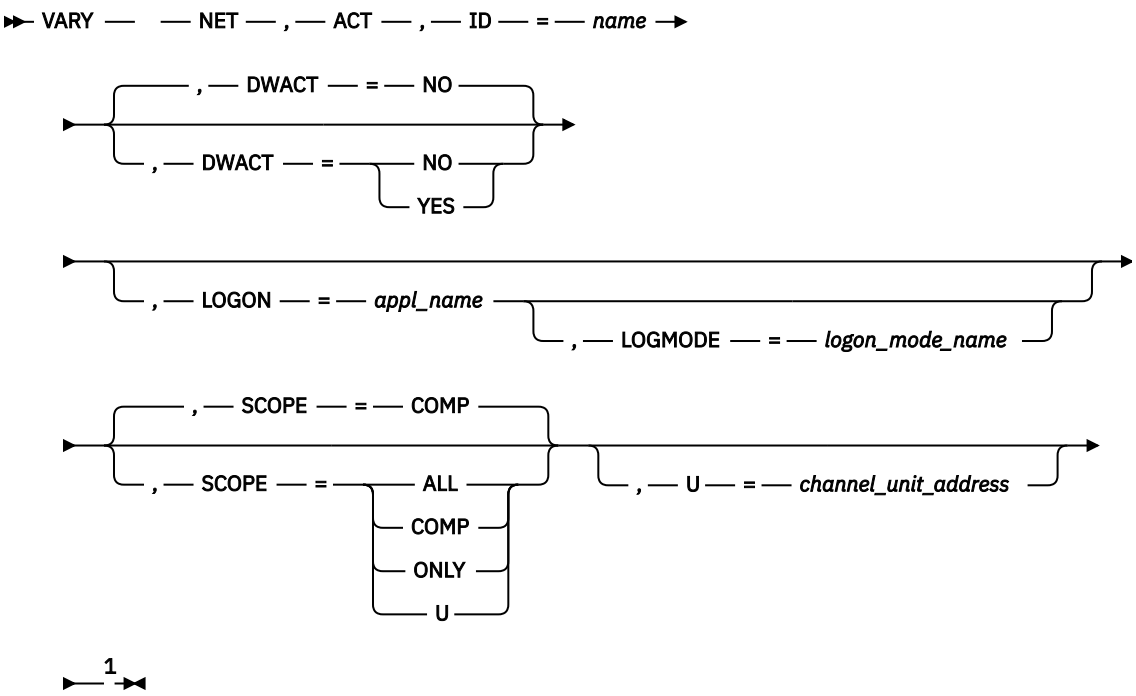
Notes:

[1] Specifying UPDATE=IMPLICIT is the same as UPDATE=ADD.

Activate a group under an Enterprise Extender XCA major node:



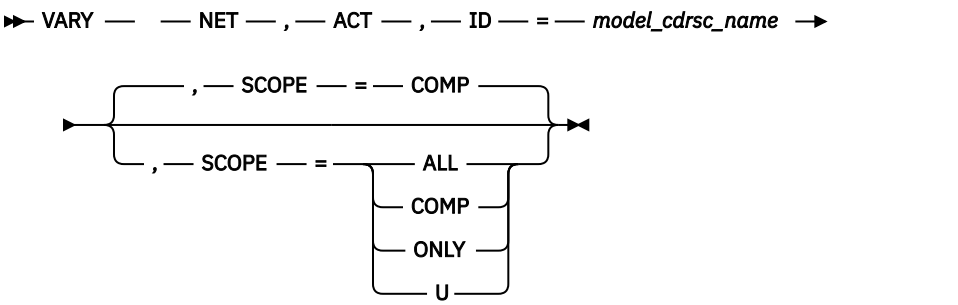
Activate other resources:



Notes:

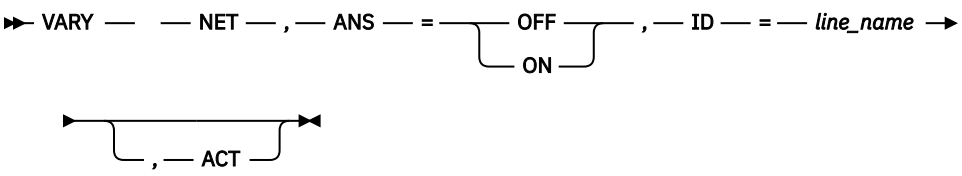
[1] The U operand is valid for a local SNA PU or a channel link.

Activate a model CDRSC and, optionally, all the clone CDRSCs created from it:



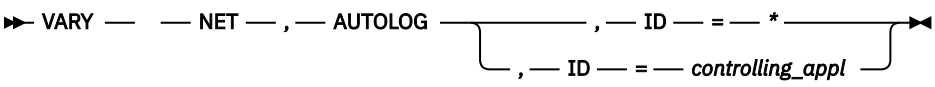
V ANS command

Enable 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:



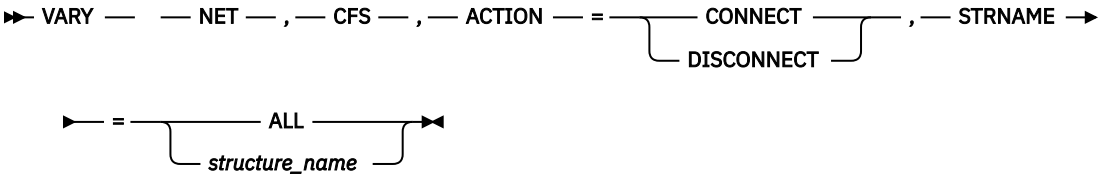
V AUTOLOG command

Initiate automatic logon processing for resources that are defined with controlling applications:



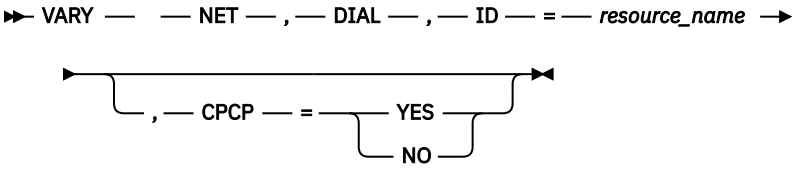
V CFS command

Connect or disconnect from a VTAM coupling facility structure:



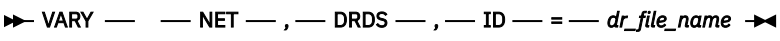
V DIAL command

Establish a switched subarea connection, a switched connection to a type 1,2, or 2.1 device (adjacent link station), or a CPSVRMGR session between a dependent LU requester (DLUR) and a dependent LU server (DLUS):



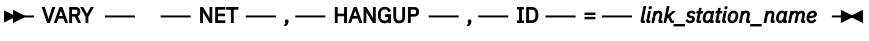
V DRDS command

Dynamically reconfigure a nonswitched peripheral node:



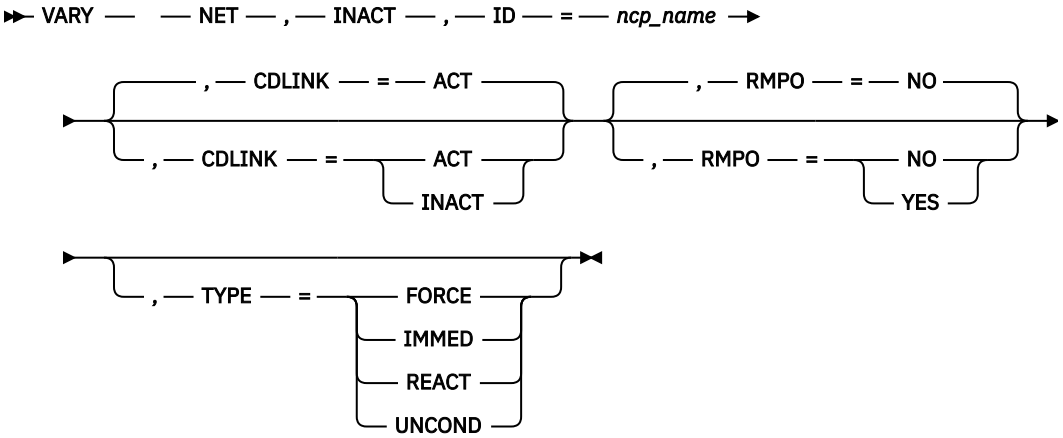
V HANGUP command

Take down a switched subarea connection or a switched connection to a type 1,2, or 2.1 device.

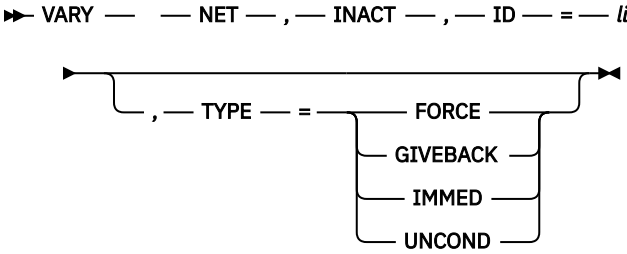


V INACT command

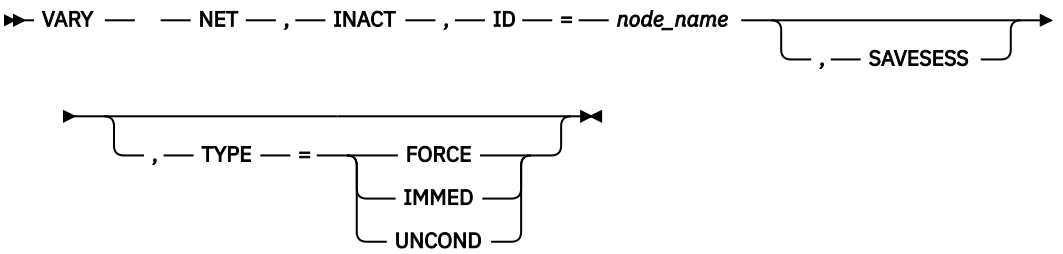
Deactivate an NCP major node:



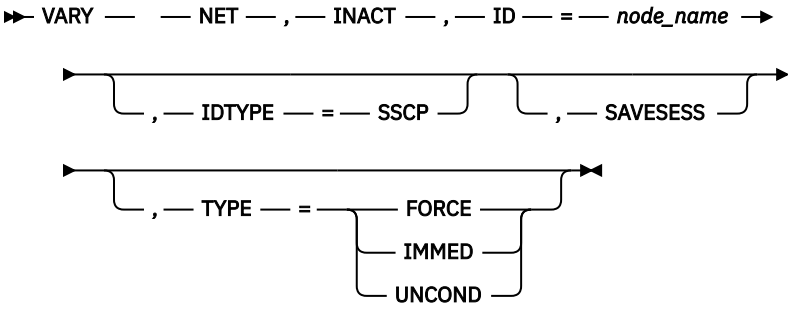
Deactivate an NCP line:



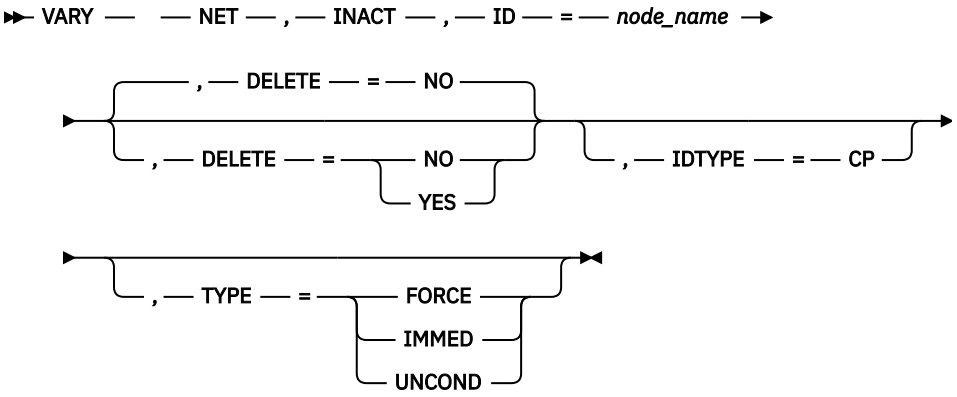
Deactivate a CDRM major node:



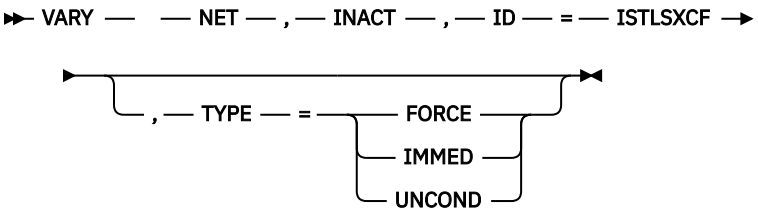
Deactivate a CDRM minor node:



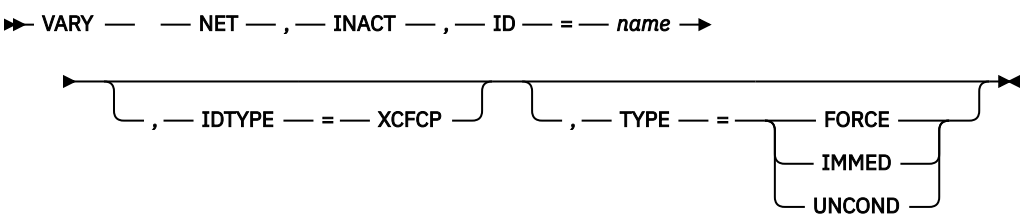
Deactivate a CDRSC minor node:



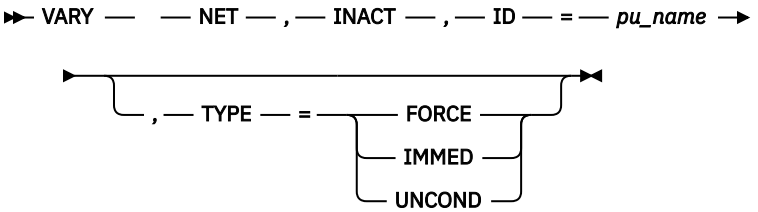
Deactivate the dynamic XCF local SNA major node:



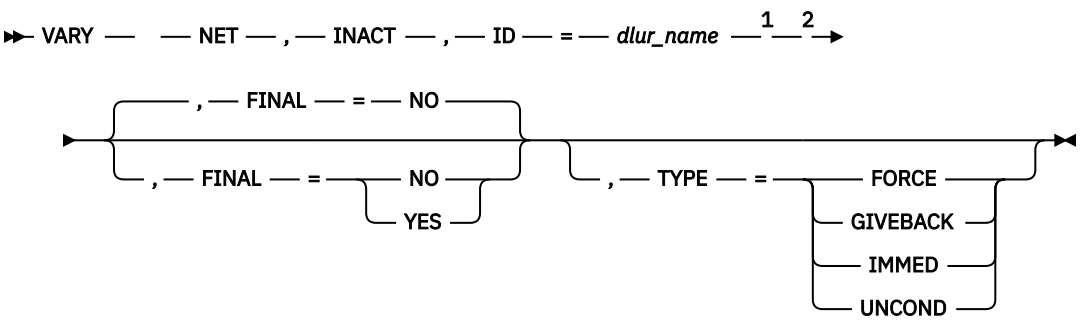
Deactivate a dynamic XCF local SNA PU:



Deactivate a dynamic switched PU:



Deactivate a dependent LU requester (DLUR):

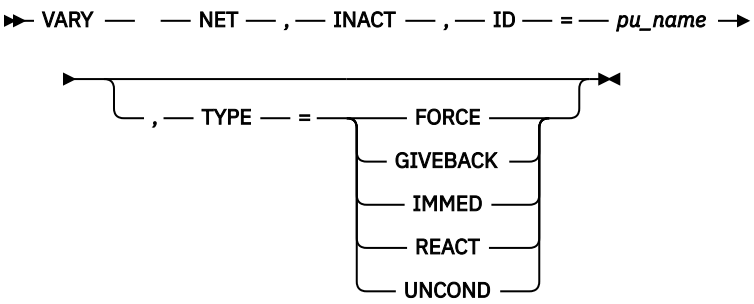


Notes:

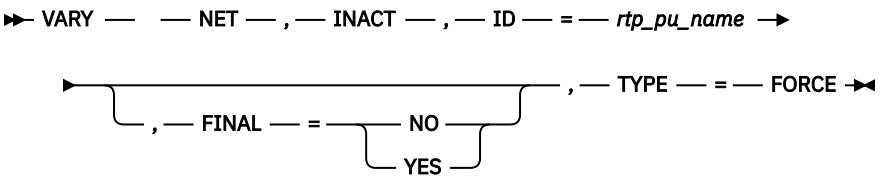
[1] Depending on the value of the VARYWLD start option, wildcard values can be used for this operand.

[2] Depending on the value of the GVBKDLY start option, GIVEBACK commands generated for DLURs using wildcard values might be paced by VTAM.

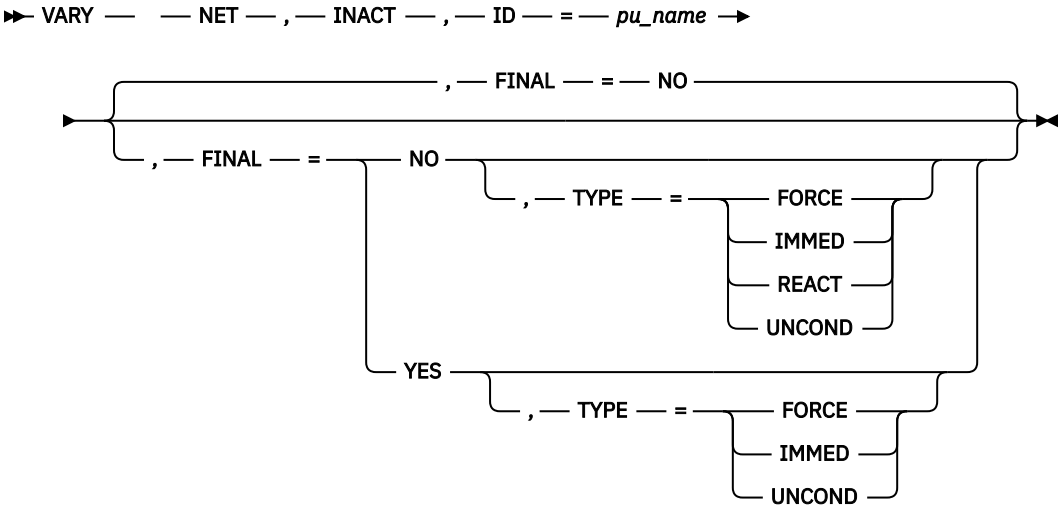
Deactivate a PU supported by a DLUR:



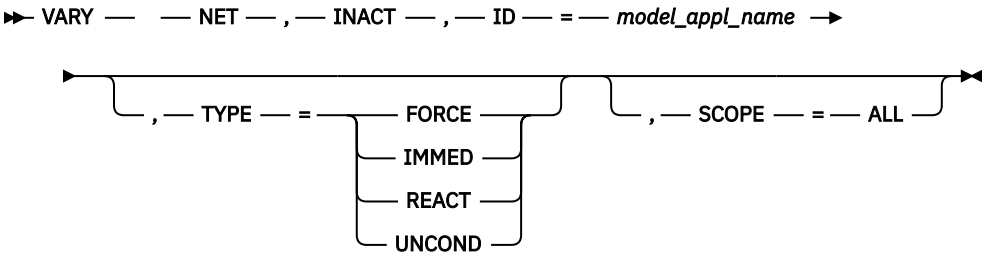
Deactivate RTP PUs:



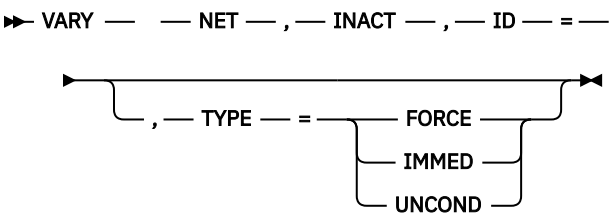
Deactivate other PUs:



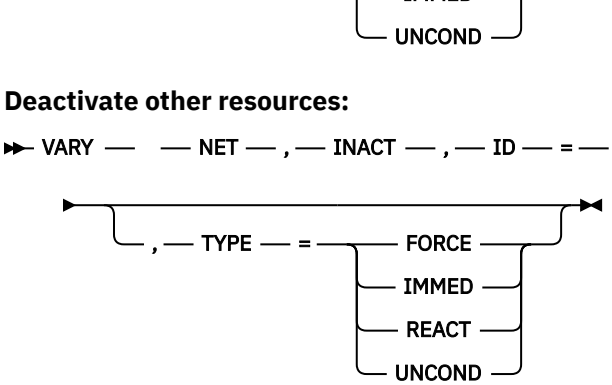
Deactivate a model application and all the APPLs created from it:



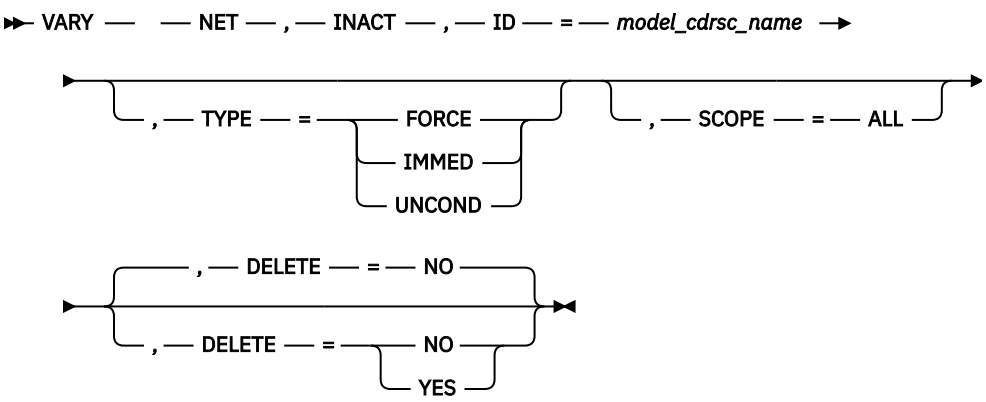
Deactivate a group under an Enterprise Extender XCA major node:



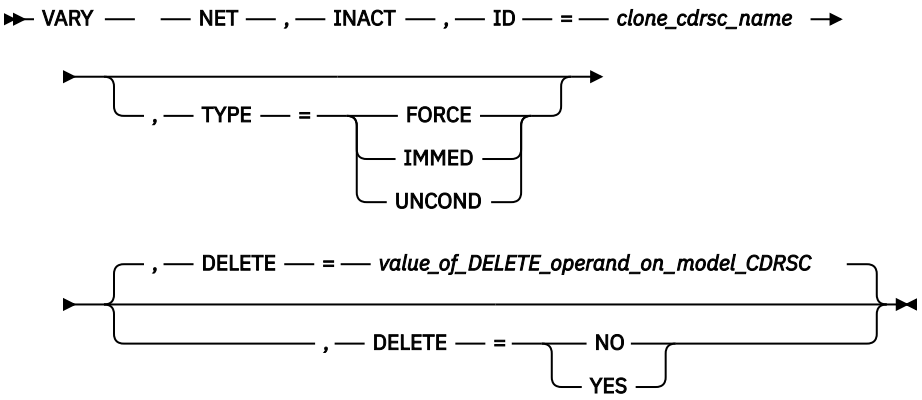
Deactivate other resources:



Deactivate a model CDRSC and, optionally, all the clone CDRSCs created from it:

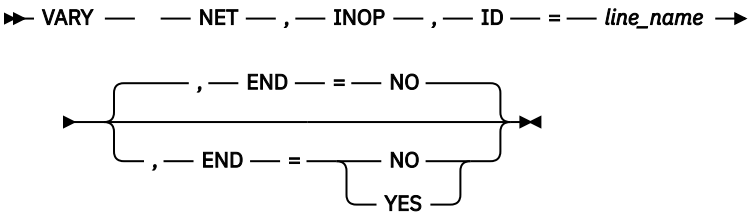


Deactivate a clone CDRSC:



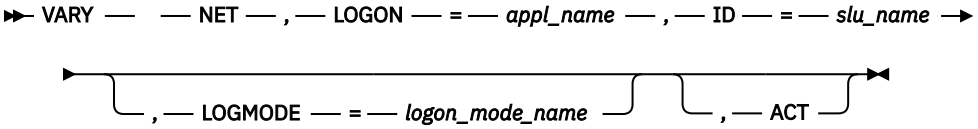
V INOP command

Terminate a manual dial operation if the VTAM operator is unable to complete the call:



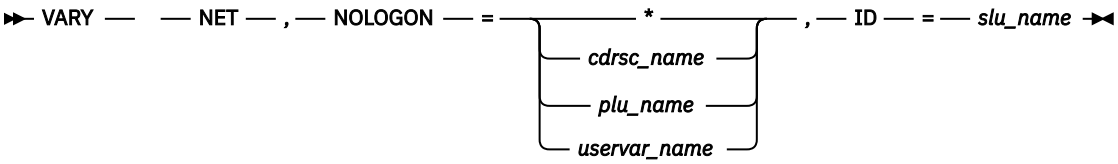
V LOGON command

Create or change an automatic logon specification:



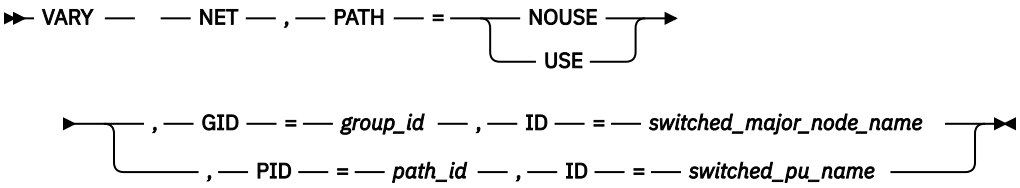
V NOLOGON command

Delete an existing automatic logon specification:



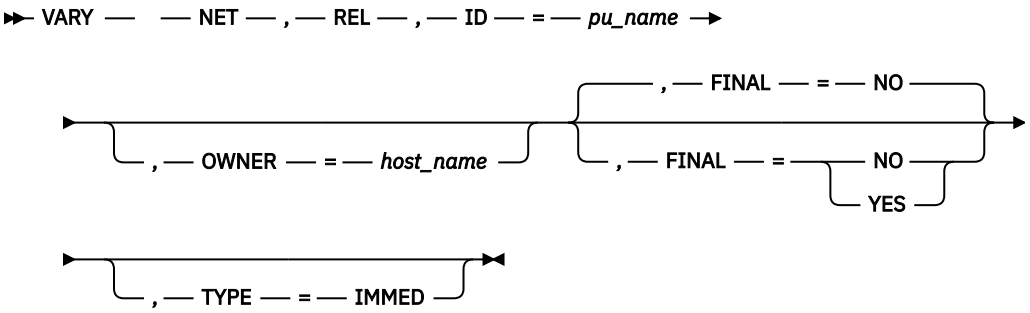
V PATH command

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:



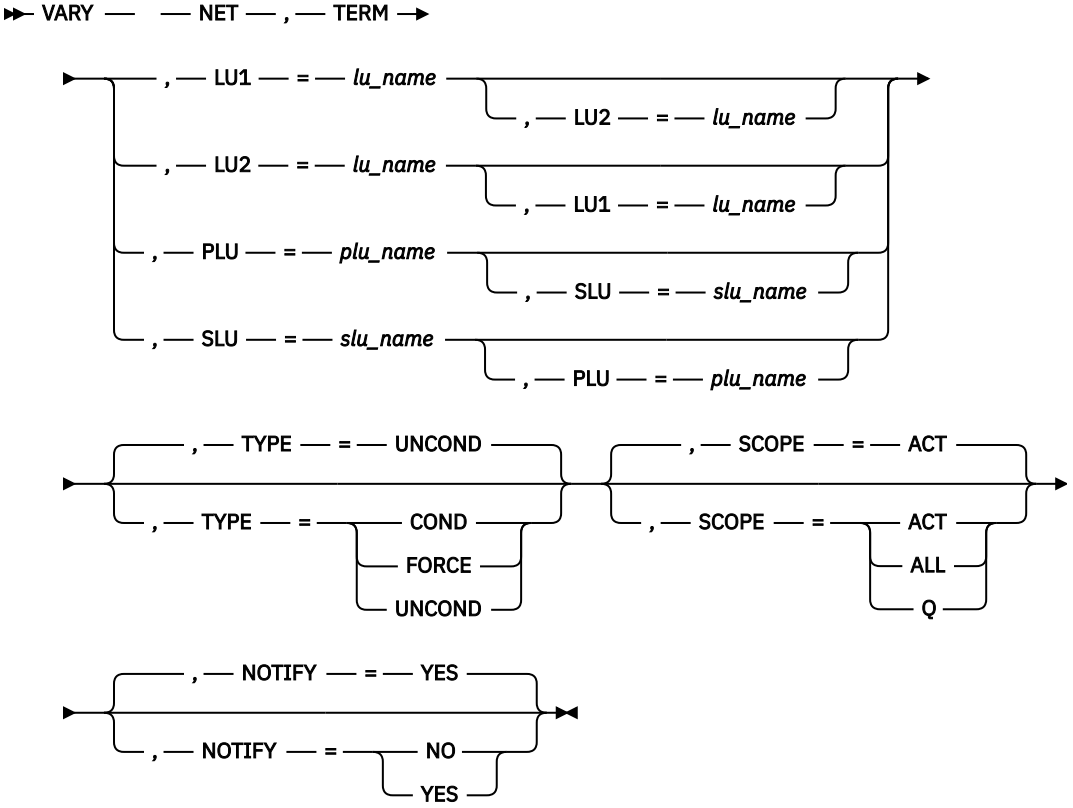
V REL command

Release a PU:

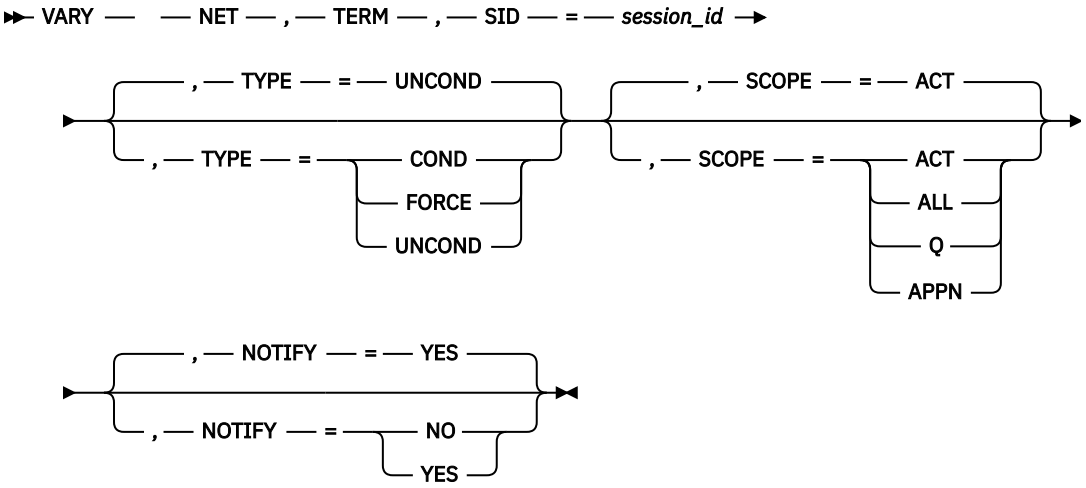


V TERM command

VARY TERM command using name or name pair:



VARY TERM command using session ID:



Start options

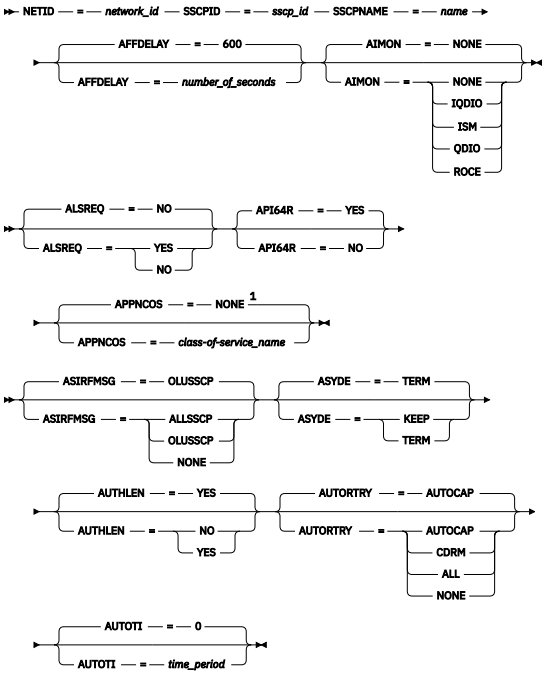
Start options are listed in this section alphabetically; however, you can code them in any order.

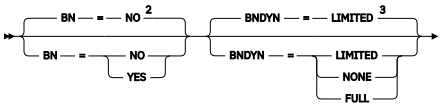
Precede the option list with three commas and enclose the group of options in parentheses.

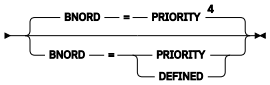
Start options that are entered on the START command must be separated by commas. Do not leave any blanks between options.

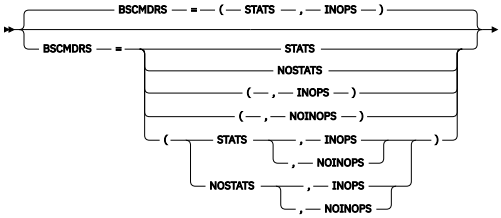
For more information on the START command, see z/OS Communications Server: SNA Operation.

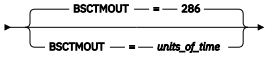
Options

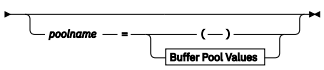


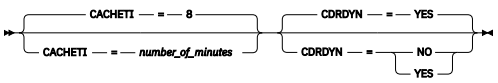

BN = NO 2
BN = YES
BNDYN = LIMITED 3
BNDYN = LIMITED
NONE
FULL

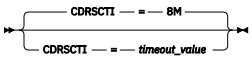

BNORD = PRIORITY 4
BNORD = PRIORITY
DEFINED

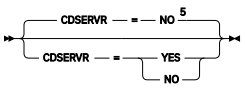

BSCMDRS = (STATS , INOPS)
BSCMDRS = STATS
NOSTATS
(, INOPS)
(, NOINOPS)
(STATS , INOPS , NOINOPS)
NOSTATS , INOPS , NOINOPS

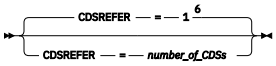

BSCTMOUT = 286
BSCTMOUT = units_of_time

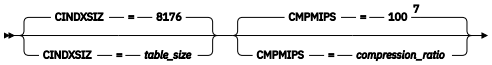

poolname = ( )
Buffer Pool Values

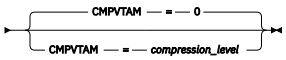

CACHETI = 8
CACHETI = number_of_minutes
CDRDYN = YES
CDRDYN = NO
YES

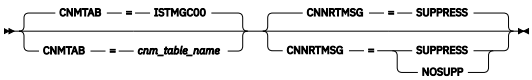

CDRSCTI = 8M
CDRSCTI = timeout_value

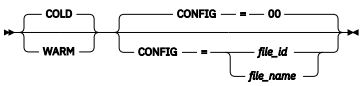

CDSERVR = NO 5
CDSERVR = YES
NO

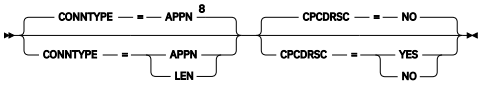

CDSREFER = 1 6
CDSREFER = number_of_CDSs

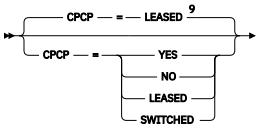

CINDXSIZ = 8176
CINDXSIZ = table_size
CMPMIPS = 100 7
CMPMIPS = compression_ratio

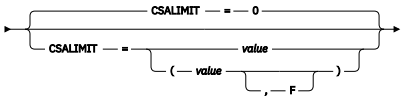

CMPVTAM = 0
CMPVTAM = compression_level

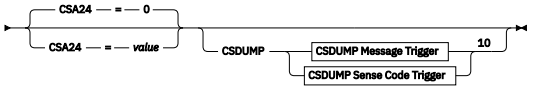

CNMTAB = ISTMGC00
CNMTAB = cnm_table_name
CNNRTMSG = SUPPRESS
CNNRTMSG = SUPPRESS
NOSUPP

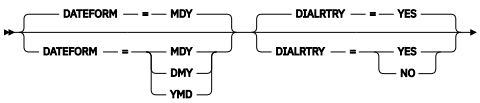

COLD
WARM
CONFIG = 00
CONFIG = file_id
file_name

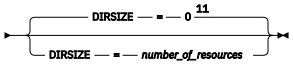

CONNTYPE = APPN 8
CONNTYPE = APPN
LEN
CPCDRSC = NO
CPCDRSC = YES
NO

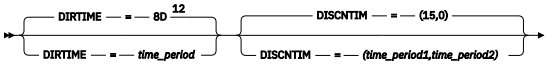

CPCP = LEASED 9
CPCP = YES
NO
LEASED
SWITCHED

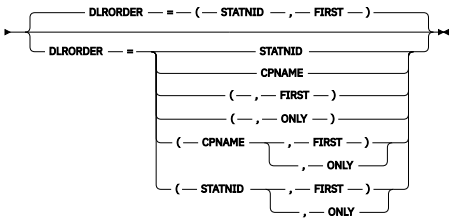

CSALIMIT = 0
CSALIMIT = value
(value , F)

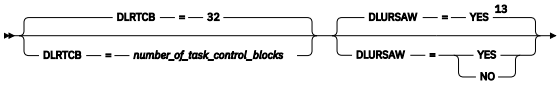

CSA24 = 0
CSA24 = value
CSDUMP
CSDUMP Message Trigger
CSDUMP Sense Code Trigger
10

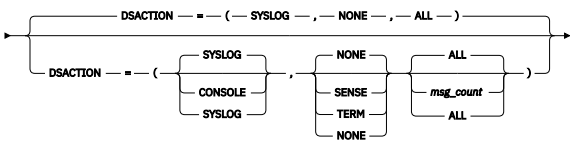

DATEFORM
=
MDY
DMY
YMD
DIALRTRY
YES
NO

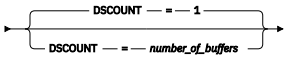

DIRSIZE
=
0
11
number_of_resources

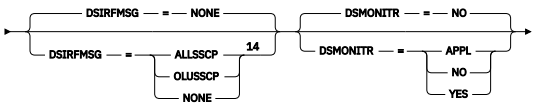

DIRTIME
=
8D
12
time_period
DISCNTIM
(15,0)
(time_period1,time_period2)

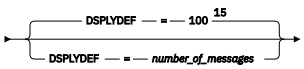

DLRORDER
=
(
STATNID
,
FIRST
)
CPNAME
ONLY

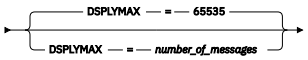

DLRTCB
=
32
number_of_task_control_blocks
DLURSAW
YES
13
NO

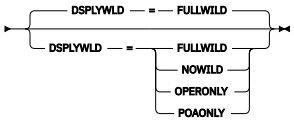

DSACTION
=
(
SYSLOG
CONSOLE
,
NONE
SENSE
TERM
ALL
msg_count
)

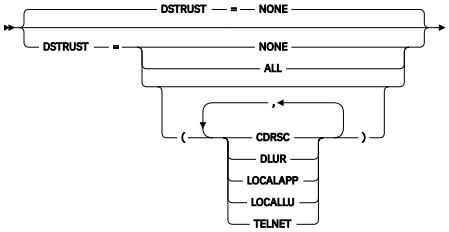

DSCOUNT
=
1
number_of_buffers

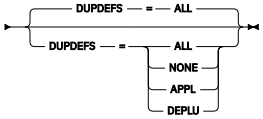

DSIRFMSG
=
NONE
ALLSSCP
OLUSSCP
NONE
14
DSMONITR
NO
APPL
YES

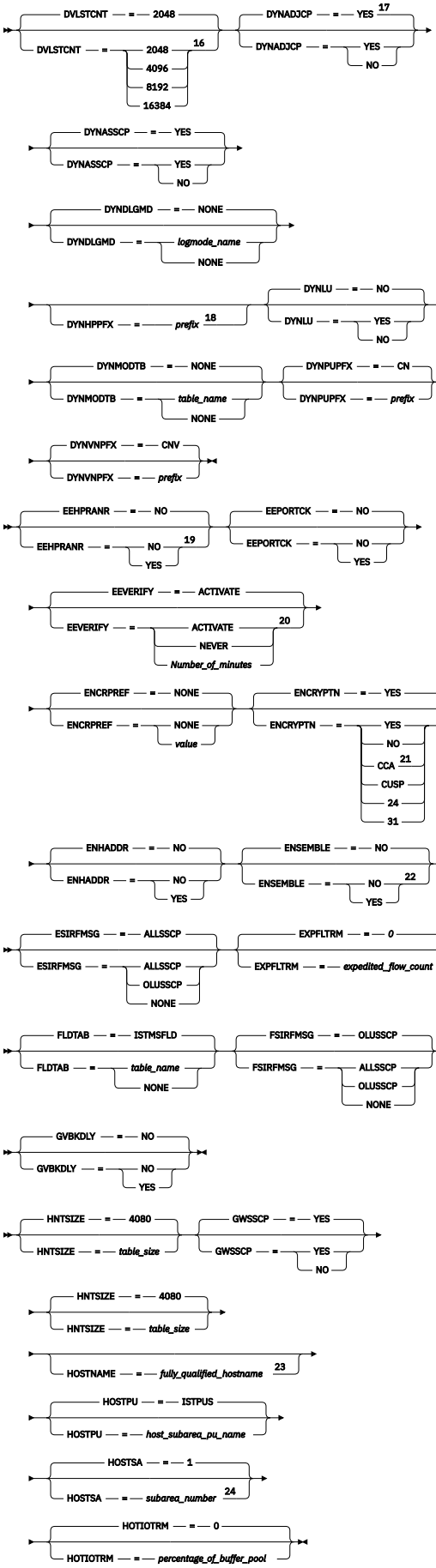

DSPLYDEF
=
100
15
number_of_messages

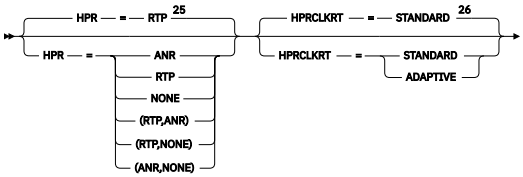

DSPLYMAX
=
65535
number_of_messages

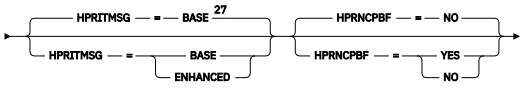

DSPLYWLD
=
FULLWILD
NOWILD
OPERONLY
POAONLY

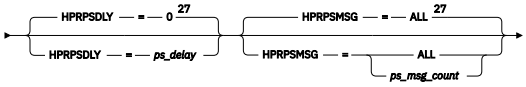

DSTRUST
=
NONE
ALL
(
,
CDRSC
DLUR
LOCALAPP
LOCALLU
TELNET
)

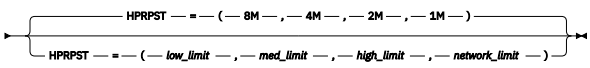

DUPDEFS
=
ALL
NONE
APPL
DEPLU

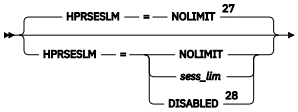

DVLSTCNT = 2048
DVLSTCNT = 2048 16
4096
8192
16384
DYNADJCP = YES 17
DYNADJCP = YES
NO
DYNASSCP = YES
DYNASSCP = YES
NO
DYNDLGMD = NONE
DYNDLGMD = logmode_name
NONE
DYNHPPFX = prefix 18
DYNLU = NO
DYNLU = YES
NO
DYNMODTB = NONE
DYNMODTB = table_name
NONE
DYNPUPFX = CN
DYNPUPFX = prefix
DYNVNPFX = CNV
DYNVNPFX = prefix
EEHPRANR = NO
EEHPRANR = NO 19
YES
EEPORTCK = NO
EEPORTCK = NO
YES
EEVERIFY = ACTIVATE
EEVERIFY = ACTIVATE 20
NEVER
Number_of_minutes
ENCRPREF = NONE
ENCRPREF = NONE
value
ENCRYPTN = YES
ENCRYPTN = YES
NO
CCA 21
CUSP
24
31
ENHADDR = NO
ENHADDR = NO
YES
ENSEMBLE = NO
ENSEMBLE = NO 22
YES
ESIRFMSG = ALLSSCP
ESIRFMSG = ALLSSCP
OLUSSCP
NONE
EXPFLTRM = 0
EXPFLTRM = expedited_flow_count
FLDTAB = ISTMSFLD
FLDTAB = table_name
NONE
FSIRFMSG = OLUSSCP
FSIRFMSG = ALLSSCP
OLUSSCP
NONE
GVBKDLY = NO
GVBKDLY = NO
YES
HNTSIZE = 4080
HNTSIZE = table_size
GWSSCP = YES
GWSSCP = YES
NO
HNTSIZE = 4080
HNTSIZE = table_size
HOSTNAME = fully_qualified_hostname 23
HOSTPU = ISTPUS
HOSTPU = host_subarea_pu_name
HOSTSA = 1
HOSTSA = subarea_number 24
HOTIOTRM = 0
HOTIOTRM = percentage_of_buffer_pool

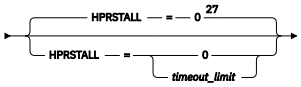

HPR = RTP 25
HPR = ANR
RTP
NONE
(RTP,ANR)
(RTP,NONE)
(ANR,NONE)
HPRCLKRT = STANDARD 26
HPRCLKRT = STANDARD
ADAPTIVE

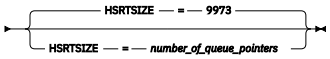

HPRITMSG = BASE 27
HPRITMSG = BASE
ENHANCED
HPRNCPBF = NO
HPRNCPBF = YES
NO

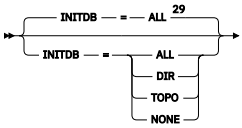

HPRPSDLY = 0 27
HPRPSDLY = ps_delay
HPRPSMSG = ALL 27
HPRPSMSG = ALL
ps_msg_count

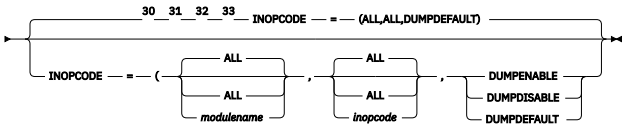

HPRPST = (8M , 4M , 2M , 1M)
HPRPST = (low_limit , med_limit , high_limit , network_limit)

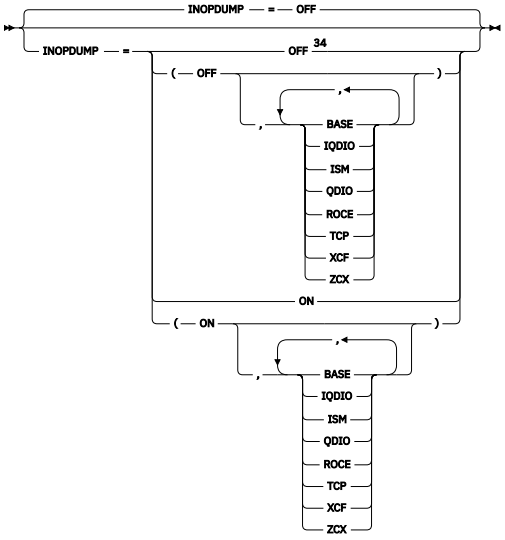

HPRSESLM = NOLIMIT 27
HPRSESLM = NOLIMIT
sess_lim
DISABLED 28

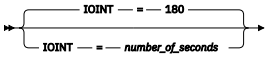

HPRSTALL = 0 27
HPRSTALL = 0
timeout_limit

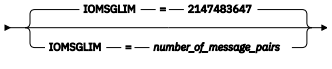

HSRTSIZE = 9973
HSRTSIZE = number_of_queue_pointers

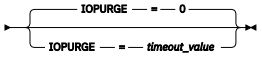

INITDB = ALL 29
INITDB = ALL
DIR
TOPO
NONE

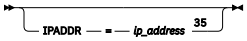

30 31 32 33 INOPCODE = (ALL,ALL,DUMPDEFAULT)
INOPCODE = (ALL ALL modulename , ALL ALL inopcode , DUMPENABLE DUMPDISABLE DUMPDEFAULT


INOPDUMP = OFF
INOPDUMP = OFF 34
(OFF)
, BASE IQDIO ISM QDIO ROCE TCP XCF ZCX
ON
(ON)
, BASE IQDIO ISM QDIO ROCE TCP XCF ZCX


IOINT = 180
IOINT = number_of_seconds


IOMSGLIM = 2147483647
IOMSGLIM = number_of_message_pairs


IOPURGE = 0
IOPURGE = timeout_value



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] CDSREFER is meaningful only if the NODETYPE=NN and CDSERVR=NO start options are also used.

[7] The CMPMIPS start option is meaningful only if the value for CMPVTAM is greater than 1.

[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] Specify the CSDUMP start option twice to set both message and sense code triggers.

[11] DIRSIZE is meaningful only if the NODETYPE=NN start option is also used.

[12] DIRTIME is meaningful only if the NODETYPE=NN start option is also used.

[13] DLURSAW is meaningful only if the NODETYPE=NN start option is also used.

[14] Because of the volume of messages that can be generated, it is not recommended that this option be enabled during normal operation. Instead, it is recommended that this option be enabled (using the MODIFY VTAMOPTS command) on all necessary hosts only when trying to diagnose specific problems. After the problem has been diagnosed or documentation has been collected, this option should be disabled once again (using the MODIFY VTAMOPTS command).

[15] If the DSPLYMAX start option value is less than 100, that value is the default for DSPLYDEF.

[16] Use the CFSIZER tool to determine the appropriate number of lists for your EZBDVIPA structure, as well as, the suggested INITSIZE and SIZE values for the structure. Before you modify the DVLSTCNT option to increase the number of lists requested for the EZBDVIPA structure, update your CFRM policy with the recommended INITSIZE and SIZE values. Increasing the number of lists requires more storage for the EZBDVIPA structure. Make sure the same DVLSTCNT value is configured in all VTAMs in the sysplex. To enable the modified DVLSTCNT value, issue the following SETXCF MVS command to rebuild the EZBDVIPA structure: **SETXCF START,REBUILD,STRNAME=EZBDVIPA**. See SETXCF command in z/OS MVS System Commands for more information.

[17] DYNADJCP is meaningful only if the NODETYPE start option is also used.

[18] Two character prefix.

[19] EEHPRANR is meaningful only when the NODETYPE=NN start option is also used.

[20] The EEVERIFY start option is meaningful only if VTAM provides RTP-level HPR support. The NODETYPE start option must be coded and the RTP value must be specified on the HPR start option.

[21] ENCRYPTN=CCA needs to be coded when Triple Des Encryption is required.

[22] The ENSEMBLE setting is used to either permit or deny connectivity to the intraensemble data network and the intranode management network. It does this by either allowing or denying activation of OSX and OSM interfaces.

[23] HOSTNAME is meaningful only if the NODETYPE start option is also used. If neither HOSTNAME nor IPADDR is specified on any of the GROUP definition statements within the Enterprise Extender XCA major node, then either the HOSTNAME, TCPNAME, or IPADDR start options must be specified in order to activate an Enterprise Extender link. The HOSTNAME start option specifies the default hostname to be used for name-to-address resolution as part of activating an Enterprise Extender connection, and must resolve at this node to a static VIPA address associated with a TCP/IP stack at this node. If IPADDR is specified along with HOSTNAME on the START command, the IPADDR value is ignored.

[24] HOSTSA specifies the subarea number of this VTAM. If HOSTSA is not coded, then a default subarea number of 1 is used.

[25] HPR is meaningful only if NODETYPE is also used.

[26] HPRCLKRT=ADAPTIVE is meaningful only in Enterprise Extender configurations that have a defined capacity of 1 Gb (gigabit) or higher access speeds.

[27] This option is meaningful only if VTAM provides RTP-level HPR support.

[28] HPRSESLM=DISABLED is meaningful only on interchange nodes.

[29] INITDB is meaningful only if the NODETYPE=NN start option is also used.

[30] When specifying an InOpCode for the second parameter, always specify three digits by including any leading zeros.

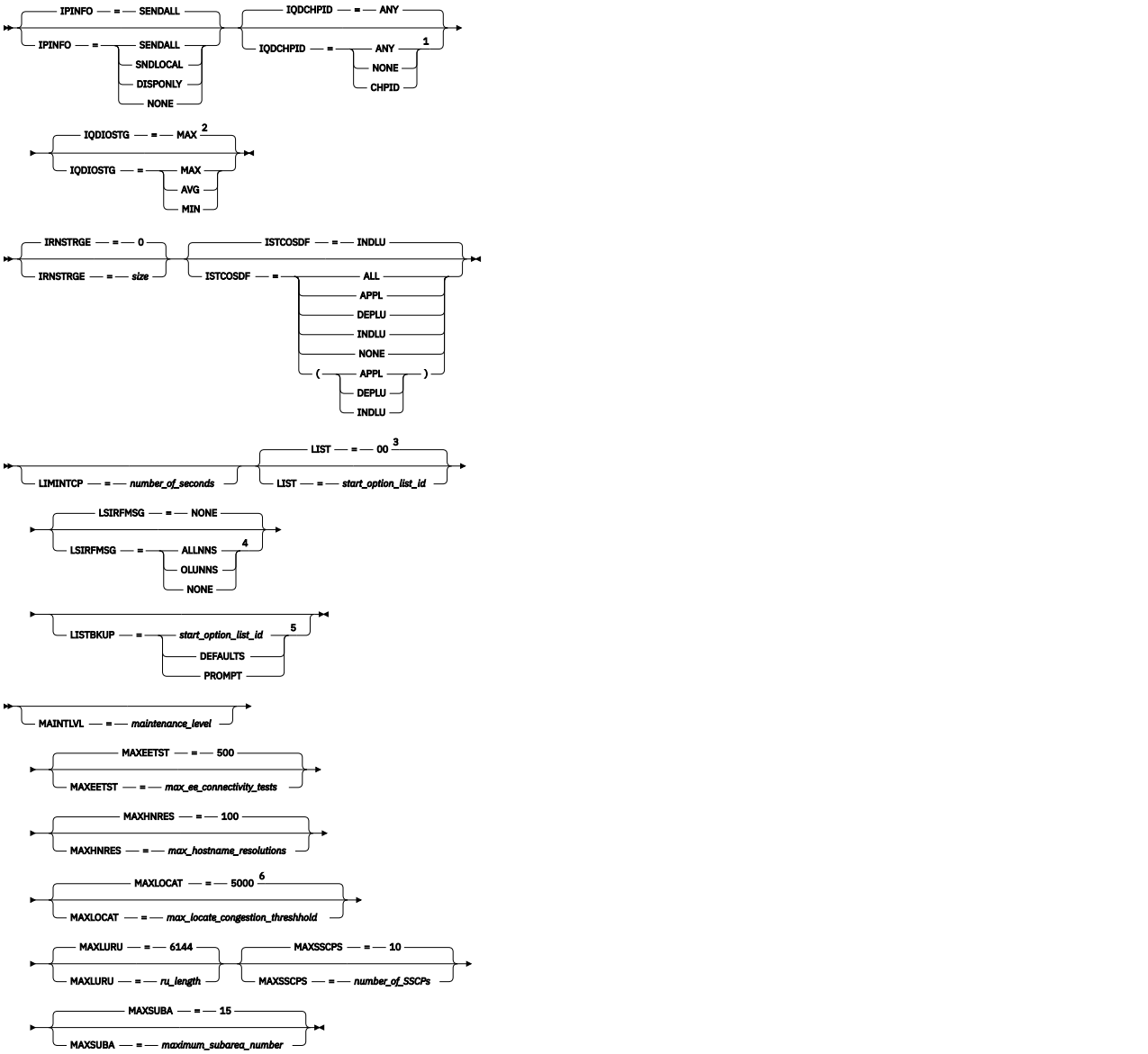
[31] If an InOpCode is specified for the second parameter, the first parameter cannot be ALL.

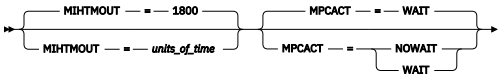
[32] INOPCODE has no effect unless INOPDUMP is active for the resource when an inoperative condition is detected. See the MODIFY INOPCODE command in z/OS Communications Server: SNA Operation for more details.

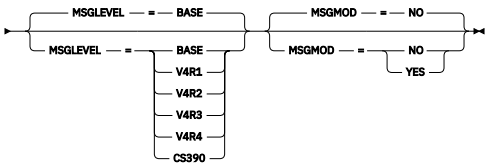
[33] Multiple INOPCODE parameters can be specified by the START command, and will be processed left to right as they are entered. This is different from specifying the INOPCODE parameter on either the MODIFY INOPCODE command or the MODIFY VTAMOPTS command, where only one INOPCODE parameter is allowed for each entry of these commands.

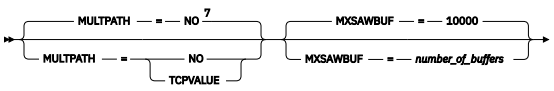
[34] INOPDUMP status is propagated to resources that are defined within a TRLE when the entry is activated.

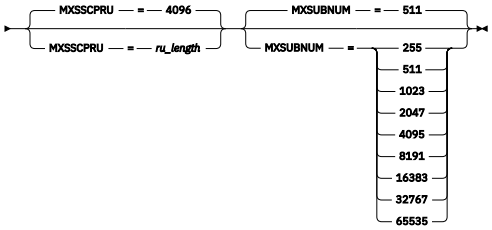
[35] IPADDR is meaningful only if the NODETYPE start option is also used. If neither IPADDR nor HOSTNAME is specified on any of the GROUP definition statements within the Enterprise Extender XCA major node, then either the HOSTNAME, TCPNAME, or IPADDR start option must be specified in order to activate an Enterprise Extender link. The IPADDR start option specifies the default IPv4 or IPv6 static VIPA address to be used when activating an Enterprise Extender connection. If HOSTNAME is specified along with IPADDR on the START command, the IPADDR value is ignored.

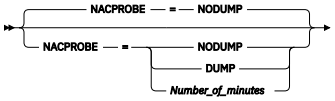


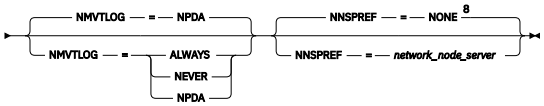

MIHTMOUT = 1800
MIHTMOUT = units_of_time
MPCACT = WAIT
MPCACT = NOWAIT
WAIT

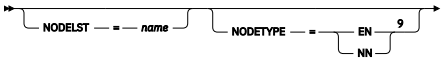

MSGLEVEL = BASE
MSGLEVEL = BASE
V4R1
V4R2
V4R3
V4R4
CS390
MSGMOD = NO
MSGMOD = NO
YES

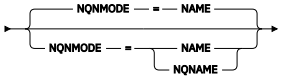

MULTPATH = NO 7
MULTPATH = NO
TCPVALUE
MXSAWBUF = 10000
MXSAWBUF = number_of_buffers

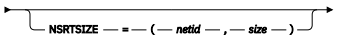

MXSSCPRU = 4096
MXSSCPRU = ru_length
MXSUBNUM = 511
MXSUBNUM = 255
511
1023
2047
4095
8191
16383
32767
65535

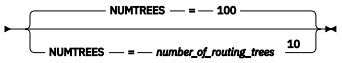

NACPROBE = NODUMP
NACPROBE = NODUMP
DUMP
Number_of_minutes

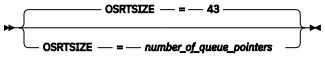

NMVTLOG = NPDA
NMVTLOG = ALWAYS
NEVER
NPDA
NNSPREF = NONE 8
NNSPREF = network_node_server

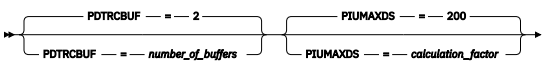

NODELST = name
NODETYPE = EN 9
NN

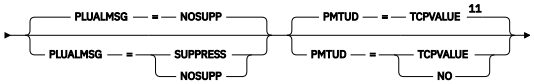

NQNMODE = NAME
NQNMODE = NAME
NQNAME

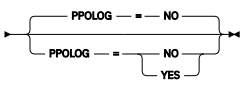

NSRTSIZE = (netid , size)

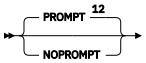

NUMTREES = 100
NUMTREES = number_of_routing_trees 10

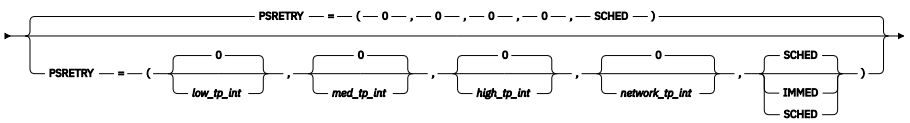

OSRTSIZE = 43
OSRTSIZE = number_of_queue_pointers

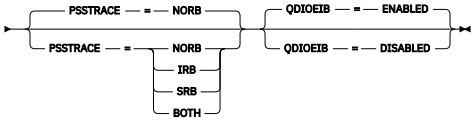

PDTRCBUF = 2
PDTRCBUF = number_of_buffers
PIUMAXDS = 200
PIUMAXDS = calculation_factor

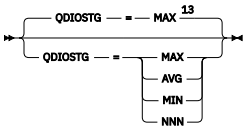

PLUALMSG = NOSUPP
PLUALMSG = SUPPRESS
NOSUPP
PMTUD = TCPVALUE 11
PMTUD = TCPVALUE
NO

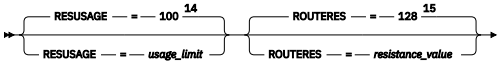

PPOLOG = NO
PPOLOG = NO
YES

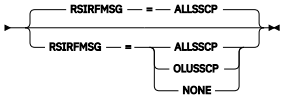

PROMPT 12
NOPROMPT

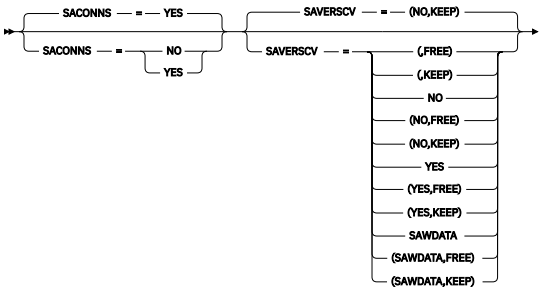

PSRETRY = (0 , 0 , 0 , 0 , SCHED)
PSRETRY = (0 low_tp_int , 0 med_tp_int , 0 high_tp_int , 0 network_tp_int , SCHED IMMED SCHED)

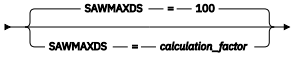

PSSTRACE = NORB
PSSTRACE = NORB
IRB
SRB
BOTH
QDIOEIB = ENABLED
QDIOEIB = DISABLED

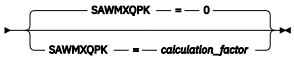

QDIOSTG = MAX 13
QDIOSTG = MAX
AVG
MIN
NNN

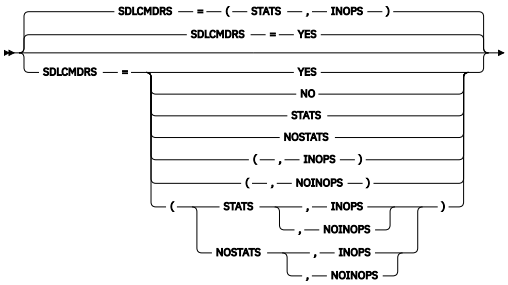

RESUSAGE = 100 14
RESUSAGE = usage_limit
ROUTERES = 128 15
ROUTERES = resistance_value

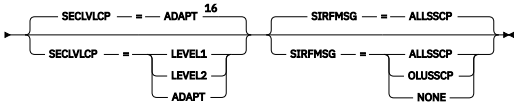

RSIRFMSG = ALLSSCP
RSIRFMSG = ALLSSCP
OLUSSCP
NONE

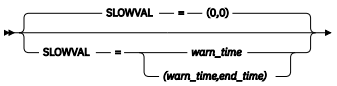

SACONNS = YES
SACONNS = NO
YES
SAVERSCV = (NO,KEEP)
SAVERSCV = (,FREE)
(,KEEP)
NO
(NO,FREE)
(NO,KEEP)
YES
(YES,FREE)
(YES,KEEP)
SAWDATA
(SAWDATA,FREE)
(SAWDATA,KEEP)

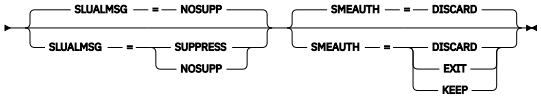

SAWMAXDS = 100
SAWMAXDS = calculation_factor

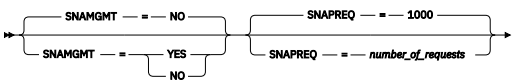

SAWMXQPK = 0
SAWMXQPK = calculation_factor

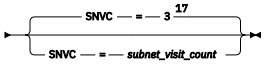

SDLCMDRS = (STATS , INOPS)
SDLCMDRS = YES
SDLCMDRS = YES
NO
STATS
NOSTATS
(, INOPS)
(, NOINOPS)
(STATS , INOPS)
, NOINOPS
NOSTATS , INOPS
, NOINOPS

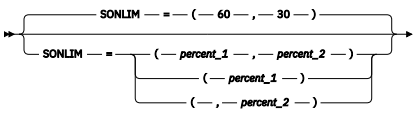

SECLVLCP = ADAPT 16
SECLVLCP = LEVEL1
LEVEL2
ADAPT
SIRFMSG = ALLSSCP
SIRFMSG = ALLSSCP
OLUSSCP
NONE

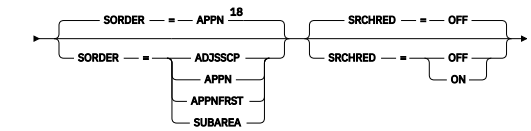

SLOWVAL = (0,0)
SLOWVAL = warn_time
(warn_time,end_time)

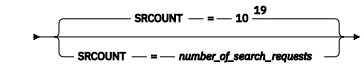

SLUALMSG = NOSUPP
SLUALMSG = SUPPRESS
NOSUPP
SMEAUTH = DISCARD
SMEAUTH = DISCARD
EXIT
KEEP

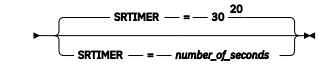

SNAMGMT = NO
SNAMGMT = YES
NO
SNAPREQ = 1000
SNAPREQ = number_of_requests

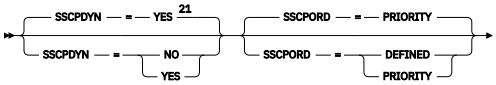

SNVC = 3 17
SNVC = subnet_visit_count

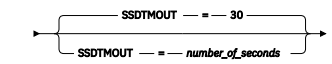

SONLIM = (60 , 30)
SONLIM = (percent_1 , percent_2)
(percent_1)
(, percent_2)

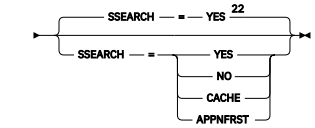

SORDER = APPN 18
ADJSSCP
APPN
APPNFRST
SUBAREA
SRCHRED = OFF
OFF
ON

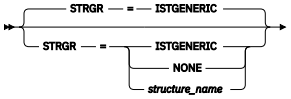

SRCOUNT = 10 19
number_of_search_requests

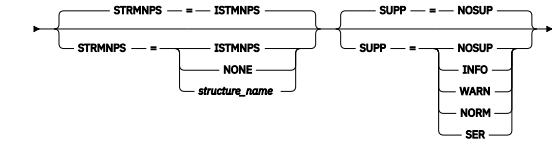

SRTIMER = 30 20
number_of_seconds

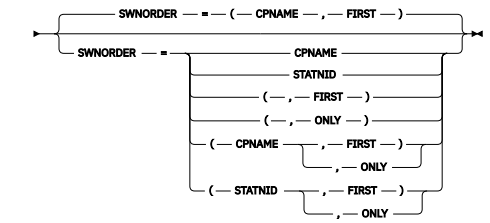

SSCPDYN = YES 21
NO
YES
SSCPORD = PRIORITY
DEFINED
PRIORITY

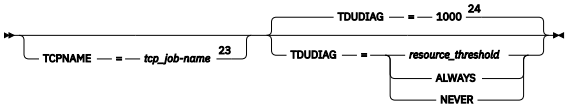

SSDTMOUT = 30
number_of_seconds

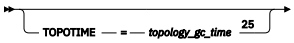

SSEARCH = YES 22
YES
NO
CACHE
APPNFRST

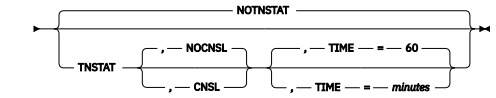

STRGR = ISTGENERIC
ISTGENERIC
NONE
structure_name

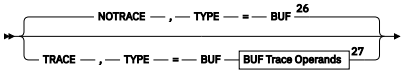

STRMNPS = ISTMNPS
ISTMNPS
NONE
structure_name
SUPP = NOSUP
NOSUP
INFO
WARN
NORM
SER

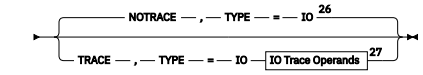

SWNORDER = (CPNAME , FIRST)
CPNAME
STATNID
(, FIRST)
(, ONLY)
(CPNAME , FIRST)
, ONLY
(STATNID , FIRST)
, ONLY

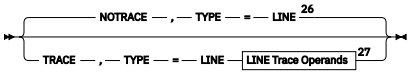

TCPNAME = tcp_job-name 23
TDUDIAG = 1000 24
resource_threshold
ALWAYS
NEVER

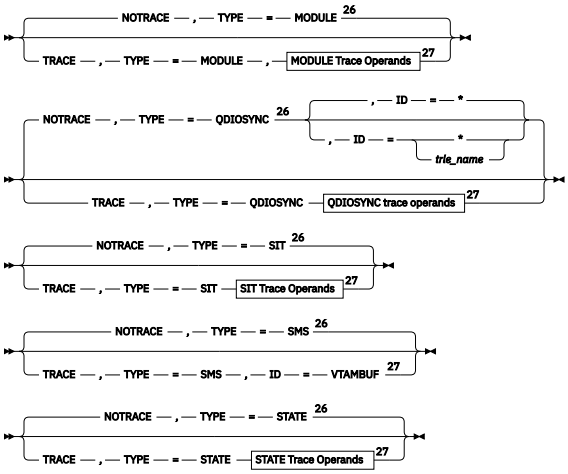

TOPOTIME = topology_gc_time 25


NOTNSTAT
TNSTAT
, NOCNSL
, CNSL
, TIME = 60
, TIME = minutes


NOTRACE , TYPE = BUF 26
TRACE , TYPE = BUF BUF Trace Operands 27


NOTRACE , TYPE = IO 26
TRACE , TYPE = IO IO Trace Operands 27


NOTRACE , TYPE = LINE 26
TRACE , TYPE = LINE LINE Trace Operands 27



Notes:

[1] The IQDCHPID option controls which IQD CHPID (and related subchannel devices) VTAM selects to dynamically build the iQDIO (IUTIQDIO) MPC group. The IUTIQDIO MPC group is used for TCP/IP dynamic XCF communications within System z. Although this option can be modified (and the modification will immediately be displayed) while the IUTIQDIO MPC group is currently active, any modifications have the effects shown in the section called IQD CHPID modifications in z/OS Communications Server: SNA Operation.

[2] This option affects only iQDIO devices that use a MFS of 64k. The smaller frame sizes will always use 126 SBALs. You can override this option on a per-device basis using the READSTORAGE parameter on the LINK or INTERFACE statement in the TCP/IP profile. See z/OS Communications Server: IP Configuration Reference for more details.

[3] LIST can be entered by a VTAM operator only. If LIST is coded in an ATCSTR*xx* file, it is considered to be an error and is ignored.

[4] Because of the volume of messages that can be generated, it is not recommended that this option be enabled during normal operation. Instead, it is recommended that this option be enabled (using the MODIFY VTAMOPTS command) on all necessary hosts only when trying to diagnose specific problems. After the problem has been diagnosed or documentation has been collected, this option should be disabled once again (using the MODIFY VTAMOPTS command).

[5] LISTBKUP can be coded only in a start option file. If you enter it on the START command or at an operator prompt, VTAM will ignore it.

[6] MAXLOCAT is meaningful only if NODETYPE is specified.

[7] MULTPATH is meaningful only if the NODETYPE start option is also specified.

[8] NNSPREF can be specified only if NODETYPE=EN is specified during VTAM START processing.

[9] NODETYPE enables APPN function. The combination of HOSTSA, NODETYPE, and SACONNS determines the configuration (subarea node, interchange node, migration data host, network node, or end node).

[10] NUMTREES is meaningful only if the NODETYPE=NN start option is also used.

[11] PMTUD is meaningful only if the NODETYPE start option is also specified.

[12] 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.

[13] QDIOSTG defaults to MAX. To understand the meaning of the various keywords on QDIOSTG, see QDIOSTG start option in z/OS Communications Server: SNA Resource Definition Reference. To see the amount of read storage being used for a specific QDIO *datapath* device, use the **DISPLAY TRLE** command. You can override the QDIOSTG value on a per-device basis using the READSTORAGE parameter on the LINK or INTERFACE statement in the TCP/IP profile. See z/OS Communications Server: IP Configuration Reference for more details.

[14] RESUSAGE is meaningful only if the NODETYPE=NN start option is also used.

[15] ROUTERES is meaningful only if the NODETYPE=NN start option is also used.

[16] The SECLVLCP start option is meaningful only if the NODETYPE and VERIFYCP start options are also used.

[17] SNVC is meaningful only if the BN=YES start option is also used.

[18] SORDER is meaningful only in an interchange node or a migration data host.

[19] SRCOUNT is meaningful only if the SRCHRED=ON start option is also used.

[20] SRTIMER is meaningful only if the SRCHRED=ON start option is also used.

[21] The SSCPDYN start option applies only for interconnected networks (that is, GWSSCP=YES is used).

[22] SSEARCH is meaningful only if the NODETYPE=NN start option is also used.

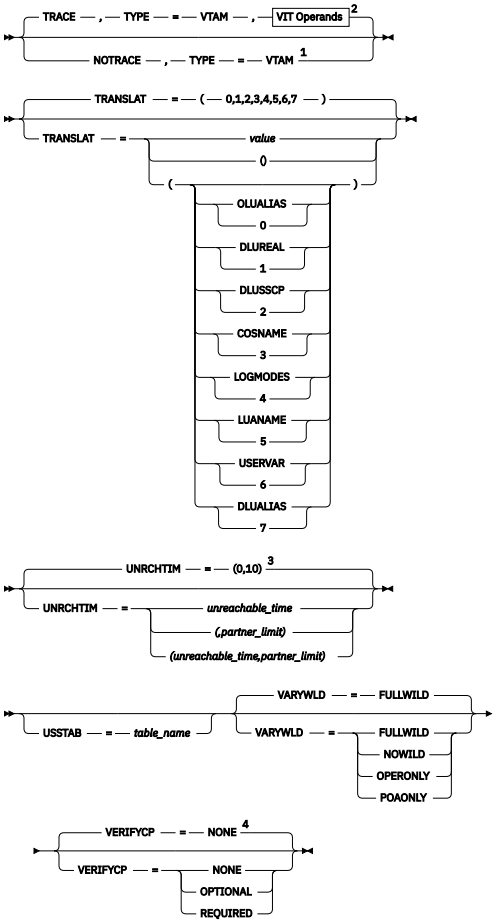
[23] TCPNAME is meaningful only if the NODETYPE start option is also used. If neither IPADDR nor HOSTNAME is specified on any of the GROUP definition statements within the Enterprise Extender XCA major node, then either the HOSTNAME, TCPNAME, or IPADDR start options must be specified in order to activate an Enterprise Extender link.

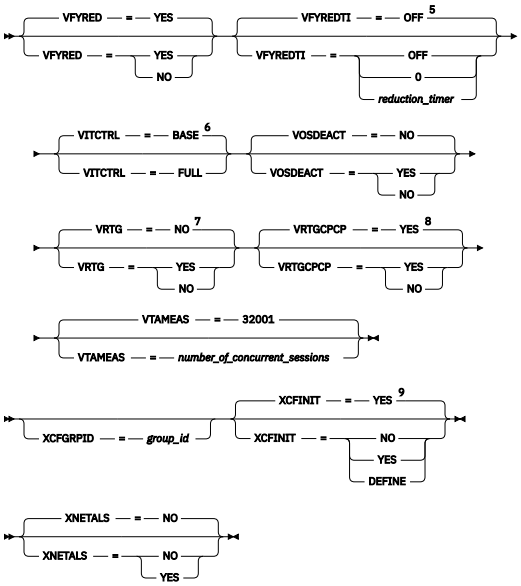
[24] TDUDIAG is meaningful only if the NODETYPE=NN start option is also available.

[25] TOPOTIME is meaningful only if the NODETYPE start option is also used.

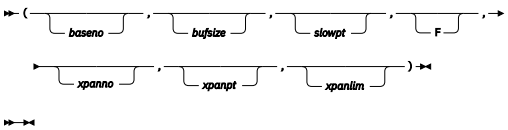
[26] Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.

[27] You can code TRACE and its qualifiers through position 71, even if you are in the middle of the start option. Continue the remainder of the item in the next record. Code the TYPE qualifier immediately after you code the TRACE start option.

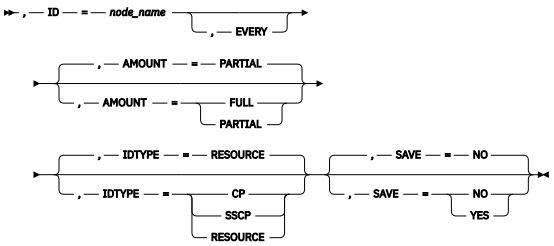




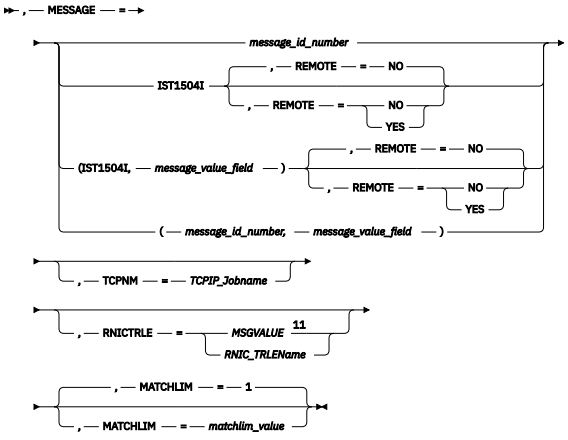
Buffer Pool Values



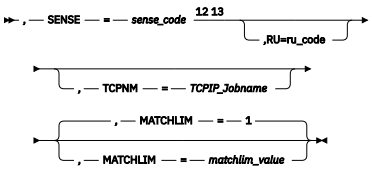
BUF Trace Operands



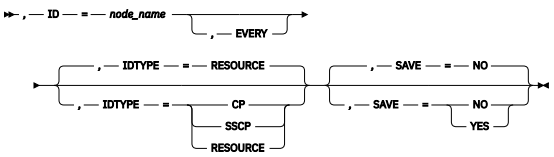
CSDUMP message trigger



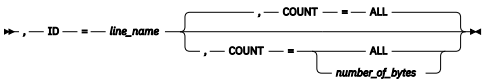
CSDUMP sense code trigger



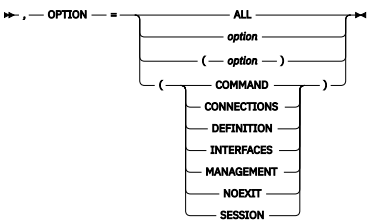
IO Trace Operands



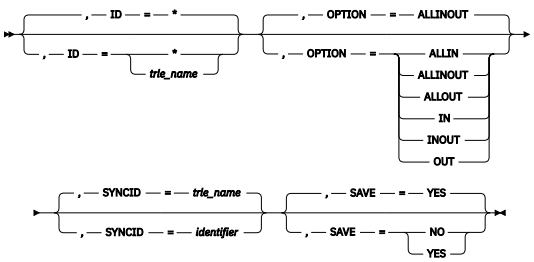
LINE Trace Operands



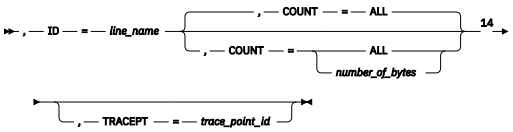
MODULE Trace Operands



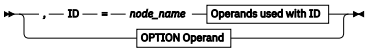
QDIOSYNC trace operands



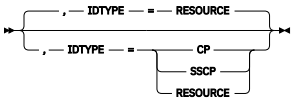
SIT Trace Operands



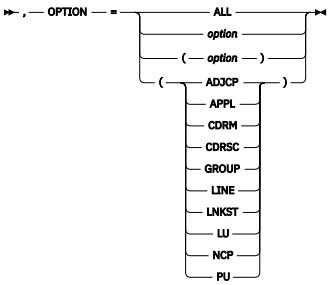
STATE Trace Operands



Operands used with ID



OPTION Operand



Notes:

[1] NOTRACE,TYPE=VTAM is accepted but ignored. Tracing is started with the default trace table size and the default options. The NOTRACE,TYPE=VTAM start option processing is affected by the level of VIT control being used (as specified by the VITCTRL start option). See z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for details.

[2] You can code TRACE and its qualifiers through position 71, even if you are in the middle of the start option. Continue the remainder of the item in the next record. Code the TYPE qualifier immediately after you code the TRACE start option.

[3] UNRCHTIM is meaningful only if the NODETYPE start option is also used.

[4] The VERIFYCP start option is meaningful only if the NODETYPE start option is also used.

[5] VFYREDTI is meaningful only if the NODETYPE=NN start option is also used.

[6] VITCTRL start option will only affect the TRACE or NOTRACE start option if it is specified prior to the TRACE or NOTRACE TYPE=VTAM (MODE=INT) start option.

[7] VRTG is meaningful only if the NODETYPE and HOSTSA start options are also used.

[8] VRTGCPCP is meaningful only if the NODETYPE and HOSTSA start options are also used.

[9] XCFINIT=YES is the default if VTAM is started as an APPN node (that is, the NODETYPE start option has been specified). XCFINIT=YES is not valid for pure subarea nodes. XCFINIT=DEFINE is the default if VTAM is started as a pure subarea node (the NODETYPE start option has not been specified).

[10] When the same parameter is entered multiple times on a CSDUMP message trigger, only the last occurrence is accepted.

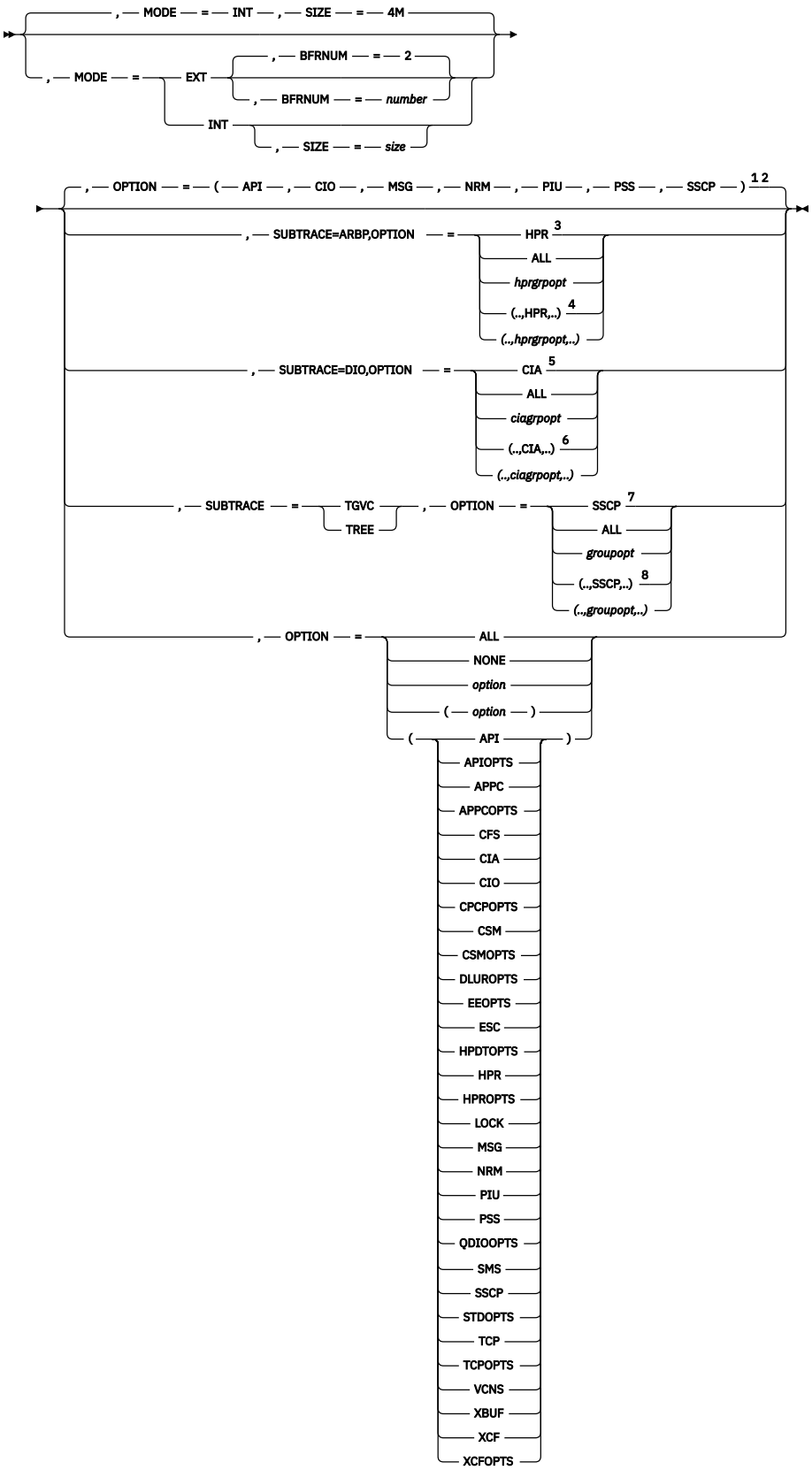
[11] MSGVALUE is valid only when the MESSAGE operand is used and specifies either message IST2391I, IST2406I or IST2419I.

[12] When an error message is received on any parameter of the CSDUMP start option, the remaining parameters for this CSDUMP start option are ignored. Enter the complete CSDUMP start option again when you are prompted.

[13] When the same parameter is entered multiple times on a CSDUMP sense trigger, only the last occurrence is accepted.

[14] COUNT applies only to the IBM 3720 and 3745 Communication Controllers.

VIT Operands



Notes:

[1] The default options apply only to MODE=INT.

[2] PSS is a default VIT option, but PSS can be turned off.

[3] When you specify SUBTRACE=ARBP and you code a single OPTION value, the OPTION value must be HPR, ALL, or one of the group options (*hprgrpopt*) that include HPR as an individual option equivalent. The applicable group options are DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, and XCFOPTS.

[4] When SUBTRACE=ARBP is coded and you code multiple trace options in parentheses, you must code either HPR or one of the group options (*hprgrpopt*) that include HPR as an individual option equivalent inside the parentheses.

[5] When you specify SUBTRACE=DIO and you code a single OPTION value, the OPTION value must be CIA, ALL, or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent. The applicable group options are EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, TCPOPTS and XCFOPTS.

[6] When SUBTRACE=DIO is coded and you code multiple trace options in parentheses, you must code either CIA or one of the group options (*ciagrpopt*) that include CIA as an individual option equivalent inside the parentheses.

[7] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code a single OPTION value, the OPTION value must be either SSCP, ALL, or one of the group options (*groupopt*), all of which include SSCP as an individual option equivalent. The group options are APIOPTS, APPCOPTS, CPCPOPTS, CSMOPTS, DLUROPTS, EEOPTS, HPDTOPTS, HPROPTS, QDIOOPTS, STDOPTS, TCPOPTS, and XCFOPTS.

[8] When you code SUBTRACE=TGVC or SUBTRACE=TREE and you code multiple trace options in parentheses, you must code either SSCP or one of the group options (*groupopt*) inside the parentheses.

Other VTAM codes and commands

Table 2. Other VTAM codes and commands

Command type	**Reference**
Status codes	See z/OS Communications Server: IP and SNA Codes.
Dump analysis tool commands	See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

Appendix A. Accessibility

Publications for this product are offered in Adobe Portable Document Format (PDF) and should be compliant with accessibility standards. If you experience difficulties when using PDF files, you can view the information through the z/OS Internet Library website http://www.ibm.com/systems/z/os/zos/library/bkserv/ or IBM Documentation https://www.ibm.com/docs/en. If you continue to experience problems, send a message to Contact z/OS web page(www.ibm.com/systems/z/os/zos/webqs.html) or write to:

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Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in z/OS enable users to:

- Use assistive technologies such as screen readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard
- Customize display attributes such as color, contrast, and font size

Using assistive technologies

Assistive technology products, such as screen readers, function with the user interfaces found in z/OS. Consult the assistive technology documentation for specific information when using such products to access z/OS interfaces.

Keyboard navigation of the user interface

Users can access z/OS user interfaces using TSO/E or ISPF. See z/OS TSO/E Primer, z/OS TSO/E User's Guide, and z/OS ISPF User's Guide Vol I for information about accessing TSO/E and ISPF interfaces. These guides describe how to use TSO/E and ISPF, including the use of keyboard shortcuts or function keys (PF keys). Each guide includes the default settings for the PF keys and explains how to modify their functions.

z/OS information

One exception is command syntax that is published in railroad track format, which is accessible using screen readers with IBM Documentation, as described in “Dotted decimal syntax diagrams” on page 231.

Dotted decimal syntax diagrams

Syntax diagrams are provided in dotted decimal format for users accessing IBM Documentation using a screen reader. In dotted decimal format, each syntax element is written on a separate line. If two or more syntax elements are always present together (or always absent together), they can appear on the same line, because they can be considered as a single compound syntax element.

Each line starts with a dotted decimal number; for example, 3 or 3.1 or 3.1.1. To hear these numbers correctly, make sure that your screen reader is set to read out punctuation. All the syntax elements that have the same dotted decimal number (for example, all the syntax elements that have the number 3.1) are mutually exclusive alternatives. If you hear the lines 3.1 USERID and 3.1 SYSTEMID, you know that your syntax can include either USERID or SYSTEMID, but not both.

The dotted decimal numbering level denotes the level of nesting. For example, if a syntax element with dotted decimal number 3 is followed by a series of syntax elements with dotted decimal number 3.1, all the syntax elements numbered 3.1 are subordinate to the syntax element numbered 3.

Certain words and symbols are used next to the dotted decimal numbers to add information about the syntax elements. Occasionally, these words and symbols might occur at the beginning of the element itself. For ease of identification, if the word or symbol is a part of the syntax element, it is preceded by the backslash (\) character. The * symbol can be used next to a dotted decimal number to indicate that the syntax element repeats. For example, syntax element *FILE with dotted decimal number 3 is given the format 3 * FILE. Format 3* FILE indicates that syntax element FILE repeats. Format 3* * FILE indicates that syntax element * FILE repeats.

Characters such as commas, which are used to separate a string of syntax elements, are shown in the syntax just before the items they separate. These characters can appear on the same line as each item, or on a separate line with the same dotted decimal number as the relevant items. The line can also show another symbol giving information about the syntax elements. For example, the lines 5.1*, 5.1 LASTRUN, and 5.1 DELETE mean that if you use more than one of the LASTRUN and DELETE syntax elements, the elements must be separated by a comma. If no separator is given, assume that you use a blank to separate each syntax element.

If a syntax element is preceded by the % symbol, this indicates a reference that is defined elsewhere. The string following the % symbol is the name of a syntax fragment rather than a literal. For example, the line 2.1 %OP1 means that you should see separate syntax fragment OP1.

The following words and symbols are used next to the dotted decimal numbers:

- A question mark (?) means an optional syntax element. A dotted decimal number followed by the ? symbol indicates that all the syntax elements with a corresponding dotted decimal number, and any subordinate syntax elements, are optional. If there is only one syntax element with a dotted decimal number, the ? symbol is displayed on the same line as the syntax element, (for example 5? NOTIFY). If there is more than one syntax element with a dotted decimal number, the ? symbol is displayed on a line by itself, followed by the syntax elements that are optional. For example, if you hear the lines 5 ?, 5 NOTIFY, and 5 UPDATE, you know that syntax elements NOTIFY and UPDATE are optional; that is, you can choose one or none of them. The ? symbol is equivalent to a bypass line in a railroad diagram.
- An exclamation mark (!) means a default syntax element. A dotted decimal number followed by the ! symbol and a syntax element indicate that the syntax element is the default option for all syntax elements that share the same dotted decimal number. Only one of the syntax elements that share the same dotted decimal number can specify a ! symbol. For example, if you hear the lines 2? FILE, 2.1! (KEEP), and 2.1 (DELETE), you know that (KEEP) is the default option for the FILE keyword. In this example, if you include the FILE keyword but do not specify an option, default option KEEP will be applied. A default option also applies to the next higher dotted decimal number. In this example, if the FILE keyword is omitted, default FILE(KEEP) is used. However, if you hear the lines 2? FILE, 2.1, 2.1.1! (KEEP), and 2.1.1 (DELETE), the default option KEEP applies only to the next higher dotted decimal number, 2.1 (which does not have an associated keyword), and does not apply to 2? FILE. Nothing is used if the keyword FILE is omitted.
- An asterisk (*) means a syntax element that can be repeated 0 or more times. A dotted decimal number followed by the * symbol indicates that this syntax element can be used zero or more times; that is, it is optional and can be repeated. For example, if you hear the line 5.1* data area, you know that you can include one data area, more than one data area, or no data area. If you hear the lines 3*, 3 HOST, and 3 STATE, you know that you can include HOST, STATE, both together, or nothing.

  Notes:

  1. If a dotted decimal number has an asterisk (*) next to it and there is only one item with that dotted decimal number, you can repeat that same item more than once.
  2. If a dotted decimal number has an asterisk next to it and several items have that dotted decimal number, you can use more than one item from the list, but you cannot use the items more than once each. In the previous example, you could write HOST STATE, but you could not write HOST HOST.
  3. The * symbol is equivalent to a loop-back line in a railroad syntax diagram.

- + means a syntax element that must be included one or more times. A dotted decimal number followed by the + symbol indicates that this syntax element must be included one or more times; that is, it must be included at least once and can be repeated. For example, if you hear the line 6.1+ data area, you must include at least one data area. If you hear the lines 2+, 2 HOST, and 2 STATE, you know that you must include HOST, STATE, or both. Similar to the * symbol, the + symbol can only repeat a particular item if it is the only item with that dotted decimal number. The + symbol, like the * symbol, is equivalent to a loop-back line in a railroad syntax diagram.

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- For information about software support lifecycle, see: IBM Lifecycle Support for z/OS (www.ibm.com/software/support/systemsz/lifecycle)
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