

OS/390 IBM Communications Server



# Quick Reference

*Version 2 Release 10*



OS/390 IBM Communications Server



# Quick Reference

*Version 2 Release 10*

**Note:**

Before using this information and the product it supports, be sure to read the general information under "Appendix. Notices" on page 217.

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## About This Quick Reference

This quick reference summarizes information found in:

- *OS/390 IBM Communications Server: IP Configuration Reference*
- *OS/390 IBM Communications Server: IP and SNA Codes*
- *OS/390 IBM Communications Server: IP Diagnosis*
- *OS/390 IBM Communications Server: IP User's Guide*
- *OS/390 IBM Communications Server: SNA Diagnosis V1 Techniques and Procedures*
- *OS/390 IBM Communications Server: SNA Operation*

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

- TSO commands
- OS/390® Unix commands
- Netview SNMP commands
- IPCS subcommands
- CTRACE Command and Options
- VTAM® commands
- VTAM start options
- Status codes
- Dump Analysis Tool commands

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

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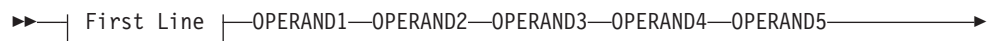
## How to Read the Syntax Diagrams

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

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



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



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



You must code required operands and values.

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



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



You can choose not to code optional operands and values.

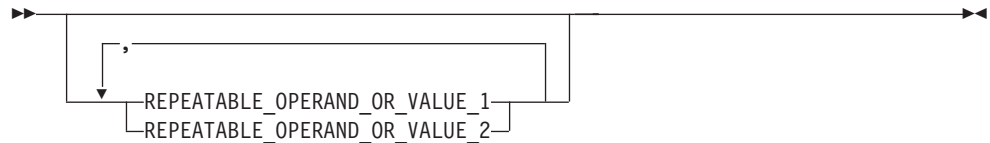
If there is more than one mutually exclusive optional operand or value to choose from, they are stacked vertically in alphanumeric order below the main path line.



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

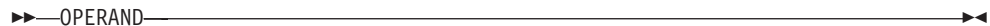


- An arrow returning to the left above a group of operands or values means more than one can be selected, or a single one can be repeated.



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

**Note:** VTAM commands are not case sensitive. You can code them in uppercase or lowercase. If the operand is coded in both uppercase and lowercase, the uppercase portion is the abbreviation (for example, OPERand).



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

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

▶▶—OPERAND=(001,0.001)—▶▶

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

▶▶—OPERAND=(001 FIXED)—▶▶

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

▶▶—

DEFAULT
OPERAND

—▶▶

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

▶▶—*variable*—▶▶

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

(1)  
▶▶—OPERAND—▶▶

**Notes:**

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

▶▶—| Reference to Syntax Fragment |—▶▶

**Syntax Fragment:**

|—1ST\_OPERAND,2ND\_OPERAND,3RD\_OPERAND—|





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## Part 1. IP Commands

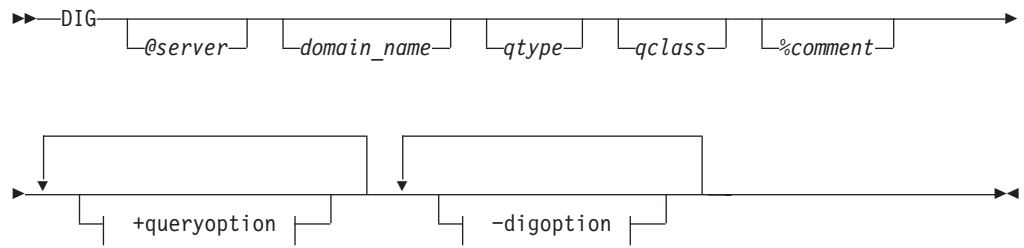
| In this section, subcommands are listed alphabetically under each command. For  
| more information on these commands and options, refer to *OS/390 IBM*  
| *Communications Server: IP User's Guide*, *OS/390 IBM Communications Server: IP*  
| *Configuration Reference*, and *OS/390 IBM Communications Server: IP Diagnosis*.



# Chapter 1. TSO Commands

## DIG Command

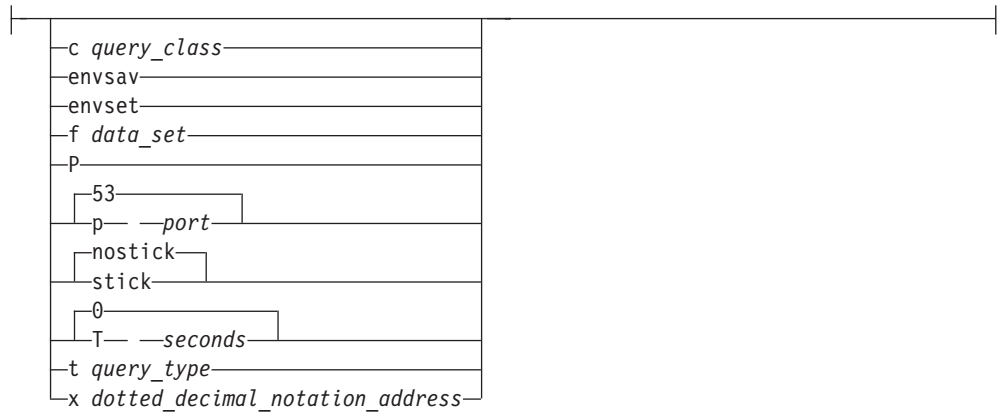
Query Name Servers



**+queryoption:**

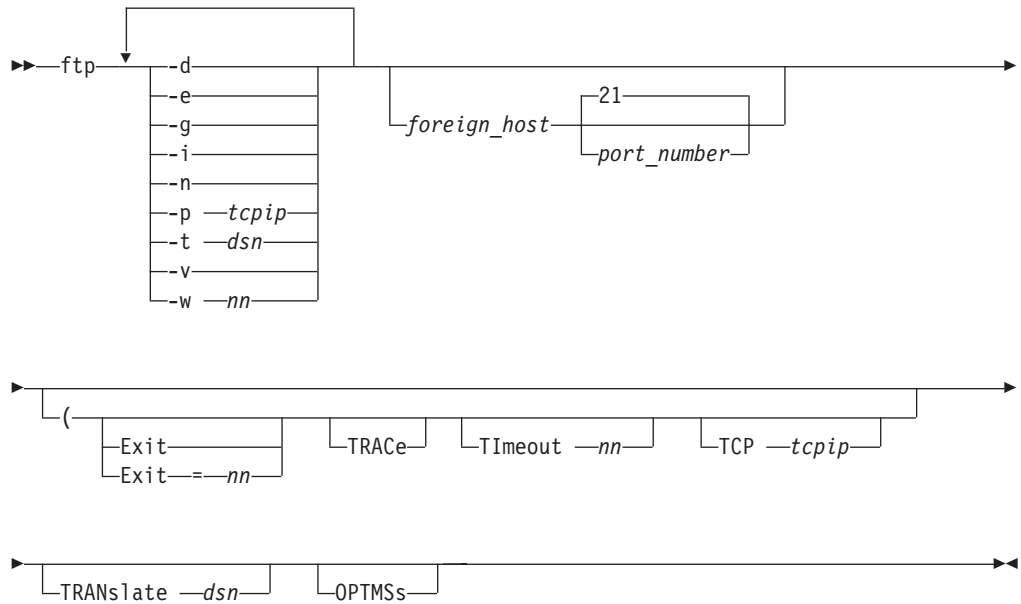
<del>noaaonly</del>
<del>aaonly</del>
<del>addit</del>
<del>noaddit</del>
<del>answer</del>
<del>noanswer</del>
<del>author</del>
<del>noauthor</del>
<del>nocl</del>
<del>cl</del>
<del>cmd</del>
<del>nocmd</del>
<del>nod2</del>
<del>d2</del>
<del>debug</del>
<del>nodebug</del>
<del>defname</del>
<del>nodefname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

**-digoption:**



## FTP Command

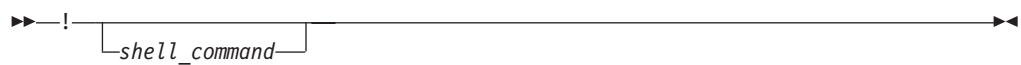
Enter the FTP Environment



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

### ! Subcommand

Invoke an OS/390 UNIX System Services Function





## CD Subcommand

Change the Directory on the Remote Host

▶▶—CD—*directory*—————▶▶

## CDUP Subcommand

Change to the Parent of the Working Directory

▶▶—CDUp—————▶▶

## CLOSE Subcommand

Disconnect from a Remote Host

▶▶—Close—————▶▶

## COMPRESS Subcommand

Set the Compressed Data Transfer Mode

▶▶—COMpress—————▶▶

## DEBUG Subcommand

Set Internal Debug Options

▶▶—DEBug 

1
2

—————▶▶

## DELETE Subcommand

Delete Files

▶▶—DELEte—*foreign\_file*—————▶▶

## DELIMIT Subcommand

Display the File Name Delimiter

▶▶—DELImit—————▶▶

## DIR Subcommand

Obtain a List of Directory Entries



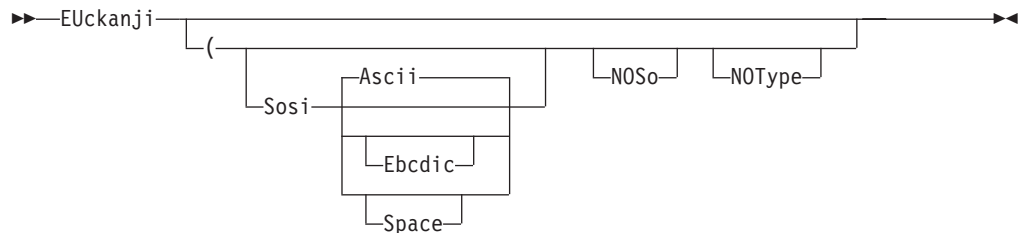
## EBCDIC Subcommand

Change the Data Transfer Type to EBCDIC



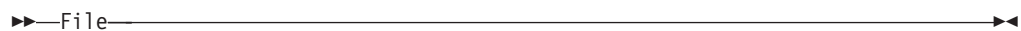
## EUCKANJI Subcommand

Change the Data Transfer Type to EUCKANJI



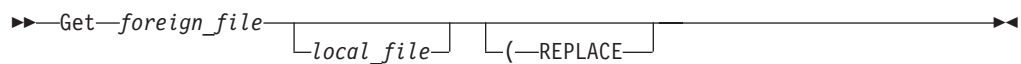
## FILE Subcommand

Set the File Structure to File



## GET Subcommand

Copy Files



## GLOB Subcommand

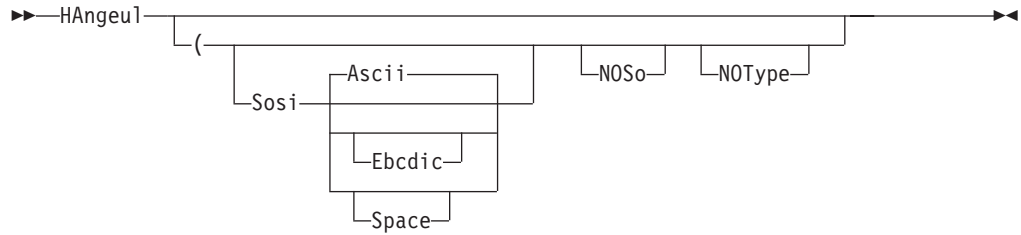
Toggle Expansion of Metacharacters





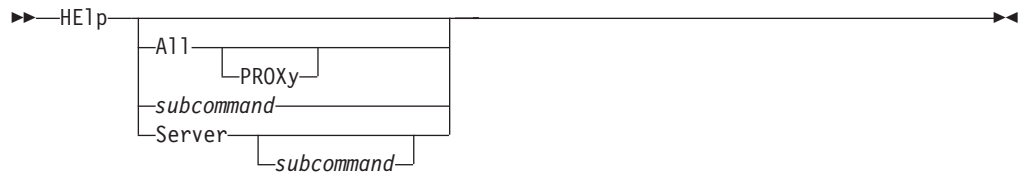
## HANGEUL Subcommand

Change the Data Transfer Type to HANGEUL



## HELP and ? Subcommands

Display Help Information



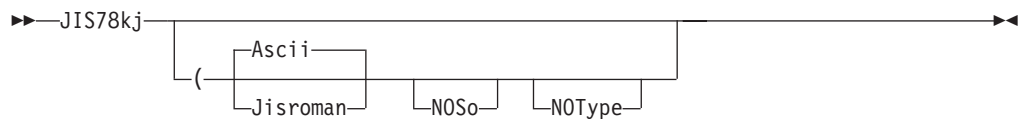
## IBMKANJI Subcommand

Change the Data Transfer Type to IBMKANJI



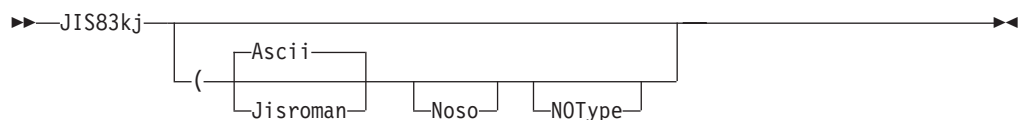
## JIS78KJ Subcommand

Change the Data Transfer Type to JIS78KJ



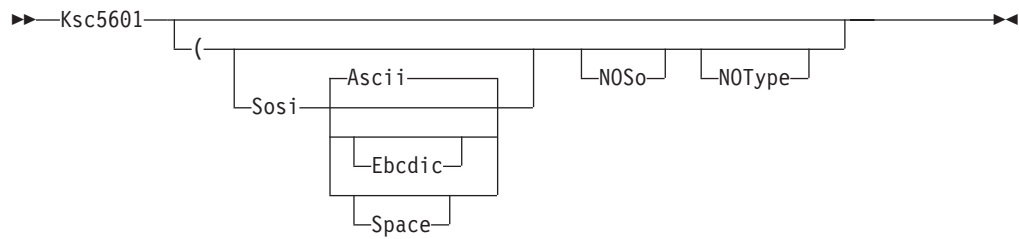
## JIS83KJ Subcommand

Change the Data Transfer Type to JIS83KJ



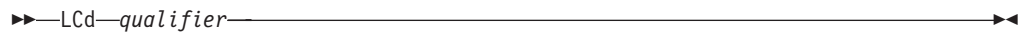
## KSC5601 Subcommand

Change the Data Transfer Type to KSC-5601



## LCD Subcommand

Change the Local Working Directory



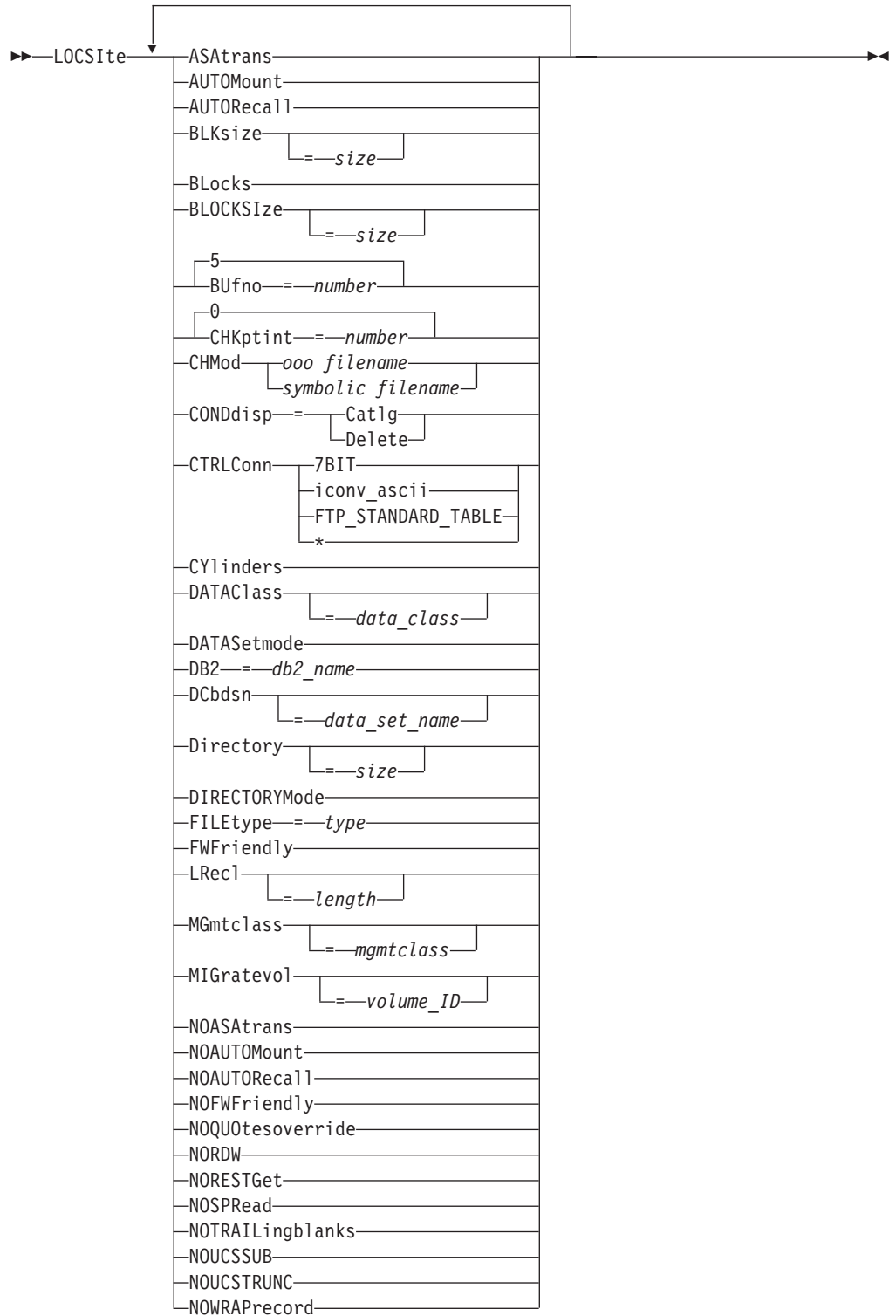
## LMKDIR Subcommand

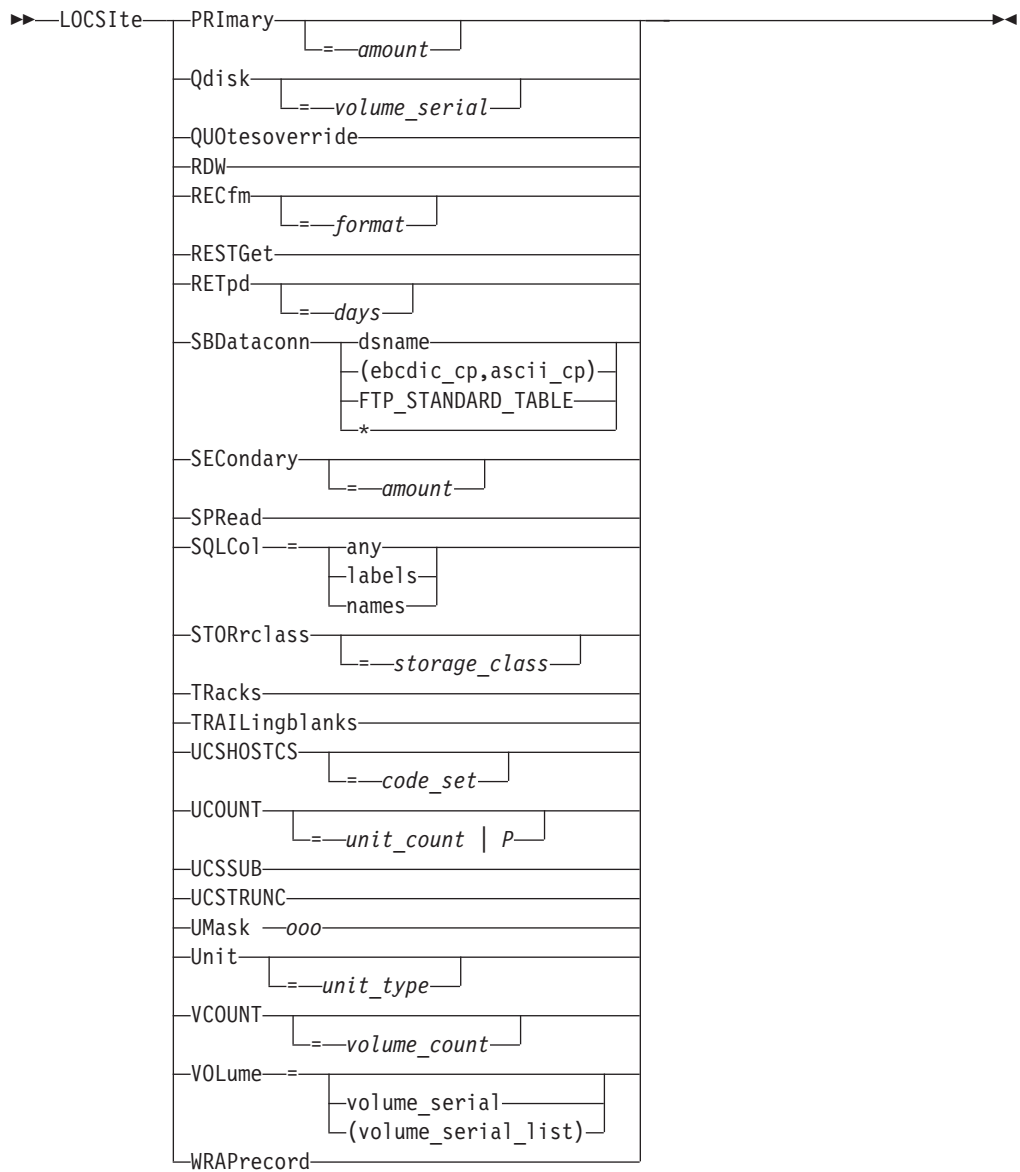
Create a Directory on the Local Host



## LOCSITE Subcommand

Specify Site Information to the Local Host





## LOCSTAT Subcommand

Display Local Status Information



## 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



## MODE Subcommand

Set the Data Transfer Mode



## MPUT Subcommand

Copy Multiple Data Sets to the Remote Host



## NOOP Subcommand

Test the Connection

▶▶—NOop—▶▶

## OPEN Subcommand

Connect to the FTP Server

▶▶—Open—*host\_name*—

21
<i>port_number</i>

—▶▶

## PASS Subcommand

Supply a Password

▶▶—PAss—*password*—

<i>/newpass/newpass</i>
-------------------------

—

<i>:userdata</i>
------------------

—

<i>account_information</i>
----------------------------

—▶▶

## PROMPT Subcommand

Toggle Interactive Prompting for M\* Commands

▶▶—PROMpt—▶▶

## PROXY Subcommand

Execute FTP Subcommand on Secondary Control Connections

▶▶—PROXy—*subcommand*—▶▶

## PUT Subcommand

Copy Data Sets to the Remote Host

▶▶—PUt—*local\_file*—

<i>foreign_file</i>
---------------------

—▶▶

## PWD Subcommand

Display the Current Working Directory

▶▶—PWd—▶▶

## QUIT Subcommand

Leave the FTP Environment

▶▶—QUIT—▶▶

## QUOTE Subcommand

Send an Uninterpreted String of Data

▶▶—QUOTE—*string*—▶▶

## RECORD Subcommand

Set the File Structure to Record

▶▶—RECORD—▶▶

## RENAME Subcommand

Rename Files

▶▶—RENAME—*original\_name*—*new\_name*—▶▶

## RESTART Subcommand

Restart a Checkpointed Data Transfer

▶▶—RESTART—▶▶

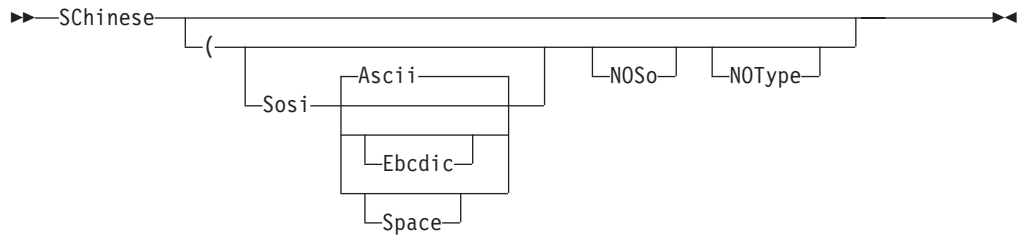
## RMDIR Subcommand

Remove a Directory on the Remote Host

▶▶—RMDIR—*directory*—▶▶

## SCHINESE Subcommand

Change the Data Transfer Type to SCHINESE



## SENDPORT Subcommand

Toggle the Sending of Port Information



## SENDSITE Subcommand

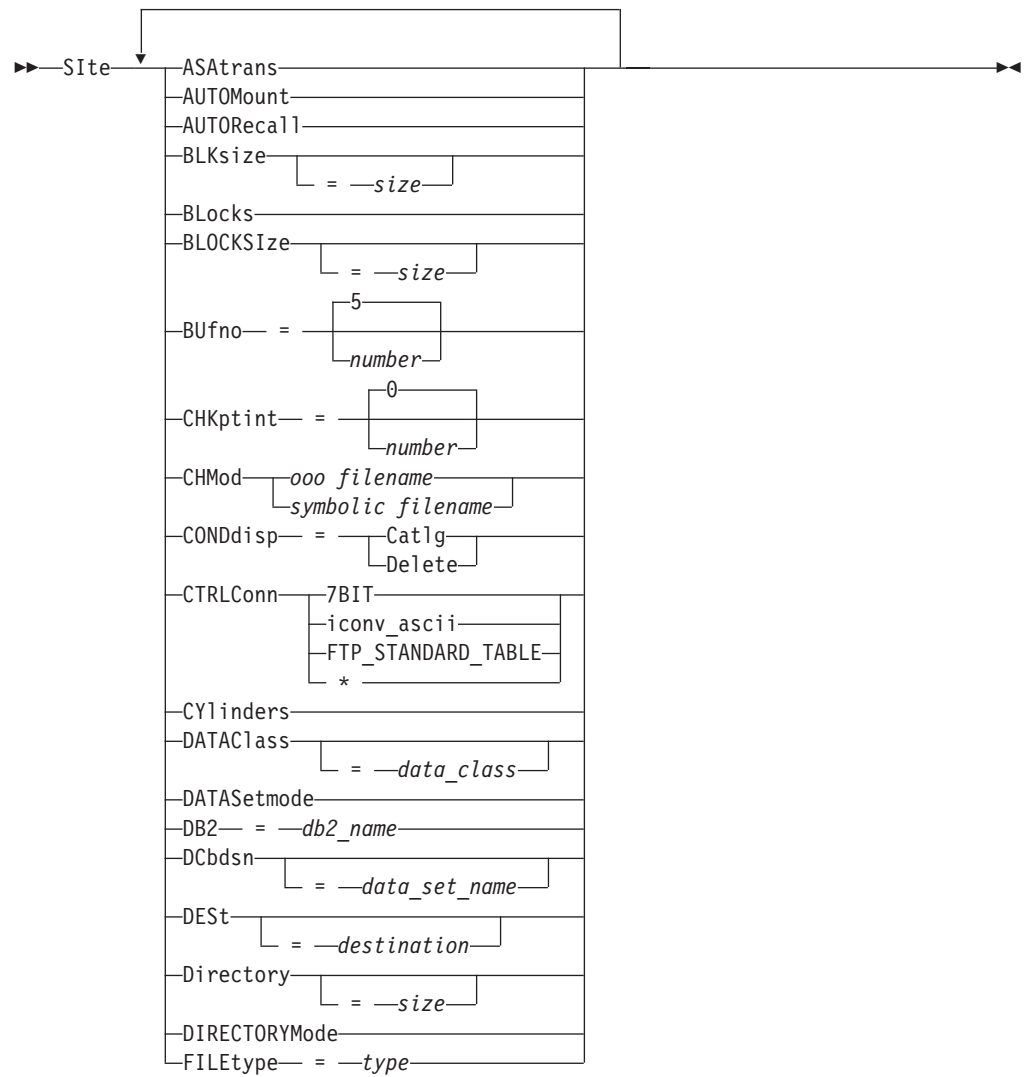
Toggle the Sending of Site Information

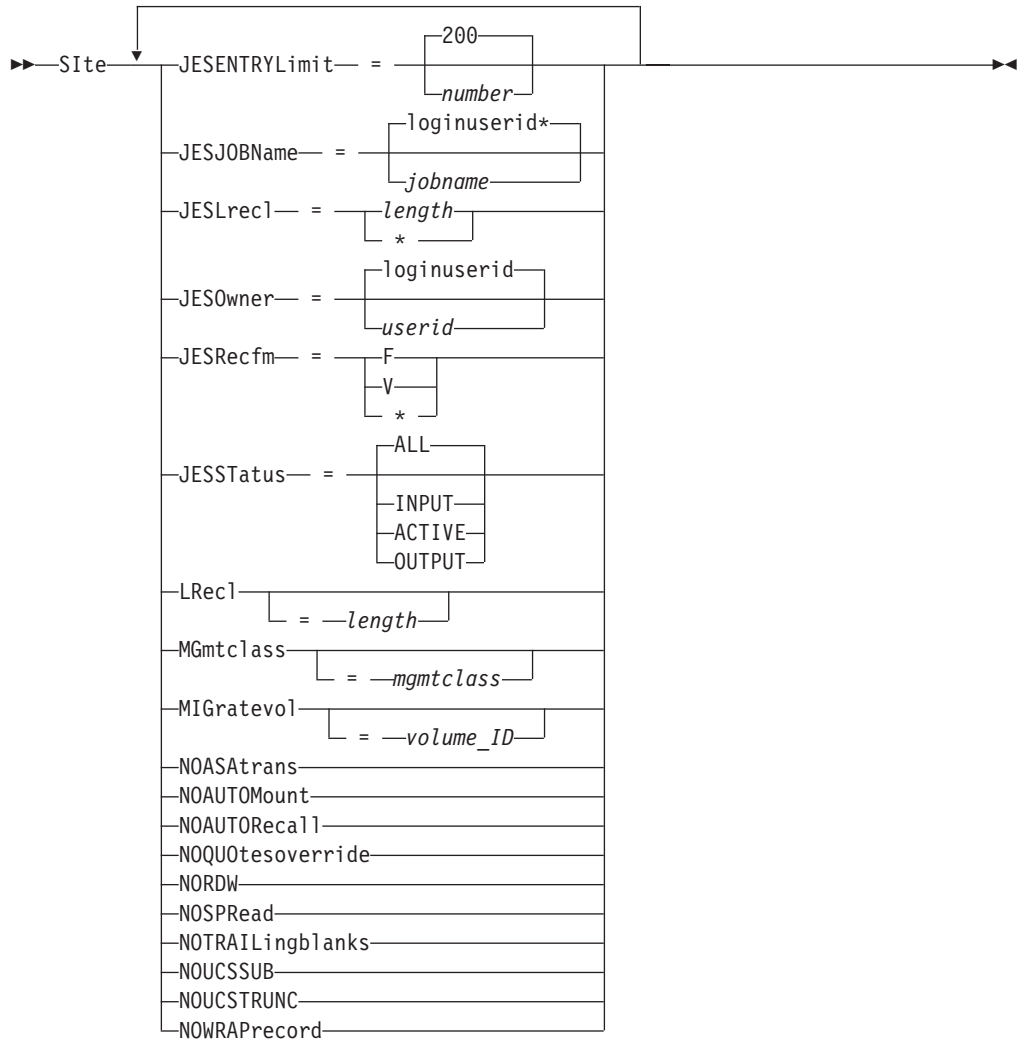


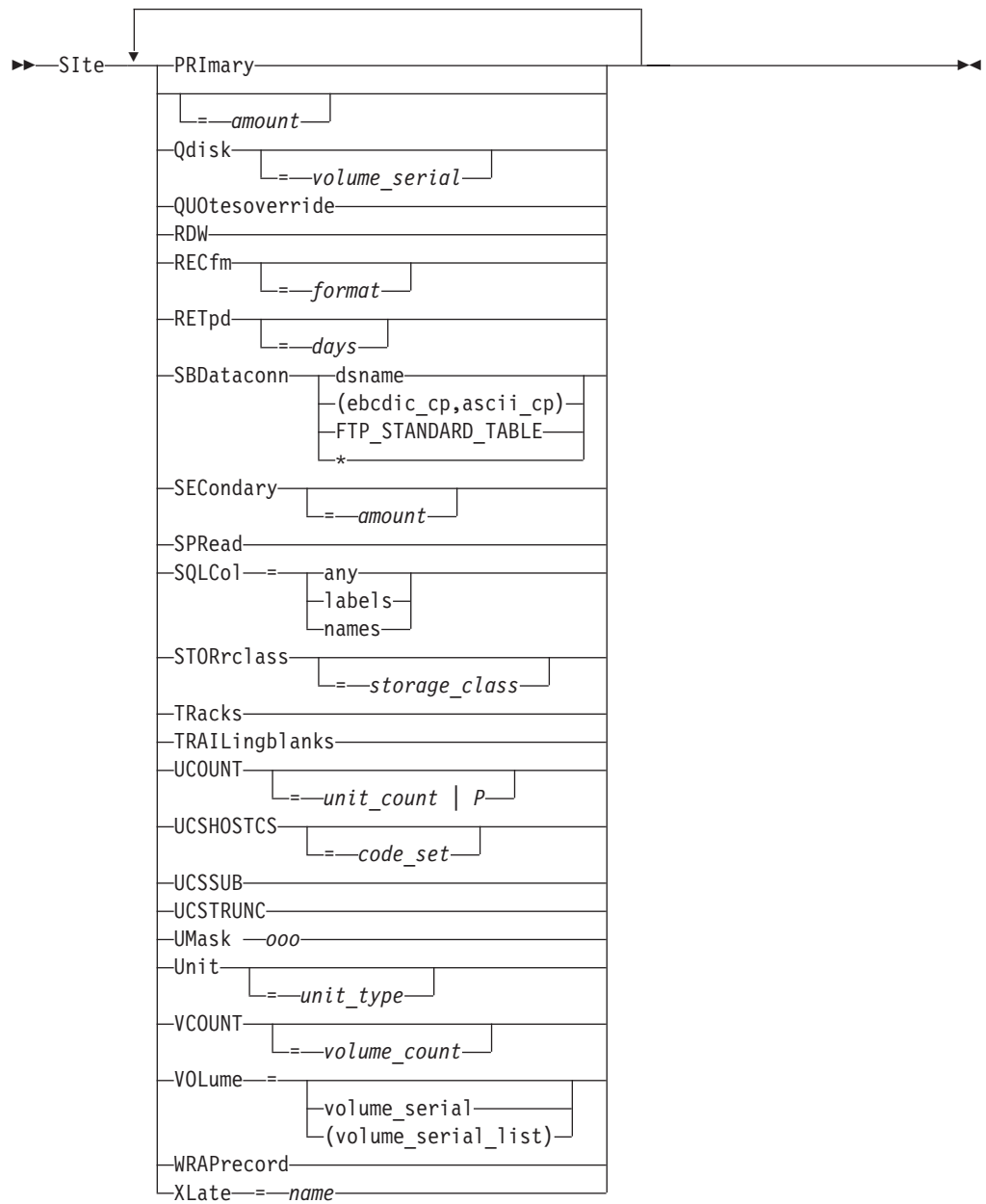
## SITE Subcommand

Send Site Specific Information to a Host



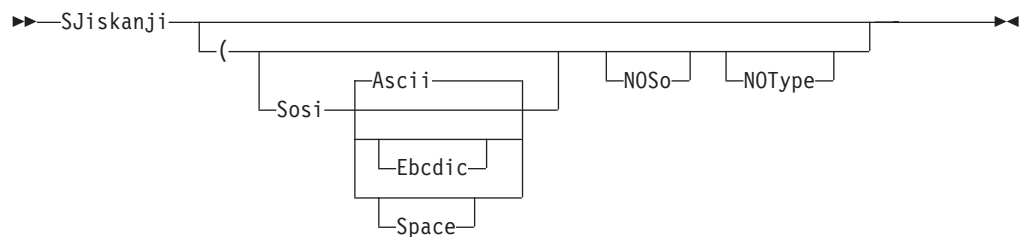






## SJISKANJI Subcommand

Change the Data Transfer Type to SJISKANJI



## STATUS Subcommand

Retrieve Status Information from a Remote Host



## STREAM Subcommand

Set the Stream Data Transfer Mode



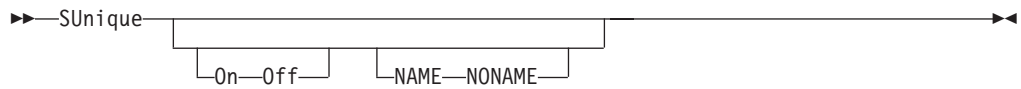
## STRUCTURE Subcommand

Set the File Structure



## SUNIQUE Subcommand

Toggle the Storage Method



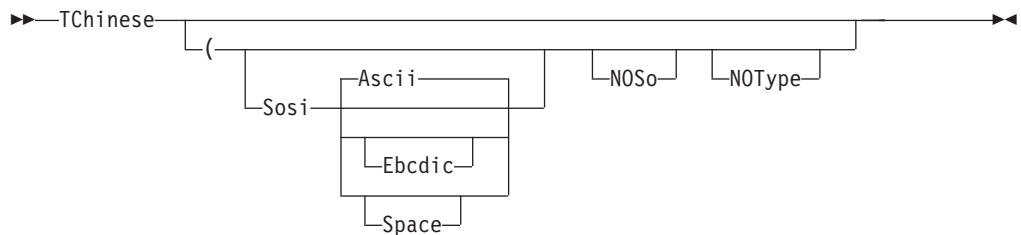
## SYSTEM Subcommand

Display the Operating System Name



## TCHINESE Subcommand

Change the Data Transfer Type to TCHINESE



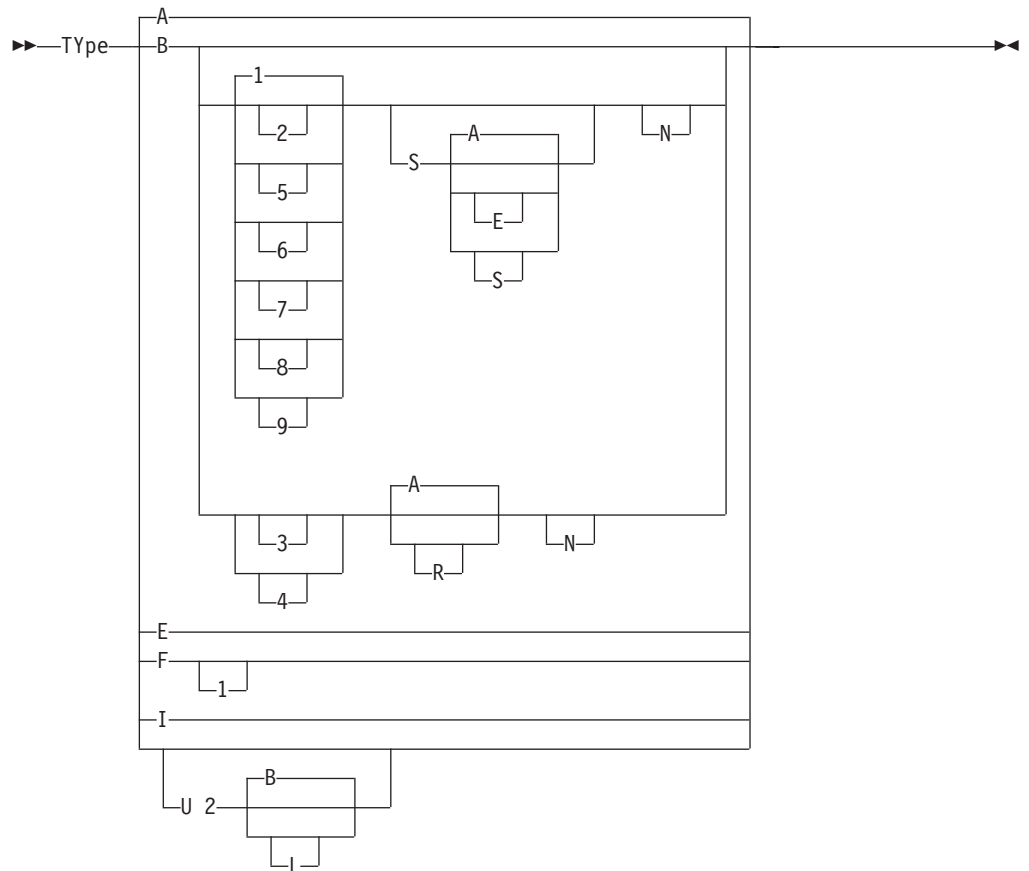
## TSO Subcommand

Use TSO Commands

►►—TSO—*command\_line*—►►

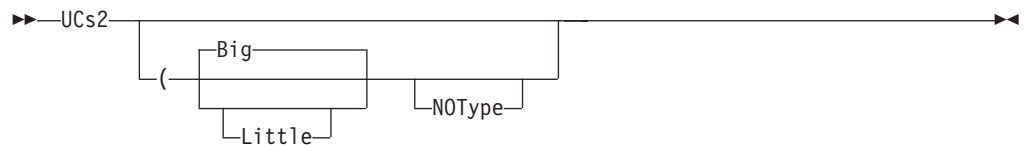
## TYPE Subcommand

Set the Data Transfer Type



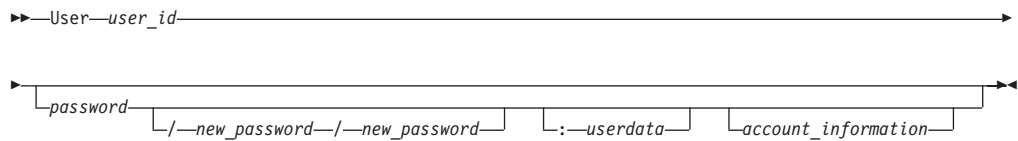
## UCS2 Subcommand

Change Data Transfer Type to Unicode UCS-2



## USER Subcommand

Identify Yourself to a Host or Change Your TSO User ID Password



---

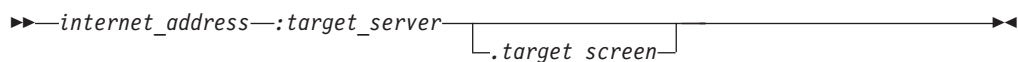
## GDDMXD Command

Invoke the GDDMXD CLIST



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

▶▶ `gddmx*Enter:—keySYM_name—`▶▶

## GColornn Option

Specify a Color Name

▶▶ `gddmx*GColornn:—c—`▶▶

## Geometry Option

Specify the Size and Location of the Initial GDDMXD Graphics Presentation Space

▶▶ `gddmx*Geometry:—width x height— + —x_offset— + —y_offset—`▶▶

## GMCPnn Option

Override GDDM<sup>®</sup> Multicolor Patterns with Workstation Color Names

▶▶ `gddmx*GMCPnn:—c—`▶▶

## HostRast Option

Perform Raster Image Processing at the System/370 Host

▶▶ `gddmx*HOSTRAST:` ▶▶

## NewLine Option

Override the Default Key Mapping for NewLine

▶▶ `gddmx*NewLine:—keySYM_name—`▶▶

## XSync Option

Request that the X Window System Process One Request at a Time

▶▶ `gddmx*XSync:` ▶▶

## ZWL Option

Tell GDDMXD/MVS to Draw All Lines Using 0-Width Lines

```
▶▶ gddmx*ZWL: [N]
                [Y]
```

---

## HOMETEST Command

Verify Your Host Name and Address Configuration

```
▶▶ HOMETEST
```

---

## KDESTROY Command

Delete Kerberos Ticket Data Sets

```
▶▶ KDESTROY [ _f ] [ _q ]
```

---

## KINIT Command

Connect to the Kerberos System

```
▶▶ KINIT [ _i ] [ _r ] [ _v ] [ _l ]
          [ _irv ]
```

---

## KLIST Command

Display Your Current Tickets

```
▶▶ KLIST [ user_id.TMP.TKT0 ]
          [ _file data_set_name ] [ _srvtab ]
```

---

## KPASSWD Command

Change Your Password

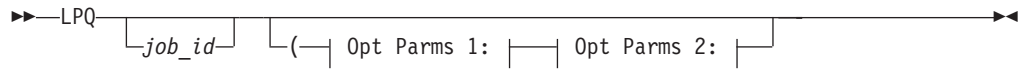
```
▶▶ KPASSWD --u user_name [ _i instance ]
```



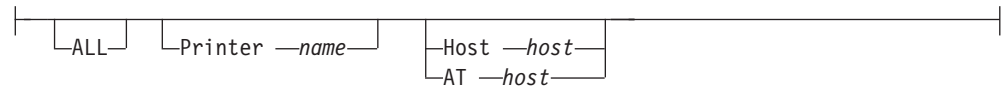
---

## LPQ Command

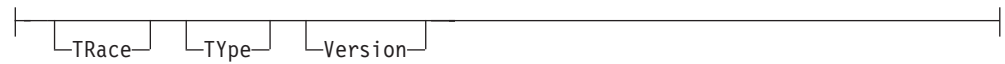
Request a List of the Printer Queue on a Remote Printer



### Opt Params 1:



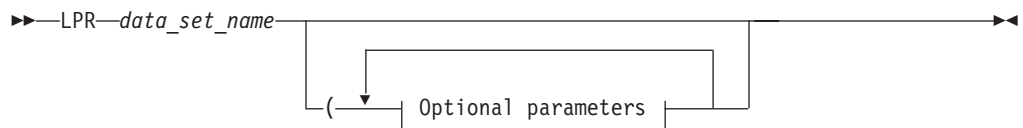
### Opt Params 2:



---

## LPR Command

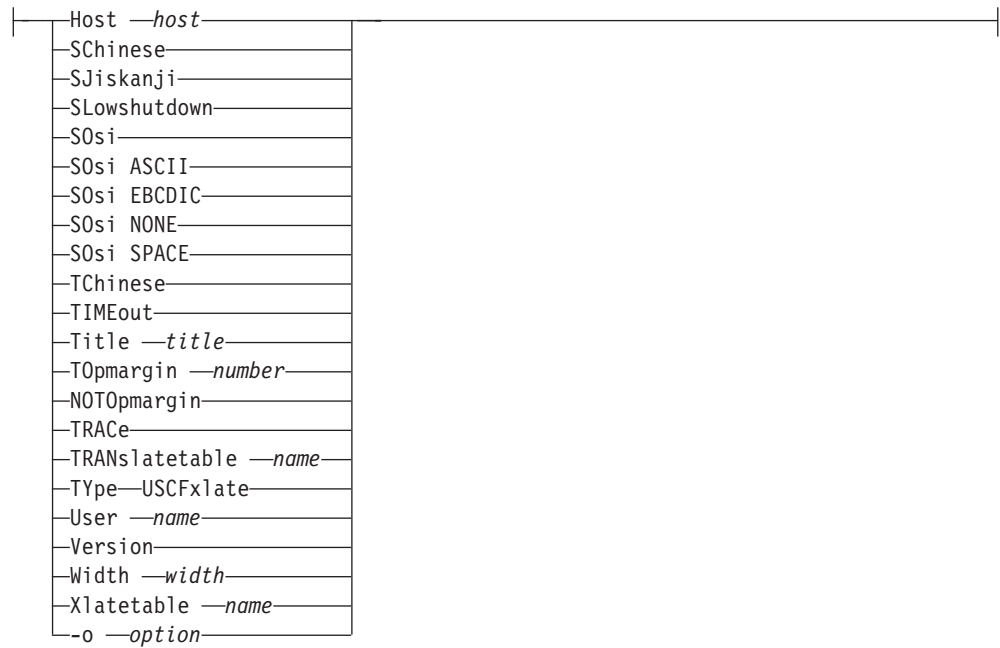
Print to a Remote Printer



### Optional parameters:

AT	<i>host</i>
BIG5	
NOBinary	
Binary	
Burst	
NOBurst	
CC	
NOCC	
CFfirst	
Class	<i>class</i>
1	
COpies	<i>copies</i>
EOF1f	
NOEOF1f	
Euckanji	
Filter	filter
HAngeul	
HEader	
NOHeader	
IBmkanji	
Indent	<i>number</i>
JIS78kj	ASCII
	JISROMAN
JIS83kj	ASCII
	JISROMAN
JNum	<i>number</i>
Job	jobname
Ksc5601	
LAandscape	
LANDNOcz	
LATEconn	
LNcz	
55	
LInecount	<i>count</i>
NOLincount	
Mail	
NAME	<i>name</i>
POstscript	
NOPostscript	
Printer	<i>name</i>

**More optional parameters:**



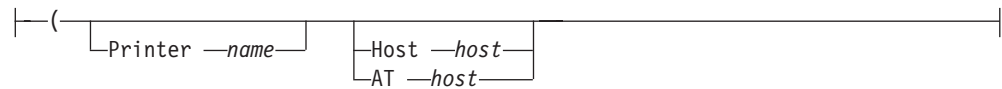

---

## LPRM Command

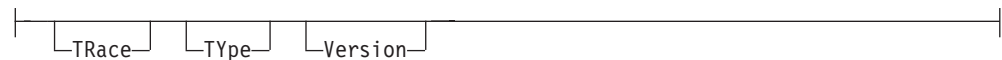
Remove a Job from the Printer Queue on a Remote Host



### Opt Params 1:



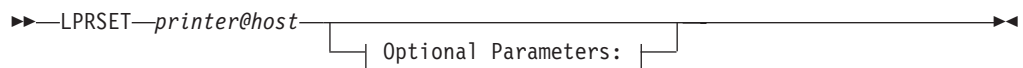
### Opt Params 2:



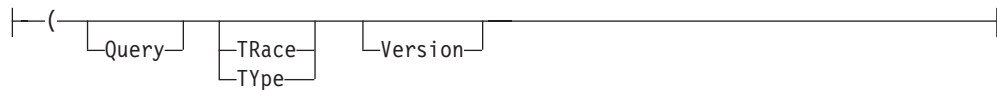

---

## LPRSET Command

Set the Default Printer and Host Name



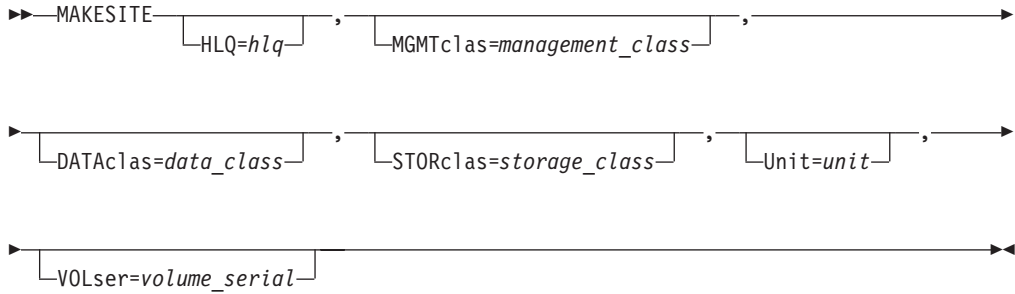
### Optional Parameters:



---

## MAKESITE Command

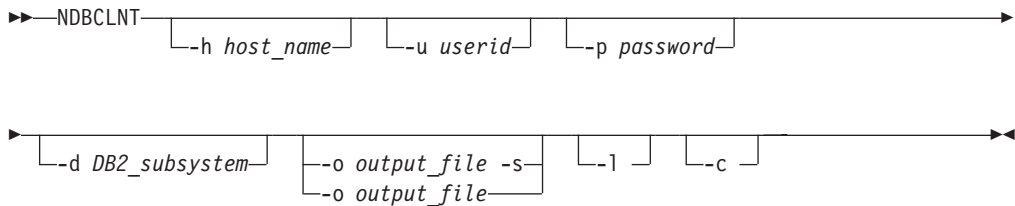
Generate new *hlq*.HOSTS.SITEINFO and *hlq*.HOSTS.ADDRINFO Data Sets



---

## NDBCLNT Command

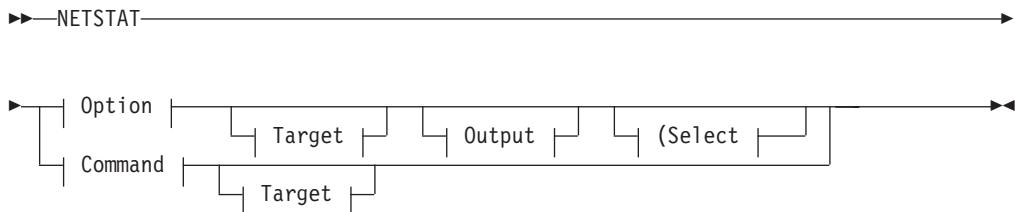
Issue SQL Statements to a DB2<sup>®</sup> Subsystem



---

## NETSTAT Command

Display Local Host Information



**Option:**

COnn
(1)
ALL
(1) (2) (3)
ALLConn
ARp
net address
ALL
(1)
BYTEinfo
IDLETIME
CACHinfo
(1)
CLients
CONFIG
(1) (2) (3)
COnn
DEvlinks
(2)
Gate
DETAIL
HElp
?
HOMe
PORTList
ROUTE
SLAP
SOCKets
(1) (2) (3) (4) (5)
TELnet
DETAIL
Up
(2) (3)
VCRT
(2) (3)
VDPT
DETAIL
VIPADCFG
VIPADyn

**Command:**

DRop -n Target

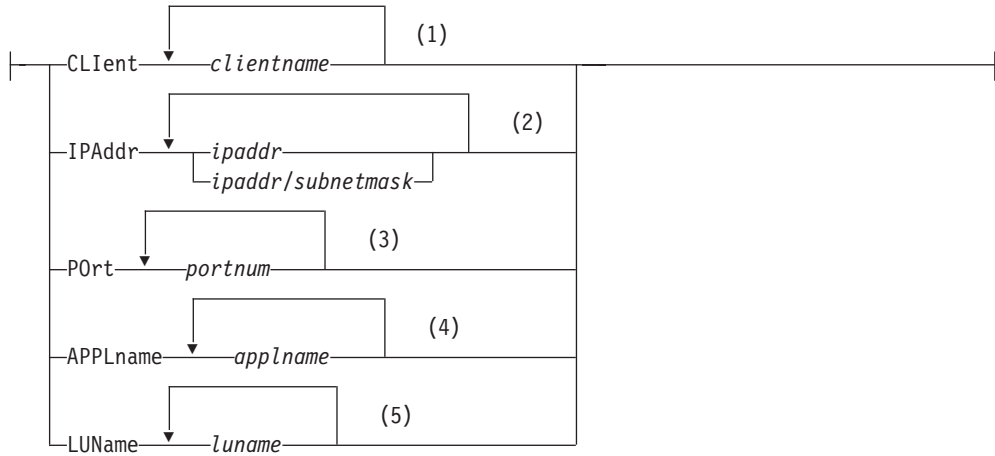
**Target:**

Tcp tcpname

**Output:**



**Select String:**



**Command:**



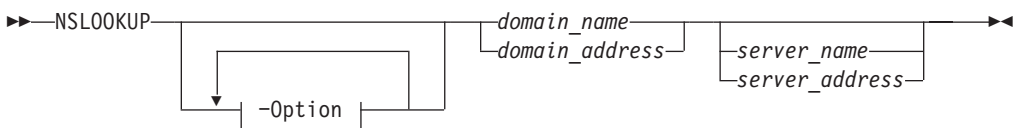
**Notes:**

- 1 The CLient select string is valid with ALL, ALLConn, BYTEinfo, COnn, CLients, and TELnet.
- 2 The IPAddr select string is valid only with ALLConn, COnn, Gate, TELnet, VCRT and VDPT.
- 3 The POrt select string is valid only with ALLConn, COnn, TELnet, VCRT and VDPT.
- 4 The APPLname select string is valid only with TELnet.
- 5 The LUName select string is valid only with TELnet.

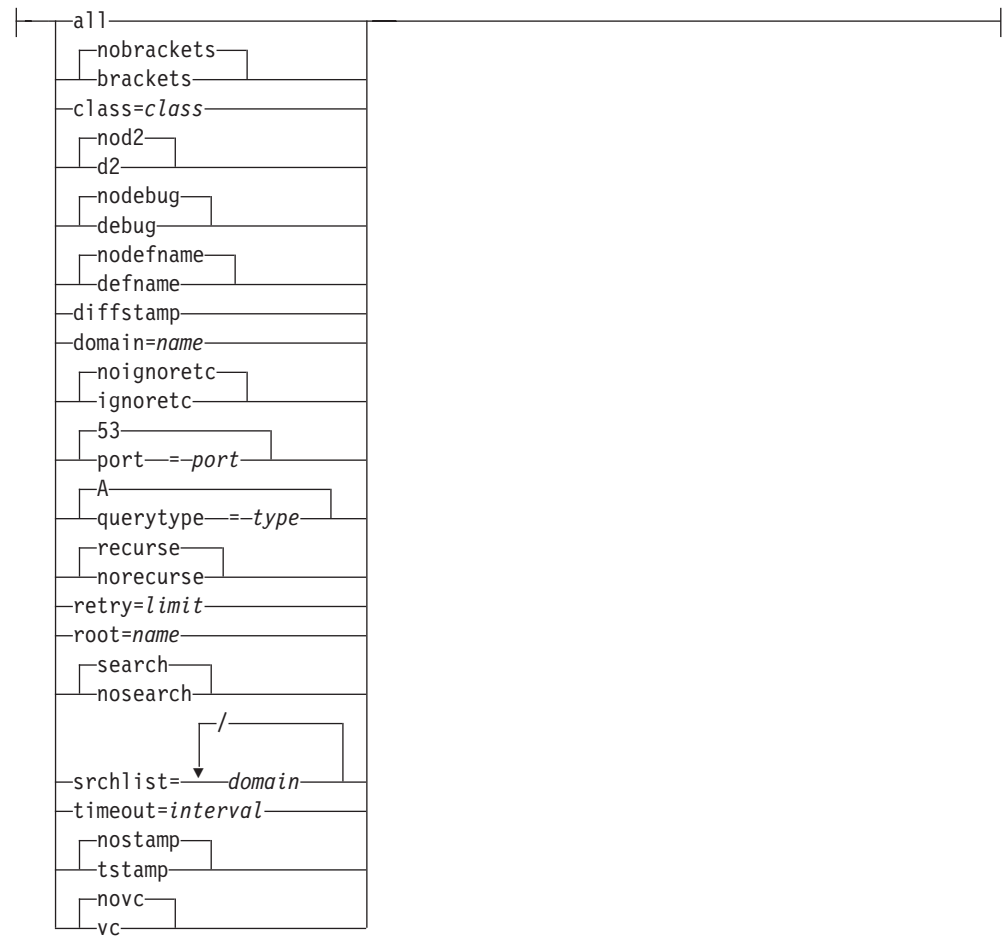
---

## NSLOOKUP Command

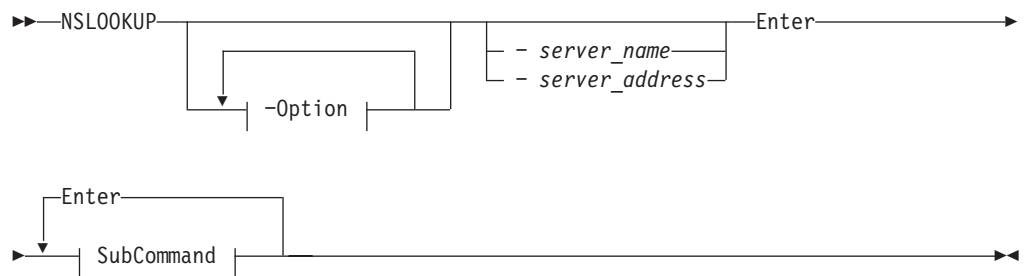
Query a Name Server in Command Mode



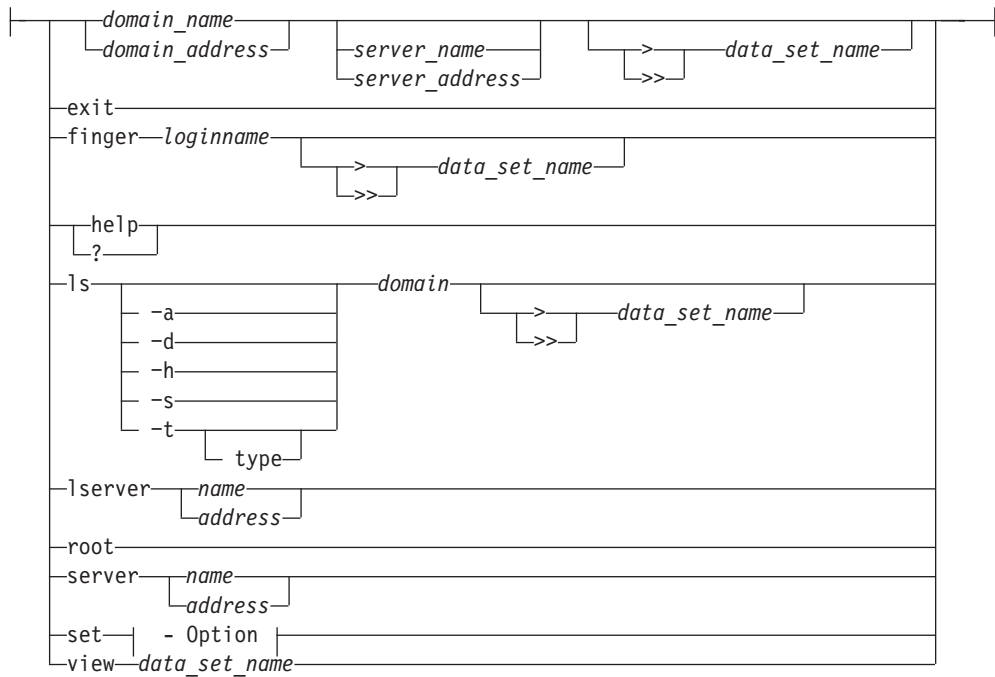
**Option:**



**Issue Queries to Name Servers in Interactive Mode**

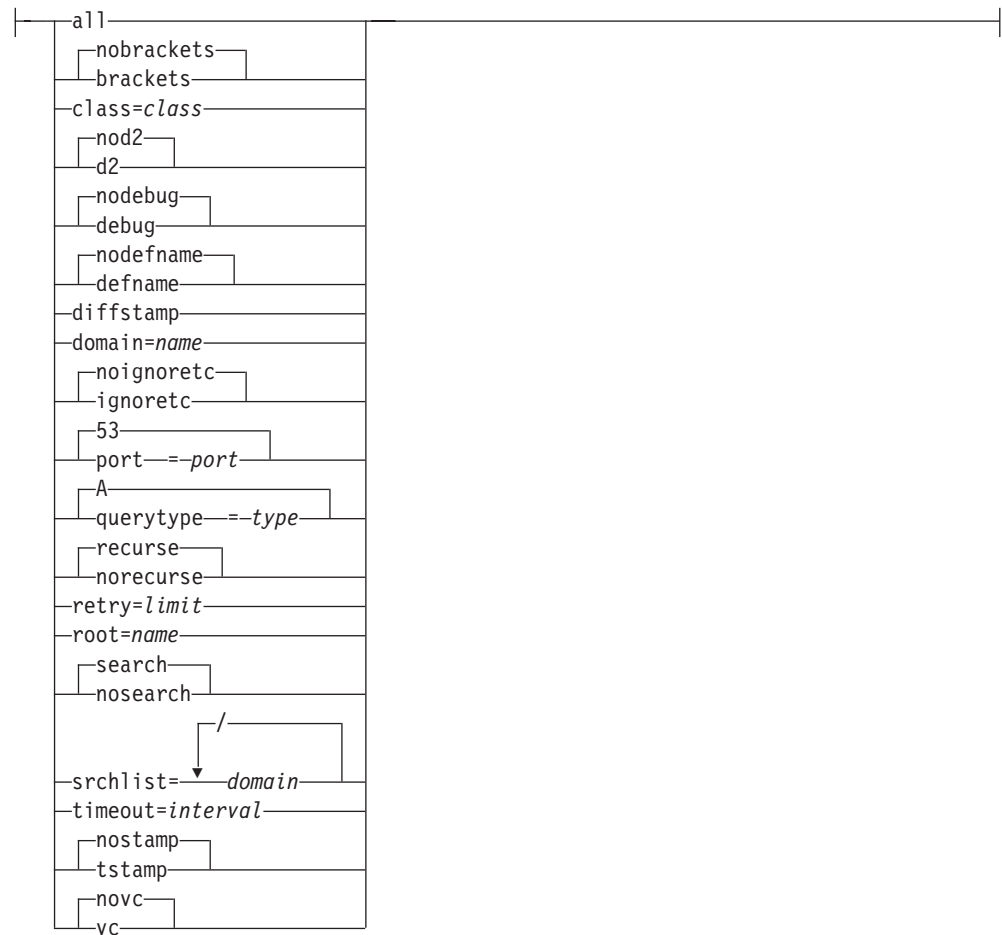


**SubCommand:**





## Option:

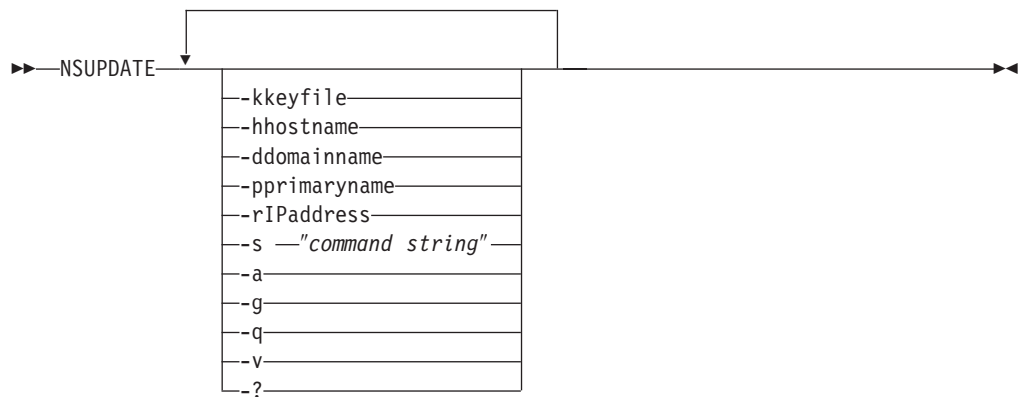


---

## NSUPDATE Command

|

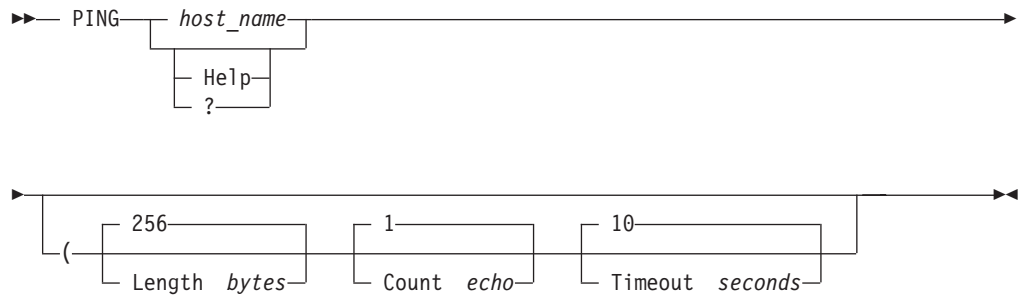
Create and Execute DNS Update Operations on a Host Record



---

## PING Command

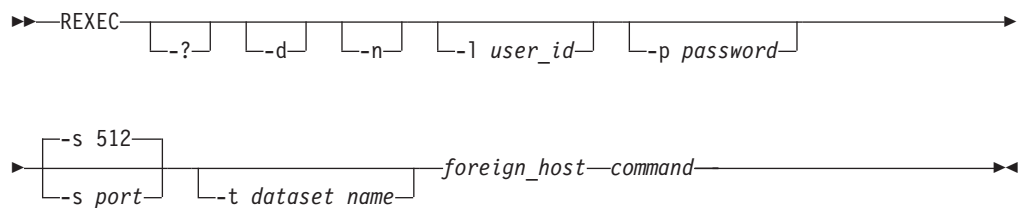
Send an Echo Request



---

## REXEC Command

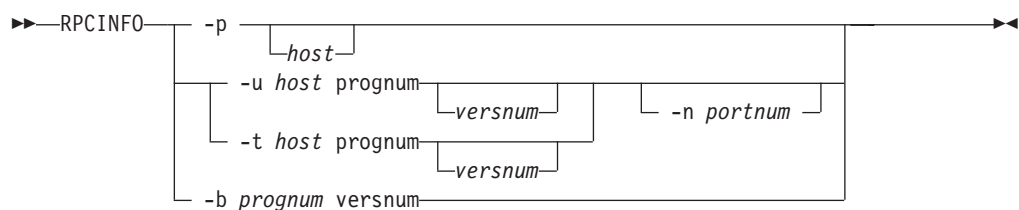
Execute a Command on the Remote Host and Receive the Results on Your Local Host



---

## RPCINFO Command

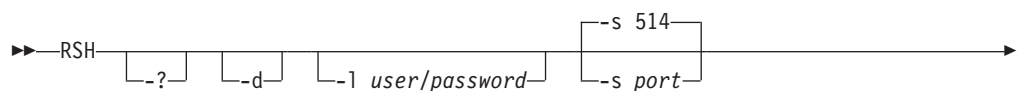
Display Server Information



---

## RSH Command

Execute a Command on a Remote Host and Receive the Results on Your Local Host



▶ *foreign\_host* *command* ▶▶

---

## SMSG SMTP Command

Command for the general user

▶▶ SMSG SMTP 

HElP
Ques
STats

 ▶▶

Command for the privileged user

▶▶ SMSG SMTP 

DEbug
EXpire <i>IP_address</i>
NODebug
NOTrace
SHutdown
TRace

 ▶▶

---

## SMTPNOTE Command

Send Electronic Mail to One or More Recipients on NJE or TCP Networks

▶▶ SMTPNOTE 

To <i>(-recipient-)</i>	Cc <i>(-recipient-)</i>
	NOcc

 ▶▶

Subject <i>(-subject-)</i>	Dataset <i>(-data_set_name-)</i>	Batch
	Reuse	

 ▶▶

---

## TELNET Command

▶▶ TELNET 

<i>foreign_host</i>	23	<i>port_number</i>
Help		

 ▶▶

▶▶ ( 

Linemode	DEBUG	TRANslate <i>data_set_name</i>
----------	-------	--------------------------------

 ) ▶▶

The following sections describe the syntax for TELNET command options

## AO Option

Terminate Output Display

▶▶—AO—▶▶

## AYT Option

Query the Connection

▶▶—AYt—▶▶

## BRK Option

Send the Break or Attention Keystroke to a Host

▶▶—Brk—▶▶

## HELP Option

Display Help Information

▶▶—He1p—▶▶  
    └─?─┘

## IP Option

Interrupt the Process

▶▶—Ip—▶▶

## PA1 Option

Send the PA1 Keystroke to a Host

▶▶—Pa1—▶▶

## QUIT Option

End the Telnet Session

▶▶—Quit—▶▶

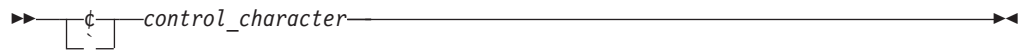
## SYNCH Option

Clear the Data Path

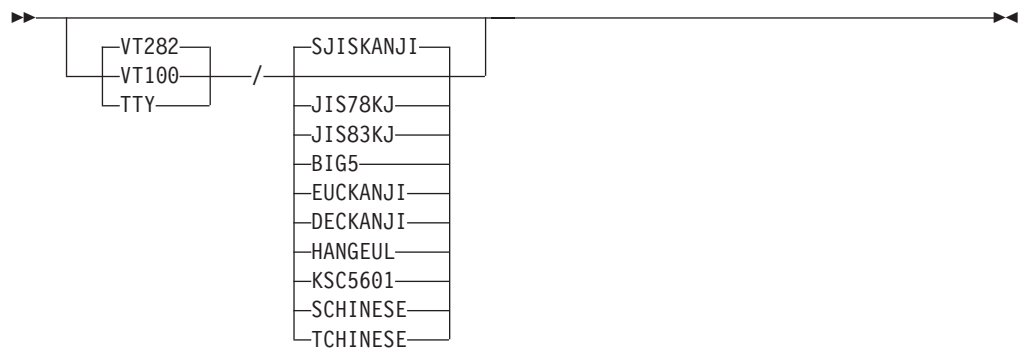


## ¢ and ` Option

Send ASCII Control Characters to a Host in Line Mode



## Terminal and Conversion Type Option



---

## TESTSITE Command

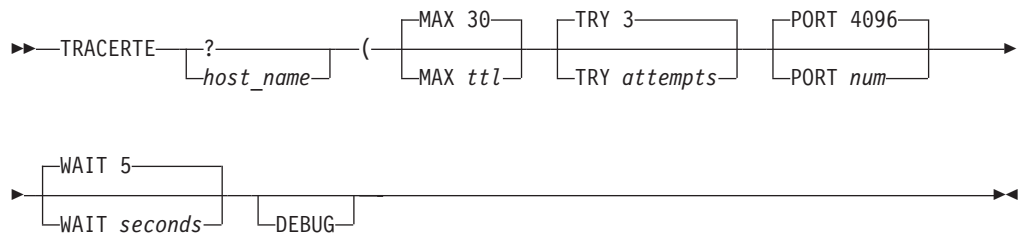
Verify `hlq.HOSTS.ADDRINFO` and `hlq.HOSTS.SITEINFO` Data Sets Correctly  
Resolve the Name of a Host, Gateway, or Net



---

## TRACERTE Command

Debug Network Problems





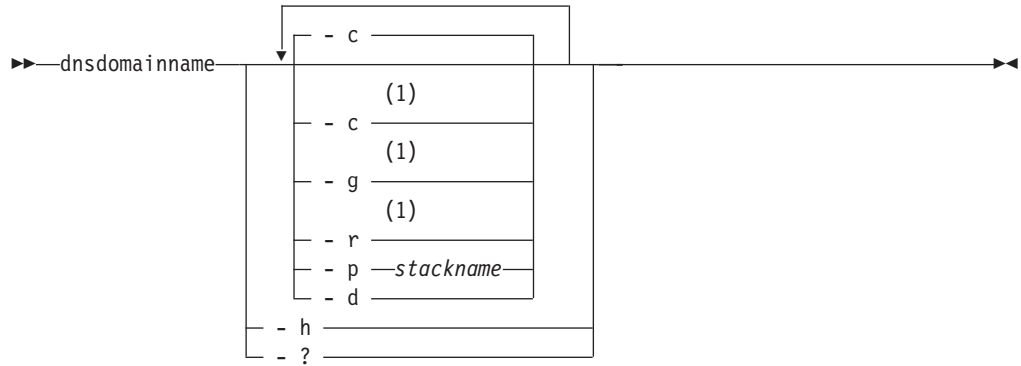
---

## Chapter 2. OS/390 Unix Commands

---

### dnsdomainname Command

Display the DNS Domain Name of the System

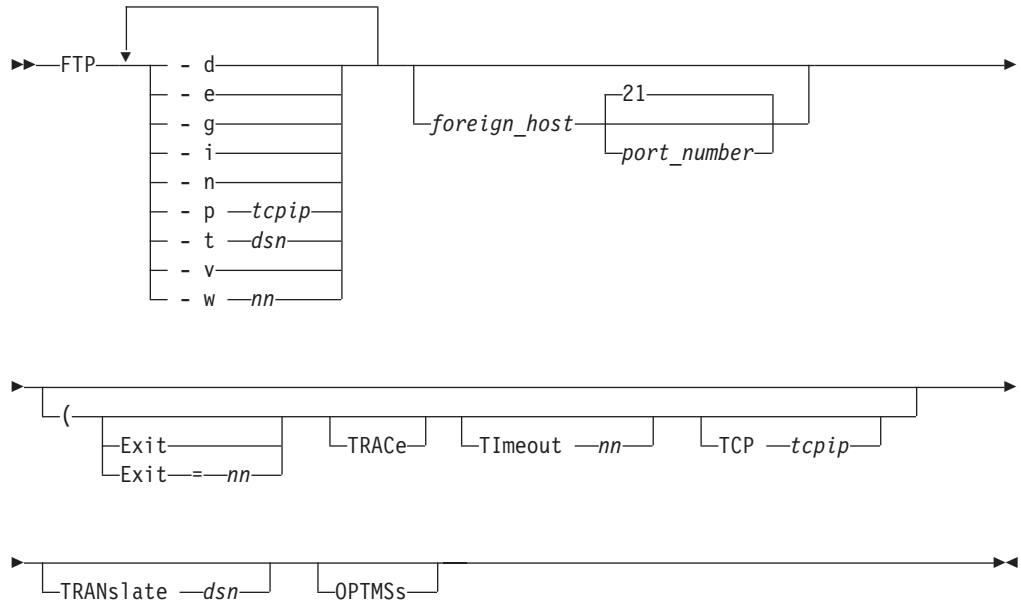


#### Notes:

- 1 Only one of the `-c`, `-g`, and `-r` can be specified.

---

### ftp Command



---

## host Command

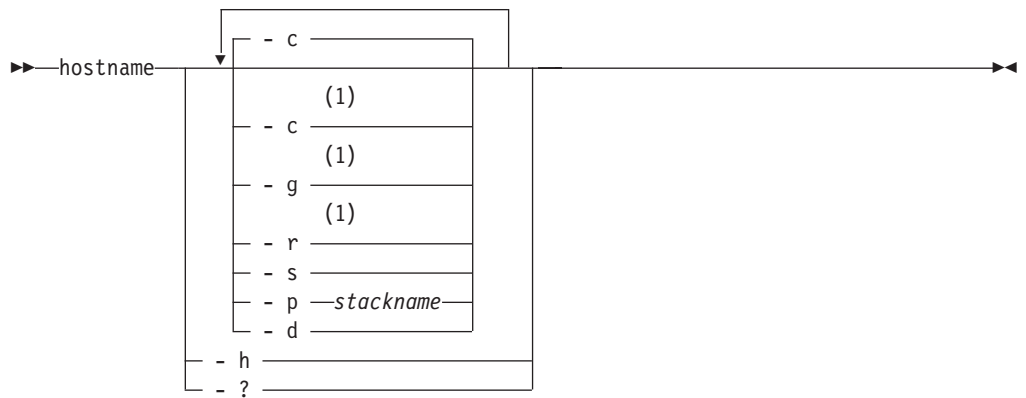
Identify the IP Addresses Associated with a Specified DNS Hostname or Identify the DNS Hostnames Associated with a Specified IP Address

►► `host` *host* ◄◄

---

## hostname Command

Display the Fully-Qualified DNS Hostname of the Local System



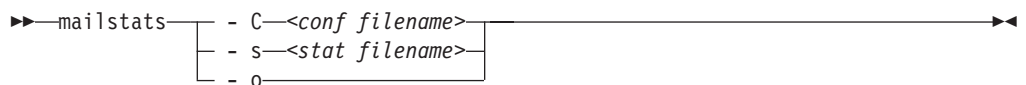
**Notes:**

- 1 Only one of the `-c`, `-g`, and `-r` can be specified.

---

## mailstats Command

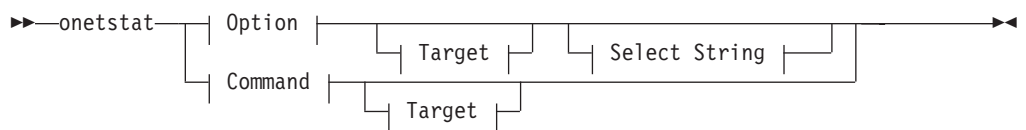
Printing Statistics



---

## onetstat/netstat Command

Display Local Host Information





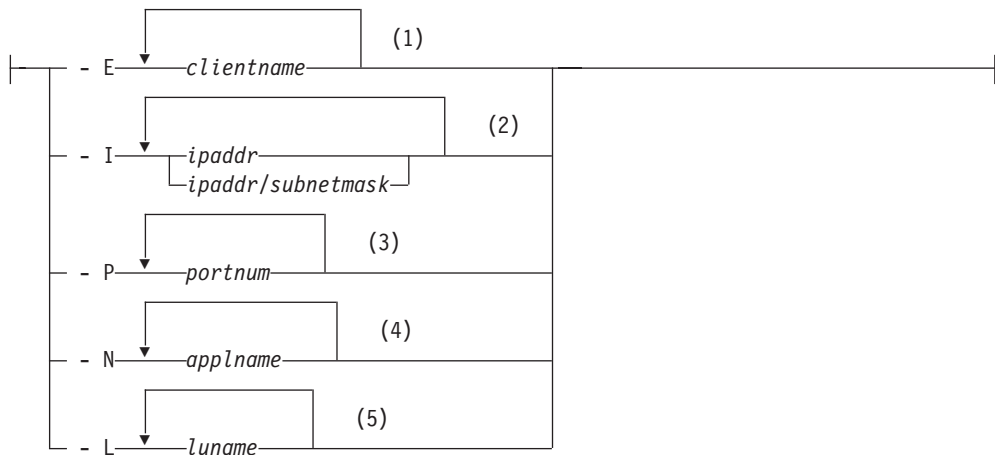
**Option:**

- c	
	(1)
- A	(1) (2) (3)
- a	(1)
- b	┌IDLETIME┐
- C	(1) (2) (3)
- c	
- d	(1)
- e	
- F	
- f	(2)
- g	┌DETAIL┐
- h	
- j	(2) (3)
- O	┌DETAIL┐
- o	
- R	┌net address┐ └ALL┘
- r	
- s	(1) (2) (3) (4) (5)
- t	┌DETAIL┐
- u	(2) (3)
- v	
- v	
- ?	

**Target:**

- p <i>tcpname</i>
--------------------

**Select String:**



**Command:**



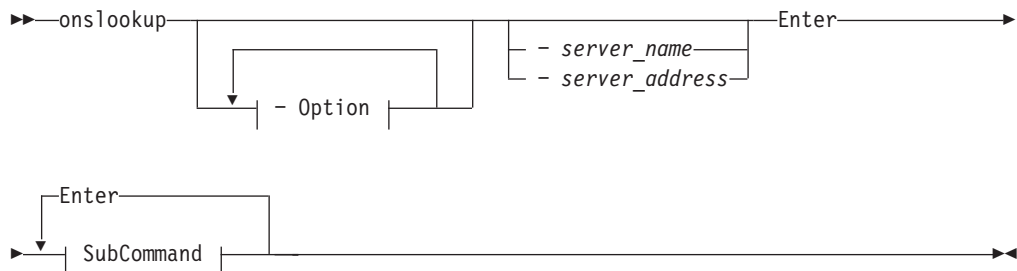
**Notes:**

- 1 -E is valid only with -A, -a, -b, -e, -c and -t.
- 2 -I is valid only with -a, -c, -g, -t, -O and -V.
- 3 -P is valid only with -a, -c, -t, -O and -V.
- 4 -N is valid only with -t.
- 5 -L is valid only with -t.

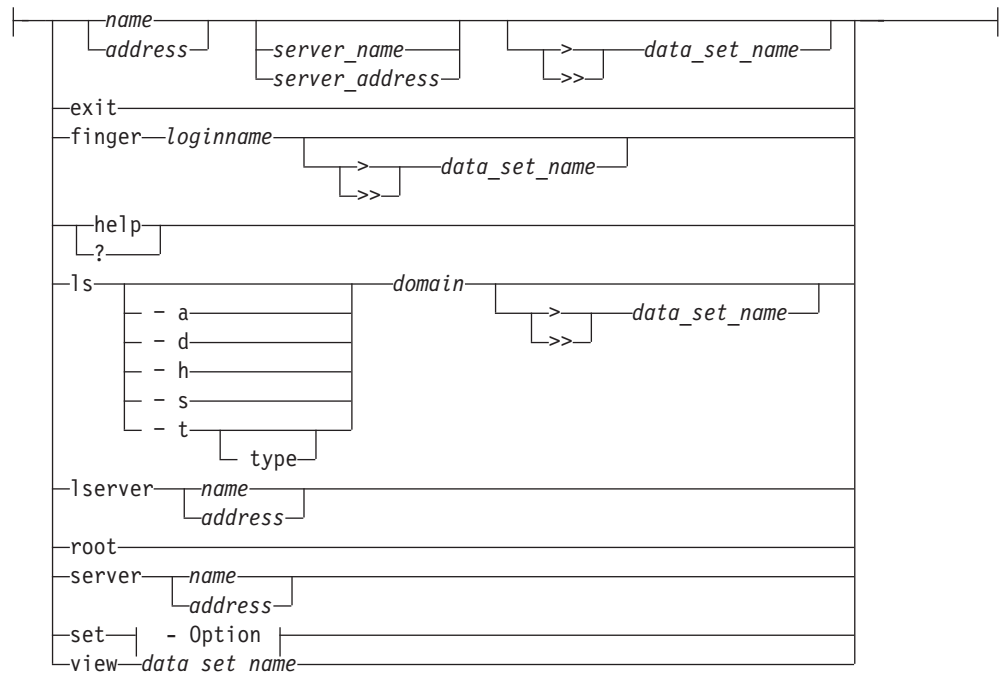
**Note:** netstat is a synonym for the onetstat command in the OS/390 UNIX shell. netstat command syntax is the same as that for the onetstat command.

## onslookup/nslookup Command

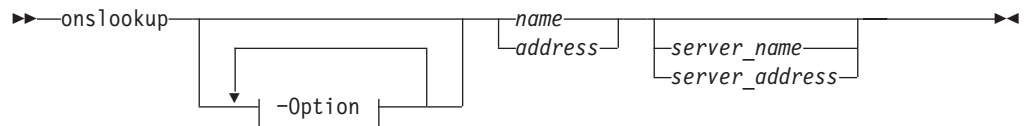
Issuing Multiple Queries to Name Servers in Interactive Mode



**SubCommand:**



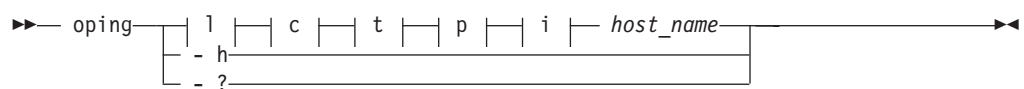
### Querying A Name Server in Command Mode



**Note:** nslookup is a synonym for the onslookup command in the OS/390 UNIX shell. nslookup command syntax is the same as that for the onslookup command.

## oping/ping Command

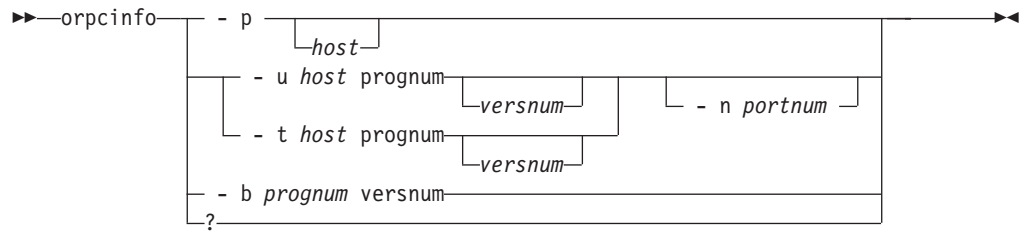
Send an Echo Request



**l:**



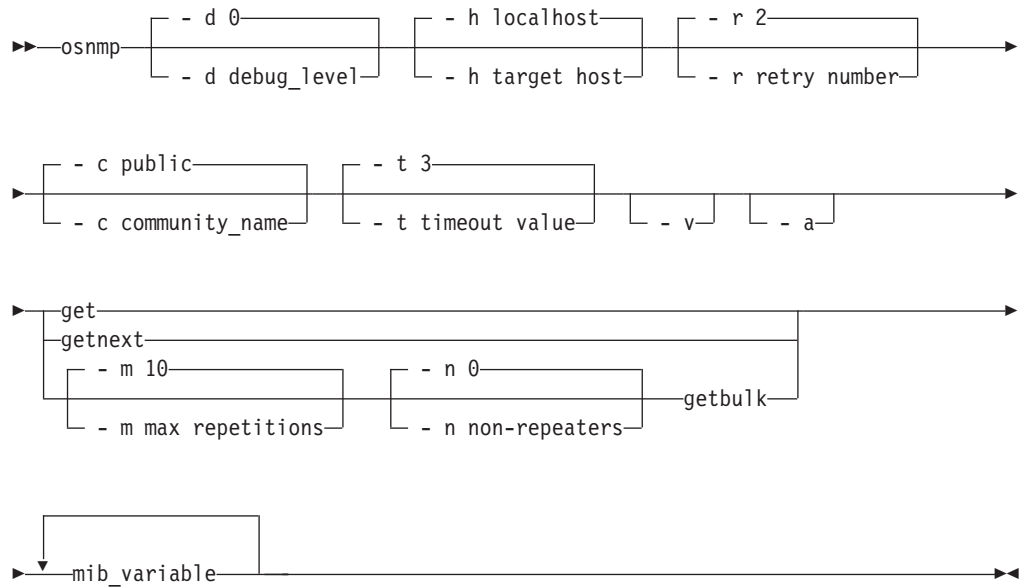




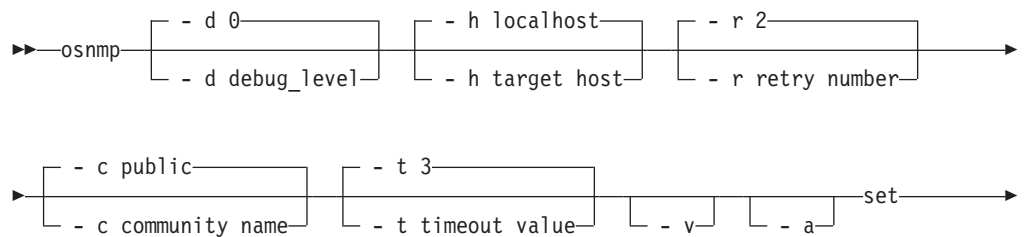
**Note:** rpcinfo is a synonym for the orpcinfo command in the OS/390 UNIX shell. rpcinfo command syntax is the same as that for the orpcinfo command.

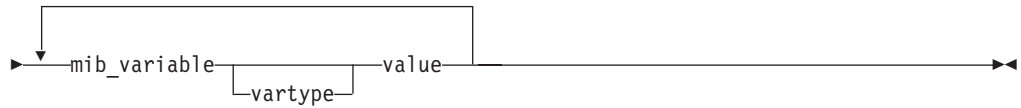
## osnmp/snmp Command

### Getting MIB Variables

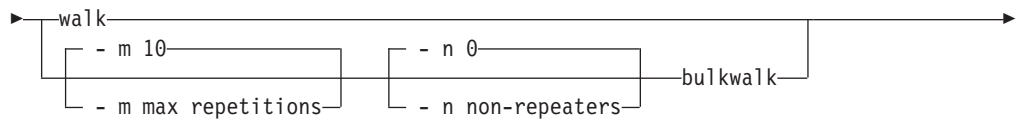
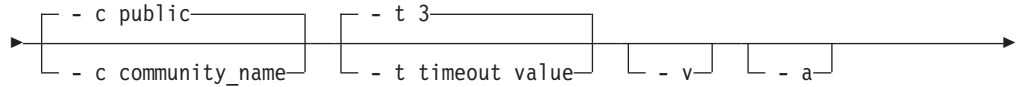
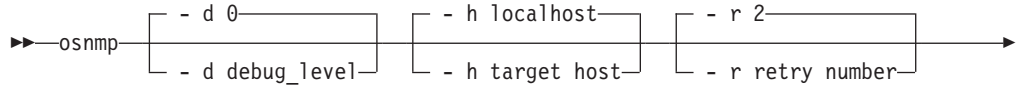


### Setting the MIB Variables





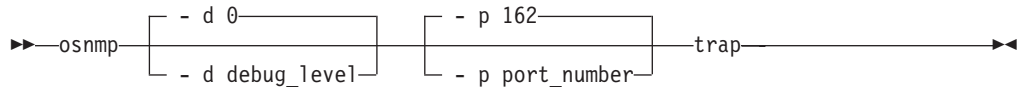
### Walking the MIB Tree



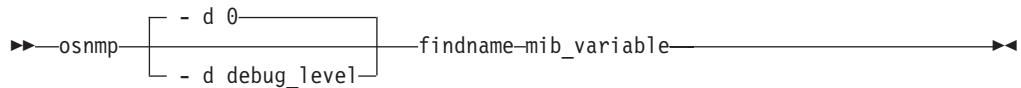
### Displaying osnmp Help



### Receiving a Trap



### Finding a MIB Variable Name

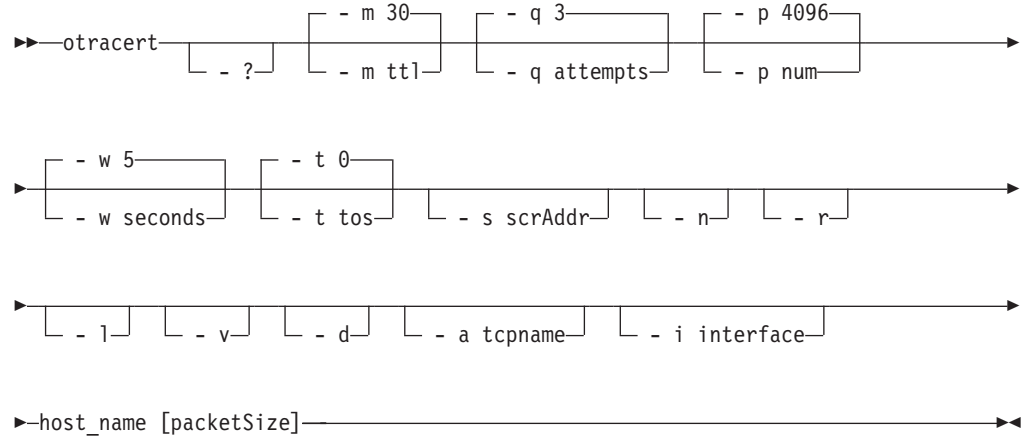


**Note:** snmp is a synonym for the osnmp command in the OS/390 UNIX shell. snmp command syntax is the same as that for the osnmp command.

---

## otracert/traceroute Command

Debug Network Problems



**Note:** traceroute is a synonym for the otracert command in the OS/390 UNIX shell. traceroute command syntax is the same as that for the otracert command.

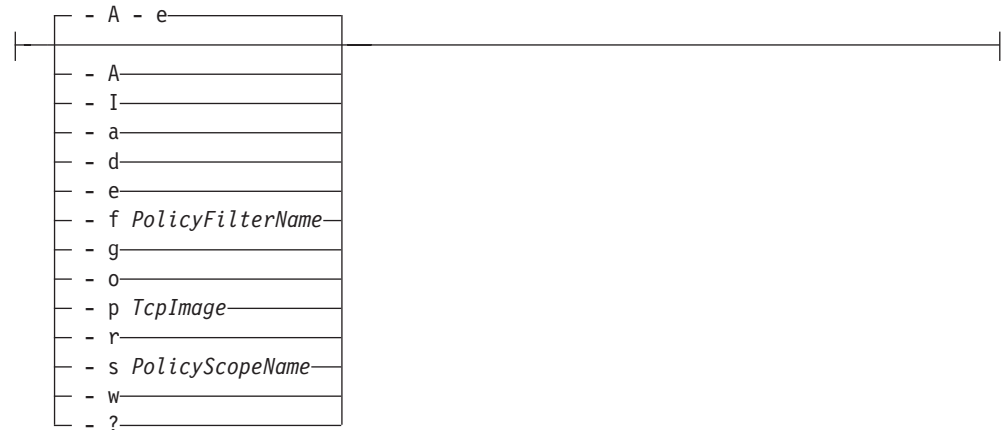
---

## pasearch Command

Query information from the Service Policy Agent (Pagent)

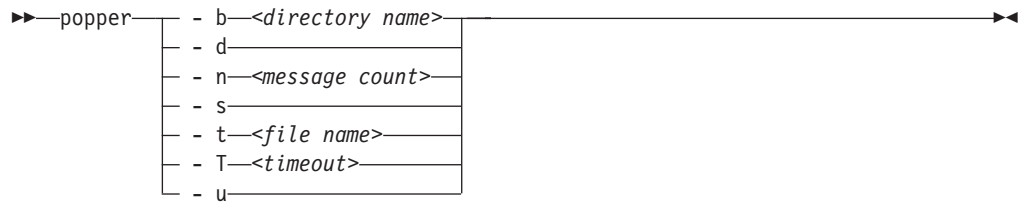


**Option:**



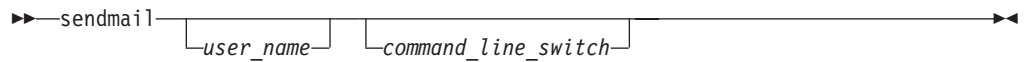
---

## popper Command



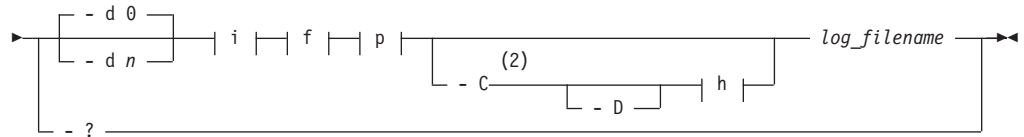
---

## sendmail Command



---

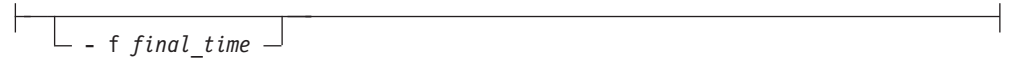
## trmdstat



**i:**



**f:**



**p:**













---

## Chapter 4. MVS Operator Commands

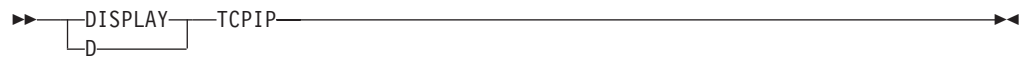
---

### 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.

►► `DISPLAY` `TCPIP` ◀◀



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

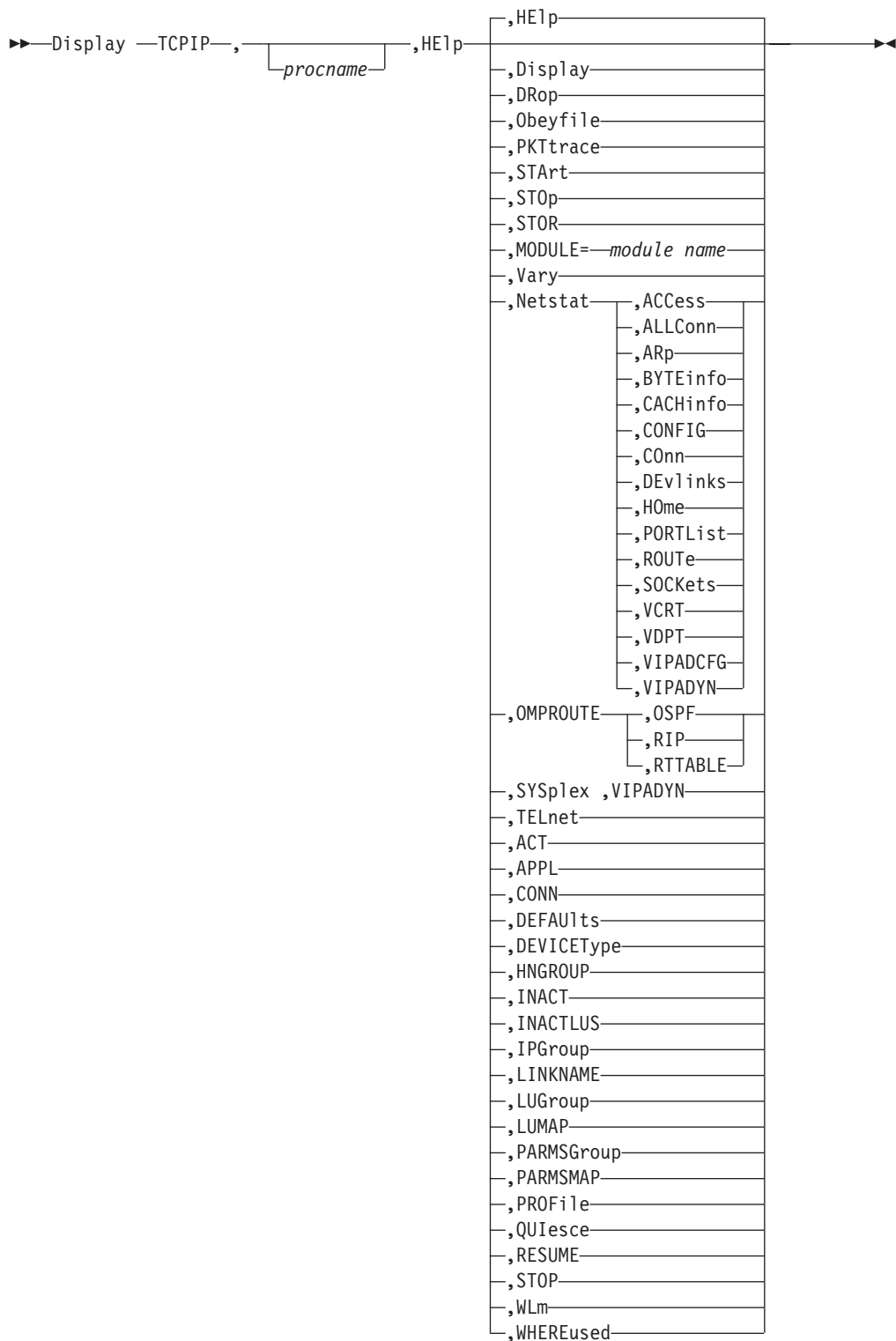
►► `DISPLAY` `TCPIP,` `procname` `,APPL=applid,CMD=CLIENT` ◀◀



---

### DISPLAY TCPIP HELP

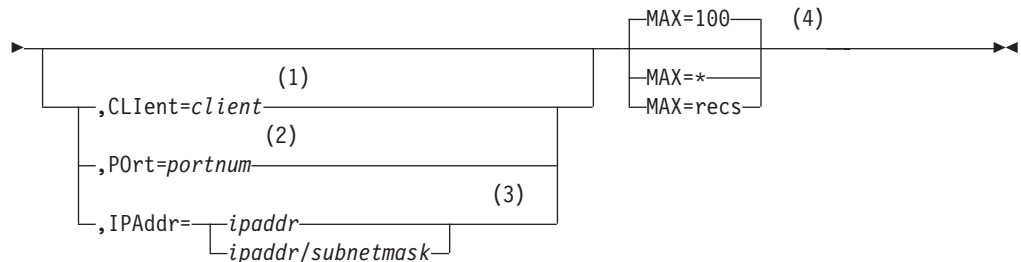
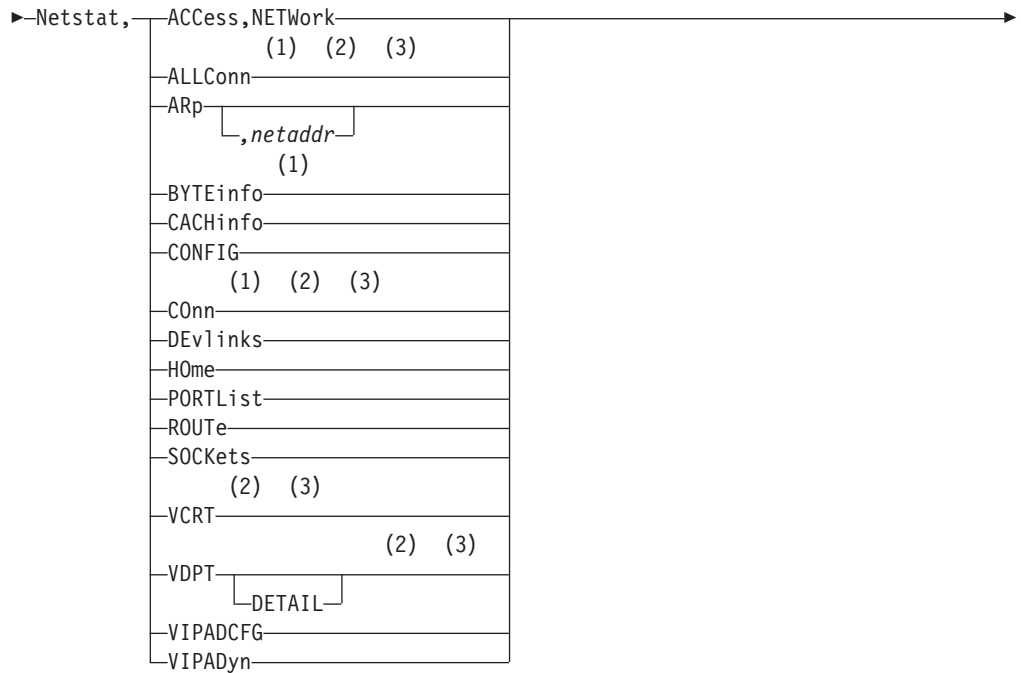
Display the syntax of MVS™ operator commands



## DISPLAY TCPIP NETSTAT

Request NETSTAT information

►► Display —TCPIP—, procname,



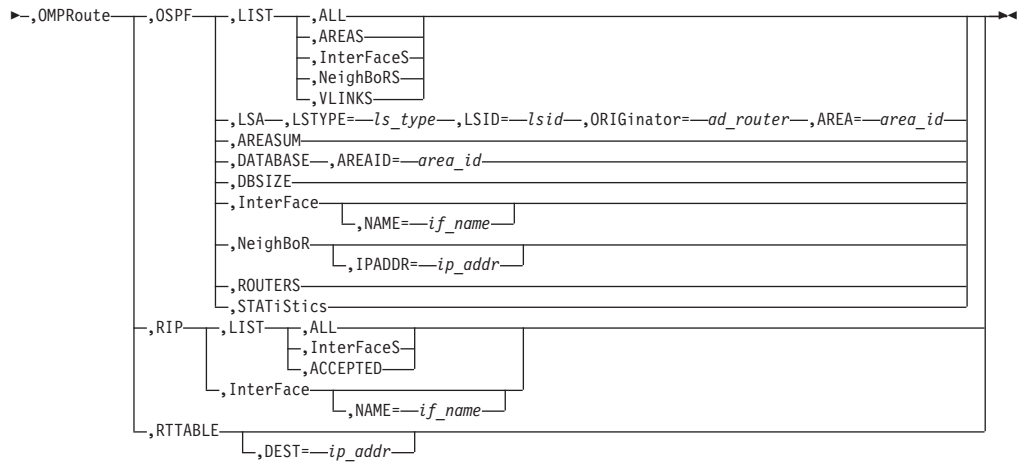
### Notes:

- 1 The CLIENT is only valid with ALLCONN, CONN, and BYTEinfo.
- 2 The PORT filter is only valid on ALLCONN, CONN, VCRT, and VDPT.
- 3 The IPADDR is only valid with ALLCONN, CONN, VCRT, and VDPT.
- 4 MAX limits the number of records displayed by the command.

## DISPLAY TCPIP OMPROUTE

Display OSPF and RIP configuration and state information

►► Display —TCPIP—, procname



## DISPLAY TCPIP STOR

Display the location and level of a TCP/IP stack module

►► Display —TCPIP—, procname, STOR—, —MODule=—modname\_name—

## DISPLAY TCPIP SYSPLEX

Request SYSPLEX information

►► Display —TCPIP—, procname,

►SYSpIex—, —VIPADyn—, IPAddr=—ipaddr— ipaddr/subnetmask MAX=100 (1)  
MAX=\*—  
MAX=recs

### Notes:

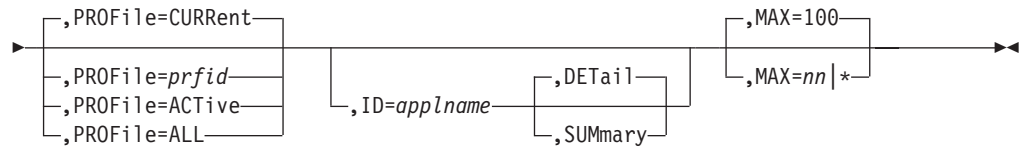
- 1 MAX limits the number of records displayed to the MVS operator's console.

## DISPLAY TCPIP TELNET

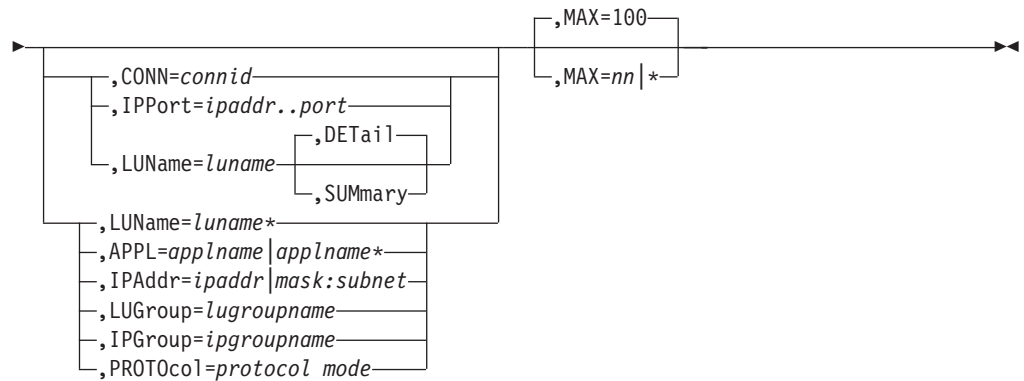
APPL Display Command

►► DISPLAY —TCPIP—, procname, Telnet—, —APPL—

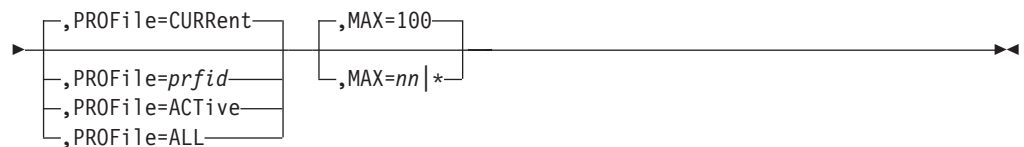




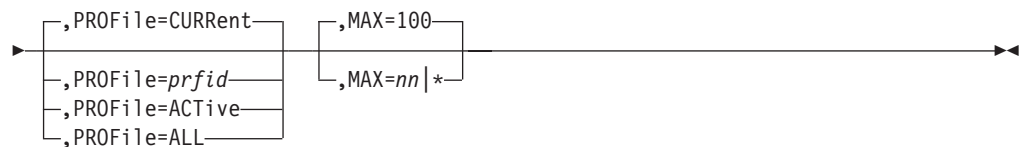
### CONNECTION Display Command



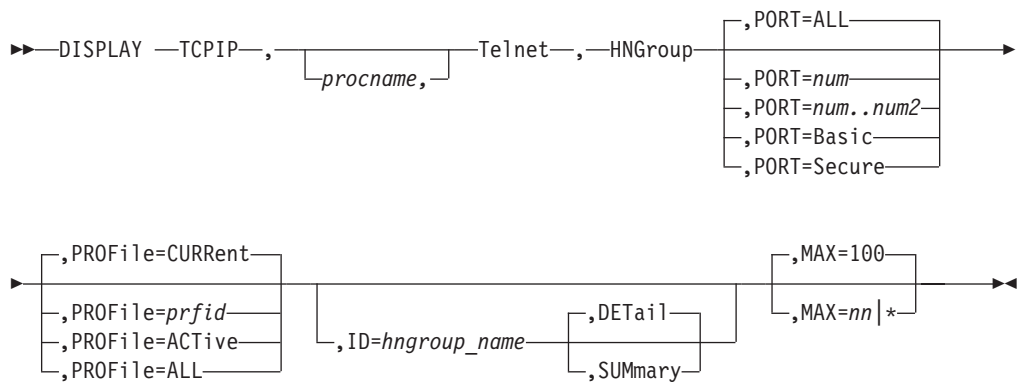
### DEFAULTS Display Command



### DEVICETYPE Display Command



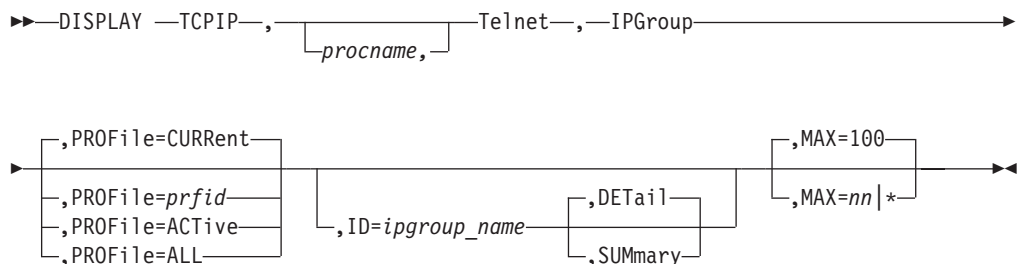
### HNGROUP Display Command



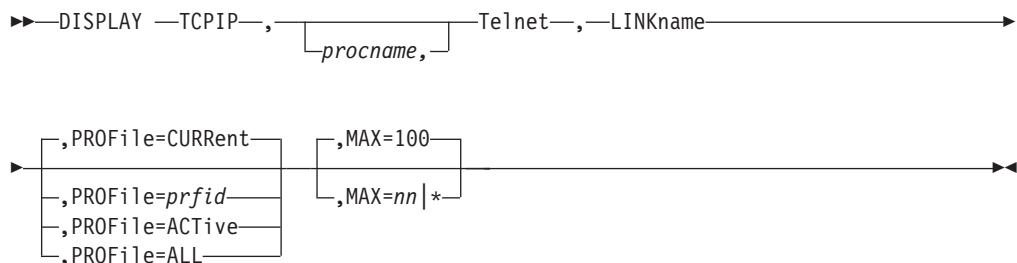
### INACTLUS Display Command



### IPGROUP Display Command

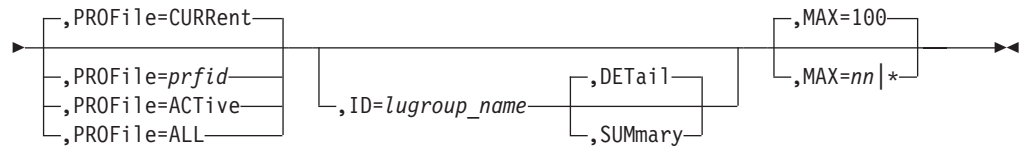


### LINKNAME Display Command

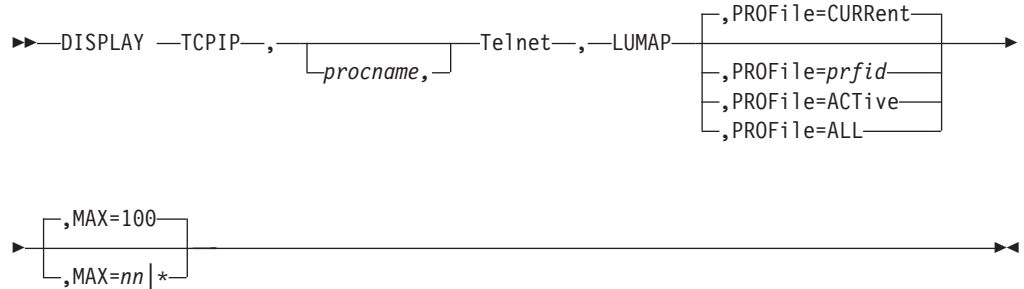


### LUGROUP Display Command

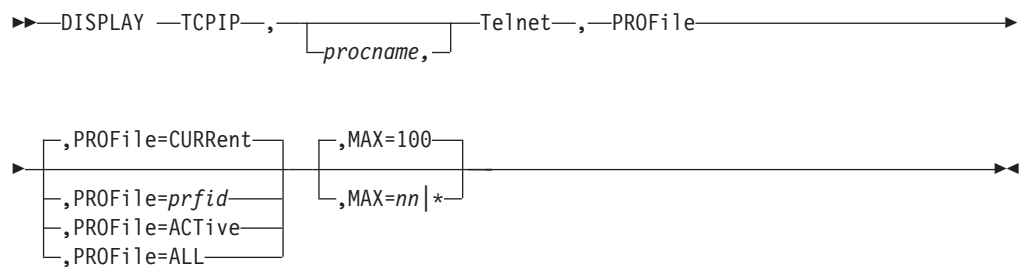




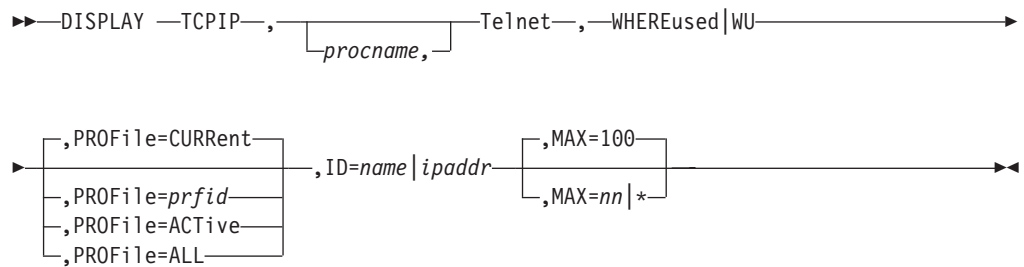
### LUMAP Display Command



### PROFILE Display Command



### WHEREUSED Display Command



### WLM Display Command



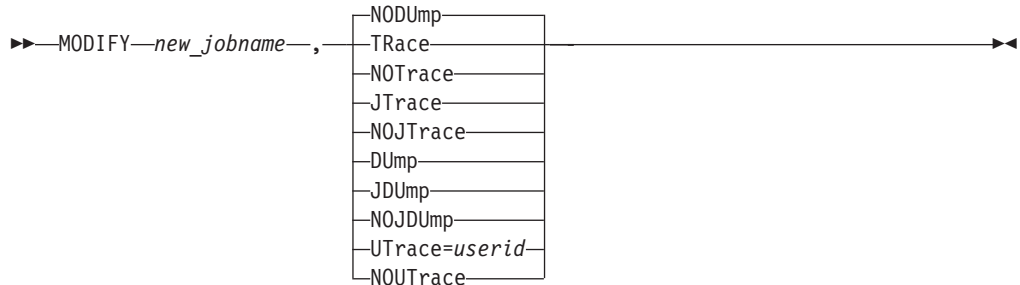
## MODIFY TCPIP Command

Dynamically change characteristics of an active task



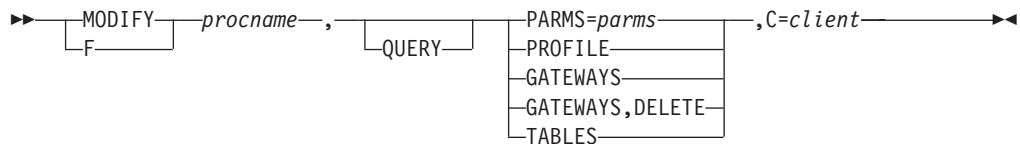
## FTP server

Start and stop tracing after initialization is complete



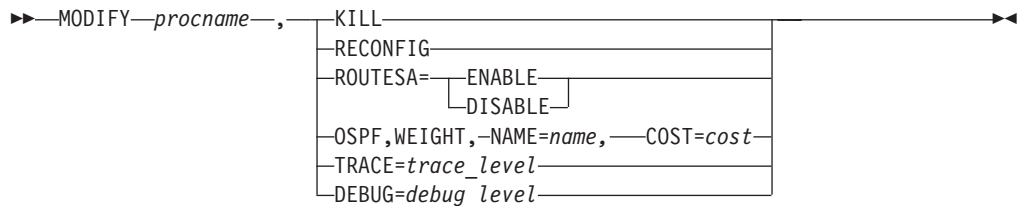
## NCPROUTE server

Pass parameters to the NCPROUTE address space



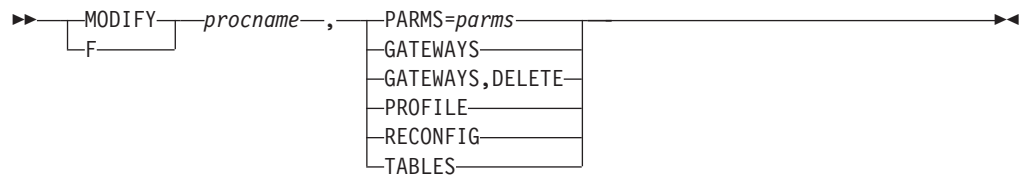
## OMPROUTE

Control OMPROUTE from the operator's console



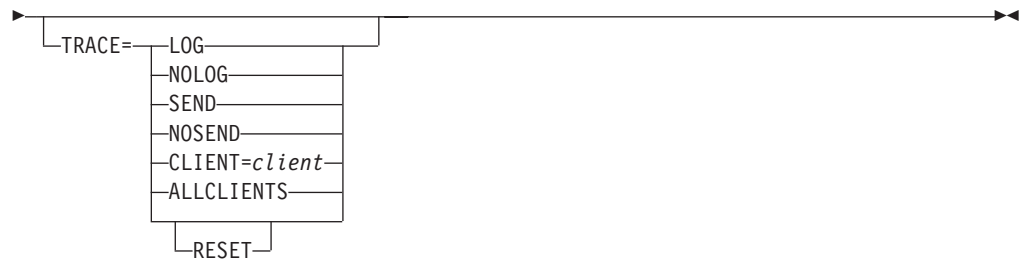
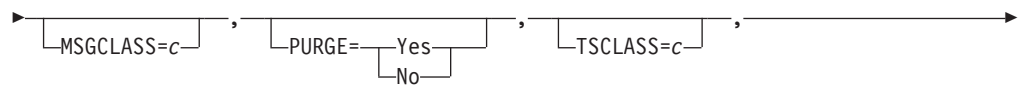
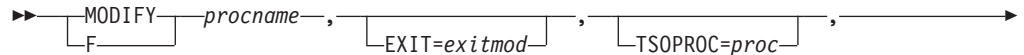
## OROUTED server

Control most server functions from the operator's console



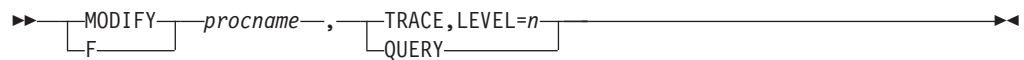
## REXEC server

Change the parameters on the Remote Execution server



## SLA Subagent

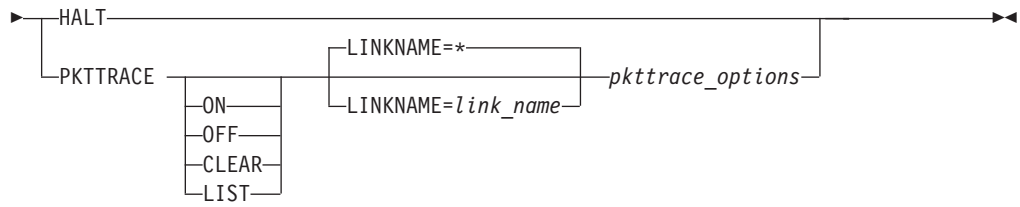
Control the SLA subagent functions



## SNALINK LU0 server

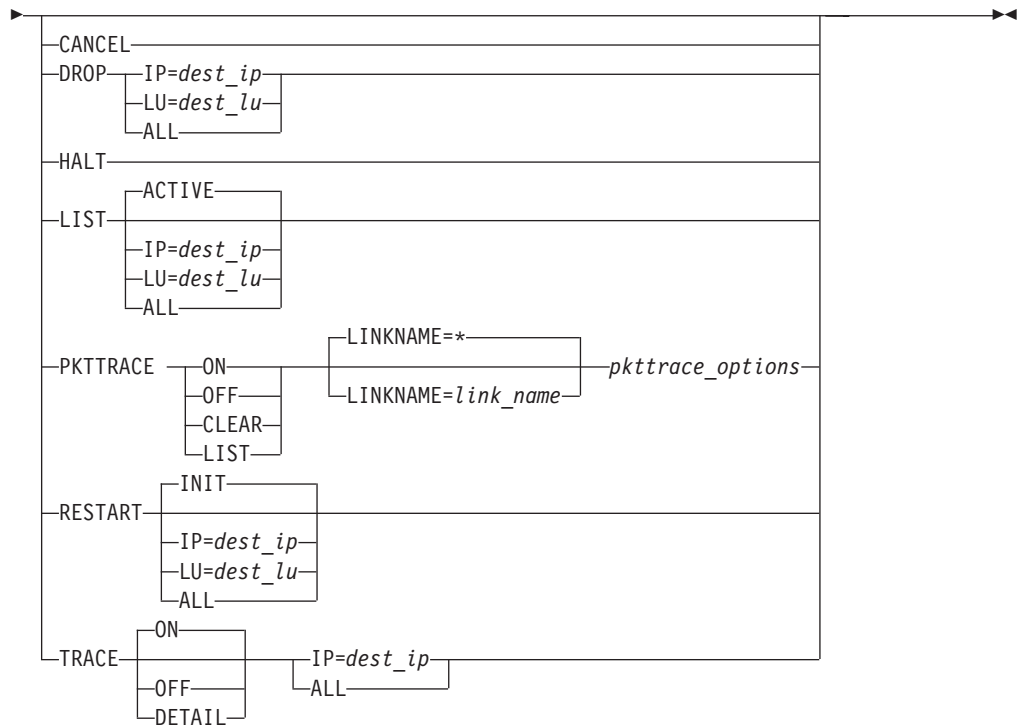
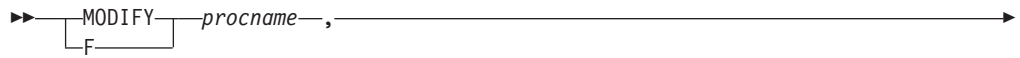
Halt the SNALINK LU0 interface and enable or disable tracing of IP packets or modify the selection criteria for selecting packets to be traced





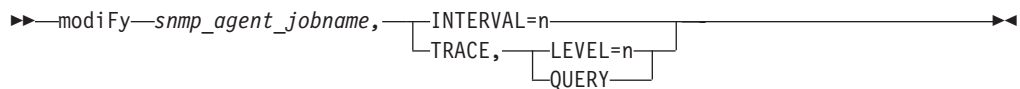
## SNALINK LU6.2 server

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



## SNMP Agent

Modify some SNMP agent initialization parameters



## TRAPFWD

Modify the trap forwarder daemon

```

▶▶ MODIFY procname,useridX
   F
  
```

## VMCF and TNF

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

```

▶▶ F VMCF, TNF, DISPLAY, REMOVE, NAME=name
   TNF, REMOVE, NAME=*
  
```

## X.25 NPSI server

Pass parameters to the X.25 NPSI server

```

▶▶ MODIFY procname,
   F
  
```

```

▶▶ CANCEL
   DEBUG digits
   EVENTS id
   HALT
   LIST
   PKTTRACE LINKNAME=*
           LINKNAME=link_name
           ON
           OFF
           CLEAR
           LIST
           pktttrace_options
   RESTART mchlu
   SNAP id
   TRACE id DATA
         * OFF
   TRAFFIC
  
```

## START TCPIP

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

```

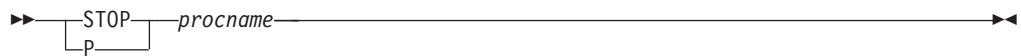
▶▶ START procname
   S
  
```

---

## STOP TCPIP

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

►► `STOP` `procname` ◀◀



---

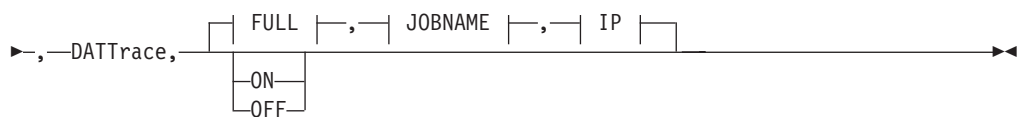
## VARY TCPIP DATTRACE

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

►► `Vary` `TCPIP`, `procname` ◀◀

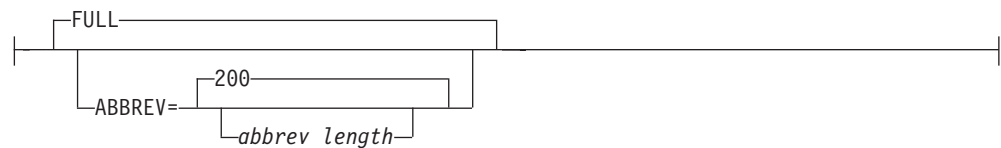


►► `,DATTrace`, `FULL` `JOBNAME` `IP` `ON` `OFF` ◀◀



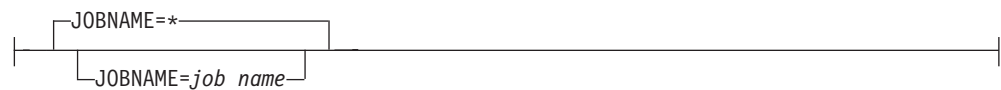
### FULL:

`FULL` `ABBREV=` `200` `abbrev_length`



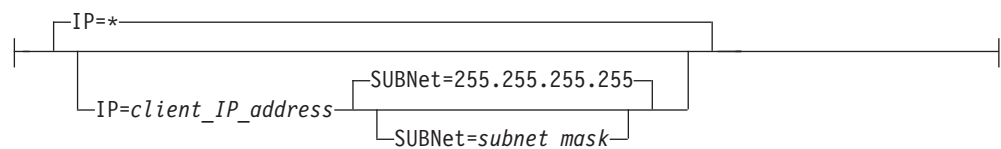
### JOBNAME:

`JOBNAME=*` `JOBNAME=job_name`



### IP:

`IP=*` `IP=client_IP_address` `SUBNet=255.255.255.255` `SUBNet=subnet_mask`





## VARY TCPIP DROP

Drop a connection

```

>> Vary TCPIP, [procname], [DROp,connid]
                                     [CMD=DROp,CONNECTION=connid]
  
```

## VARY TCPIP OBEYFILE

```

>> VARY TCPIP, [procname], Obeyfile, [dsname]
  
```

## VARY TCPIP PKTTRACE

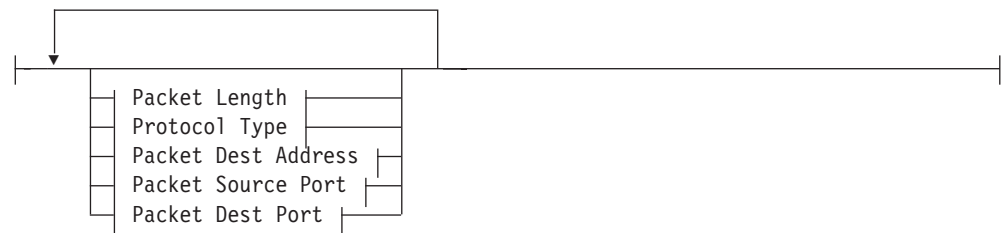
```

>> Vary TCPIP, [procname]
, PKTTRACE
, PKT, [LINKName=*] , [ON] PKT Opt (1)
        [LINKName=link_name] [OFF]
  
```

### Notes:

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

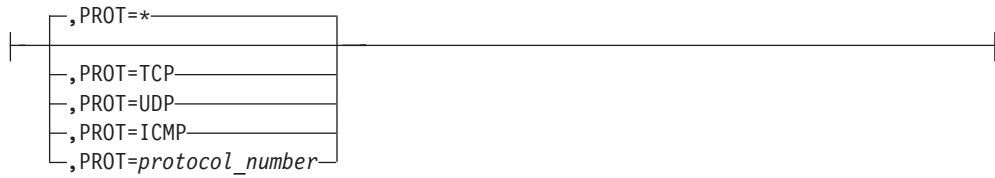
### PKT Opt:



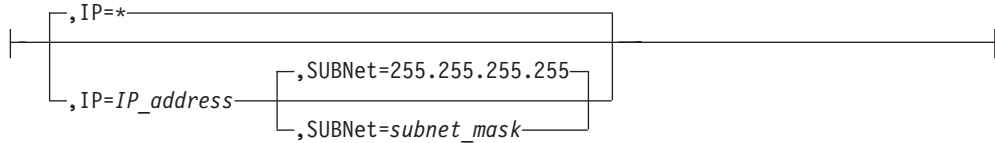
### Packet Length:



### Protocol Type:



### Packet Dest Address:



### Packet Source Port:



### Packet Dest Port:



---

## VARY TCPIP START

►► Vary TCPIP, `[procname]`, START, `device_name` ►►

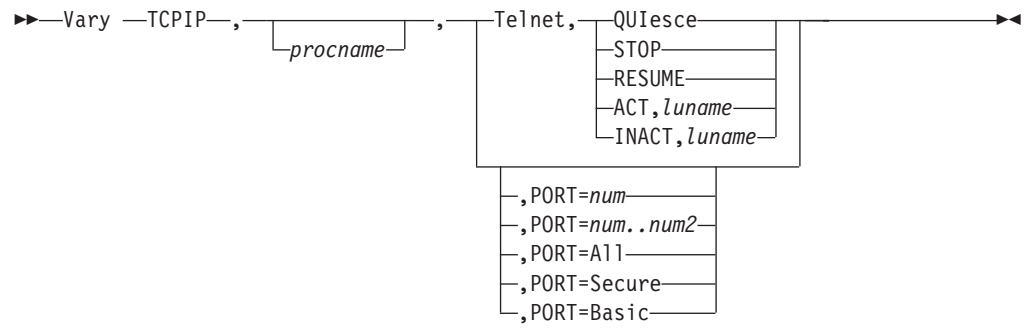
---

## VARY TCPIP STOP

►► Vary TCPIP, `[procname]`, STOP, `device_name` ►►

---

## VARY TCPIP TELNET

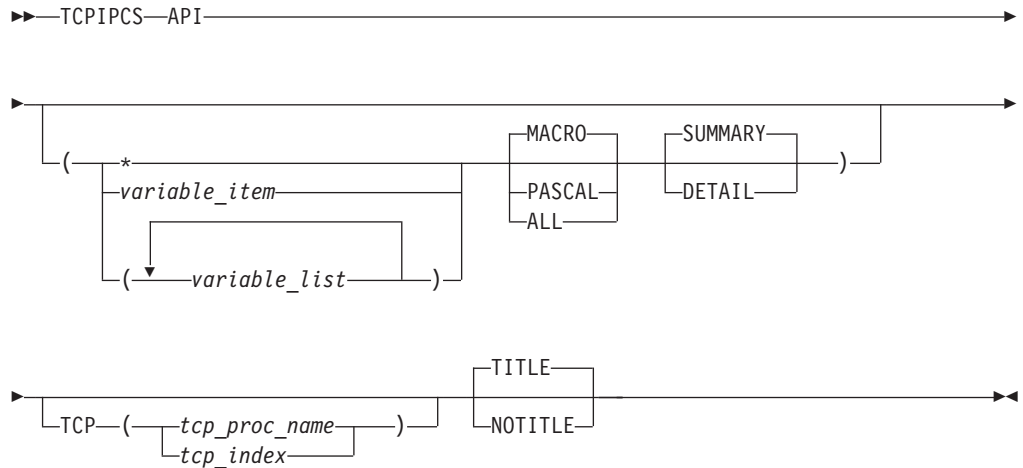




# Chapter 5. IPCS Subcommands for TCP/IP

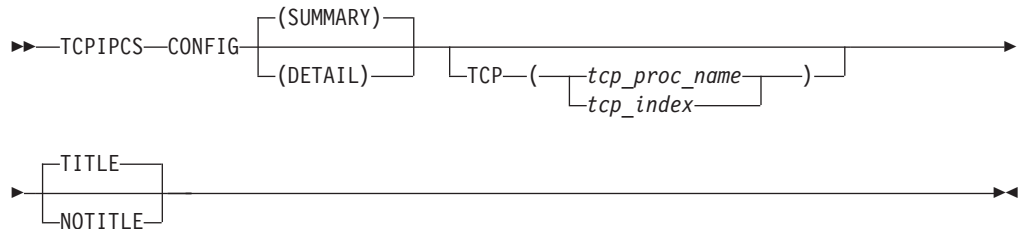
## TCPIPACS API

Display information about the connects in the Sockets Extended Assembler Macro Application Programming Interface (Macro API) and the Pascal API



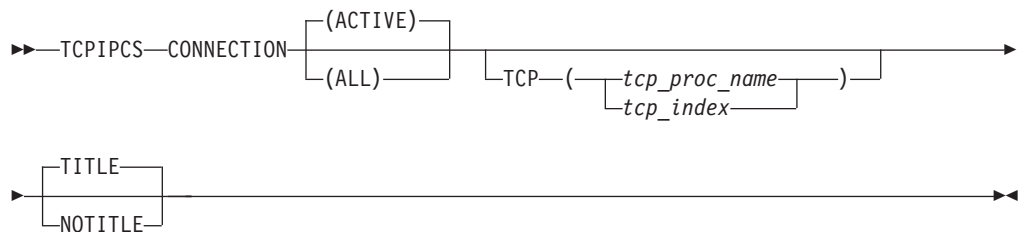
## TCPIPACS CONFIG

Display each device interface, physical interface, and logical interface



## TCPIPACS CONNECTION

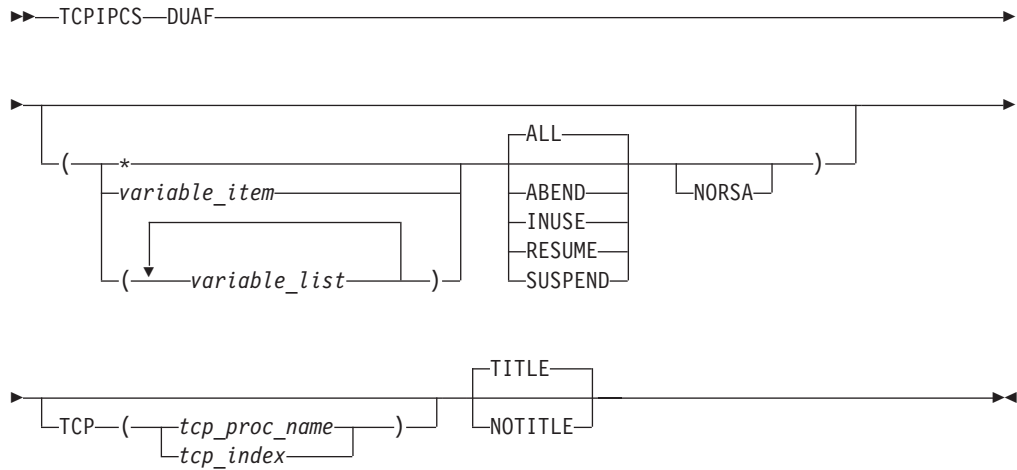
Display information about TCP, UDP and raw connections



---

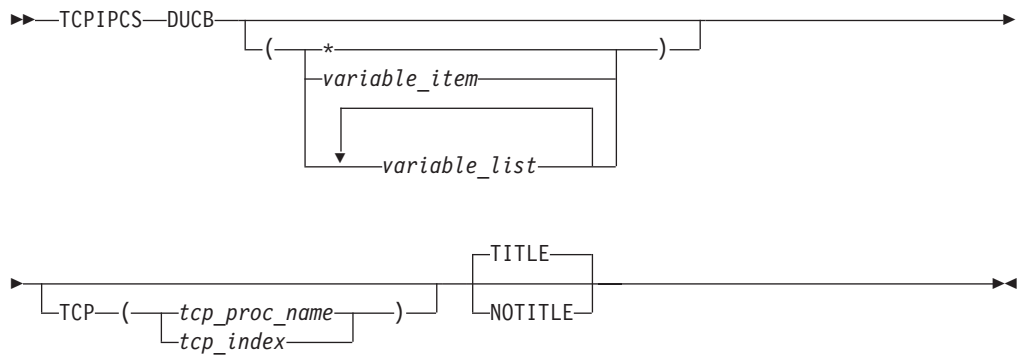
## TCPIP CS DUA F

Display a summary of each dispatchable unit control block (DUCB)



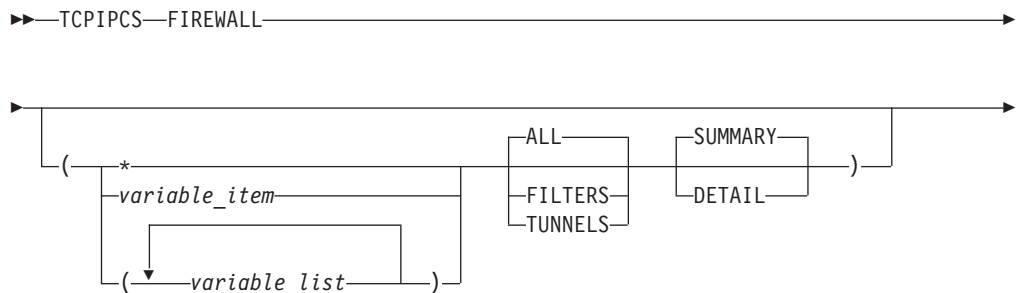
## TCPIP CS DUCB

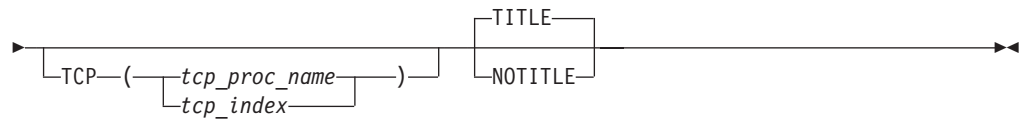
Display the contents of each dispatchable unit control block (DUCB)



## TCPIP CS FIREWALL

Display information about Firewall filters or tunnels

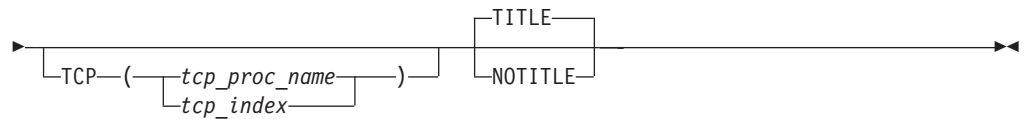
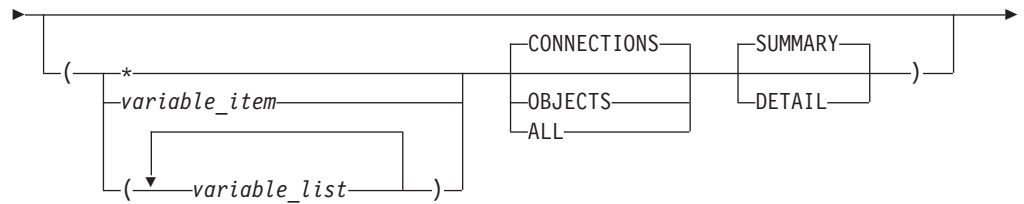




## TCPIP CS FRCA

Display information about the Fast Response Cache Accelerator (FRCA) connections or about cached objects

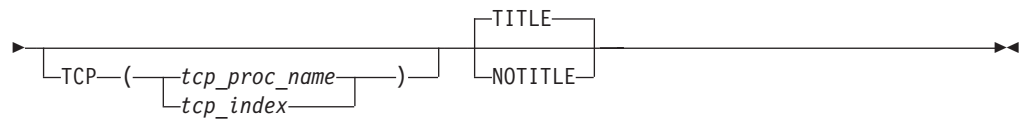
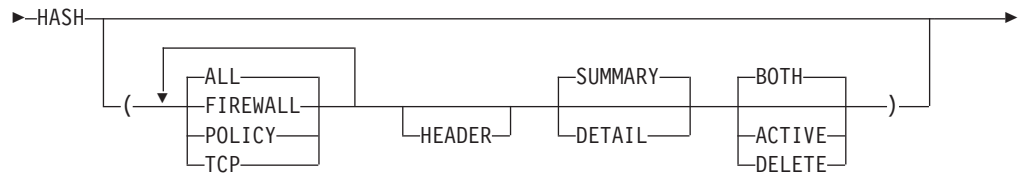
►► TCPIP CS FRCA



## TCPIP CS HASH

Display information about the structure of TCP/IP hash tables

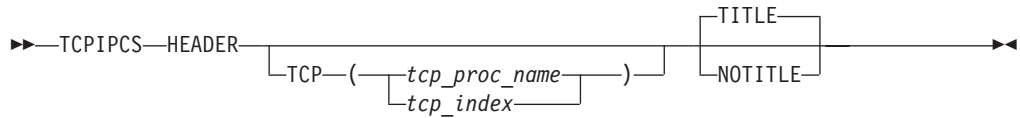
►► TCPIP CS



---

## TCPIP CS HEADER

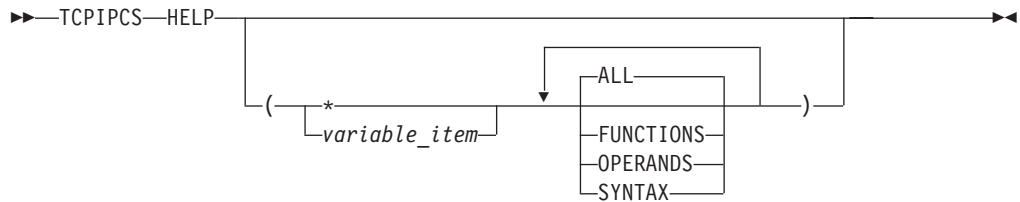
Display information from the system dump header and, in some cases, if a DUCB has ABENDED, display the DUC



---

## TCPIP CS HELP

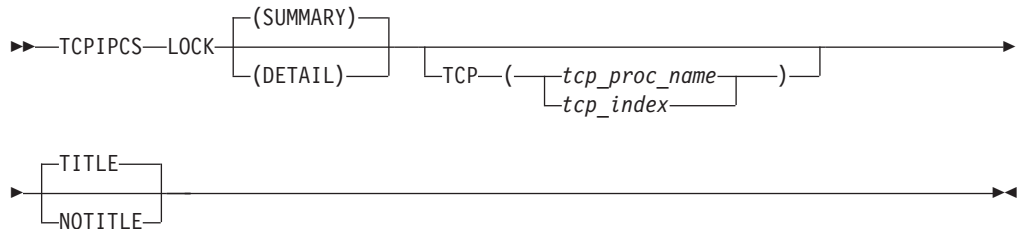
Display TCPIP CS usage and syntax information



---

## TCPIP CS LOCK

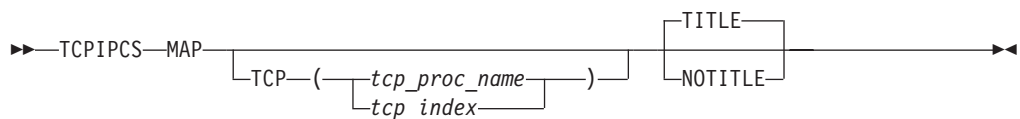
Scan the dump for information about the current locks that are defined and held



---

## TCPIP CS MAP

Display a mapping of TCP/IP storage

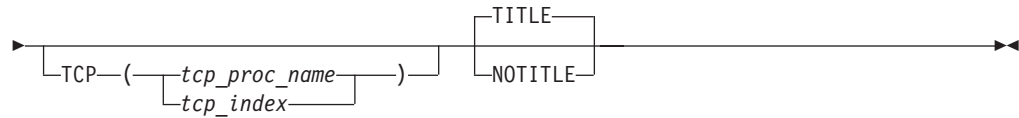
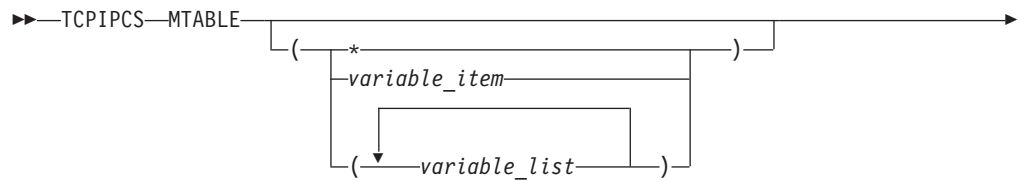


---

## TCPIP CS MTABLE

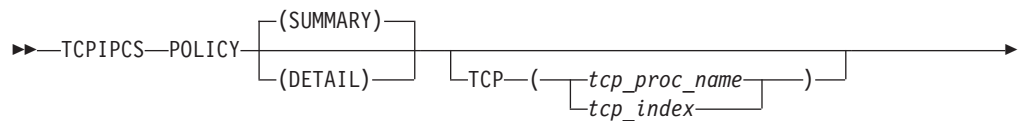
Access the module tables and display the module entry point address, name, compile date and time, PTF number, and load module name





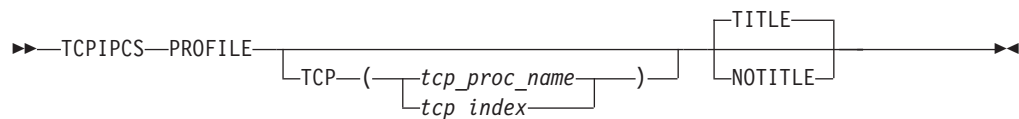
## TCPIP CS POLICY

Display information about service policies



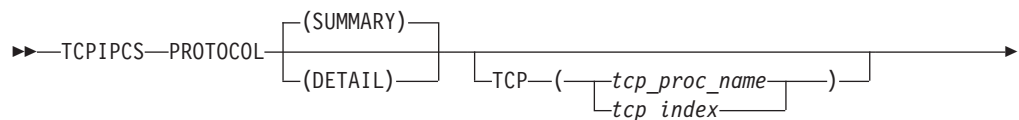
## TCPIP CS PROFILE

Show the active configuration information at the time of the dump, in the form of profile dataset statements



## TCPIP CS PROTOCOL

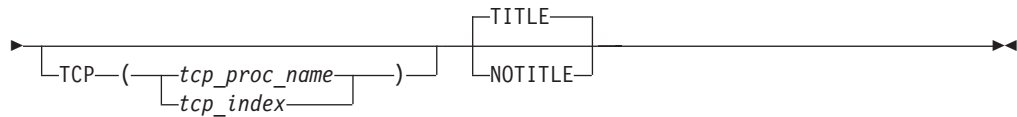
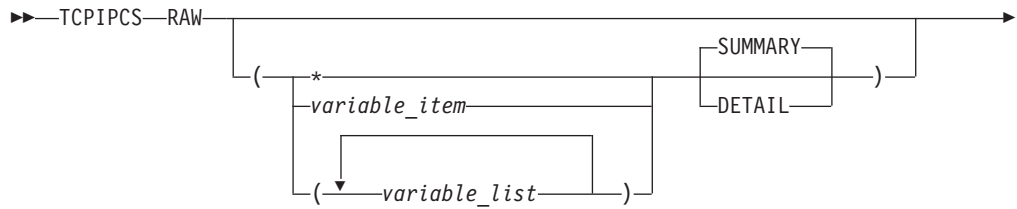
Display the TCP, UDP and RAW control blocks by invoking the TCP, UDP and RAW options



---

## TCPIP CS RAW

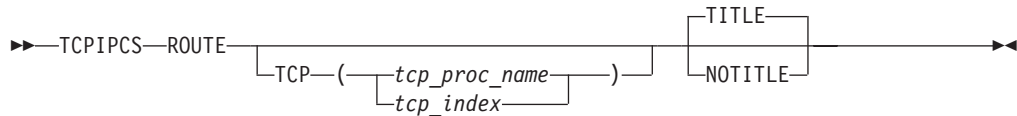
Display the Master Raw Control Block (MRCB) and any Raw protocol Control Blocks (RCBs) defined in the hash table



---

## TCPIP CS ROUTE

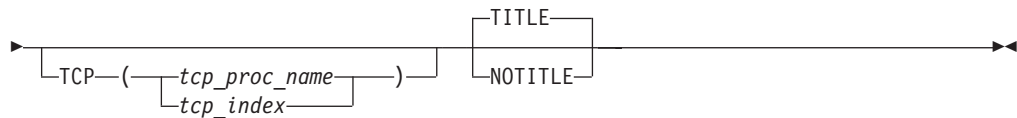
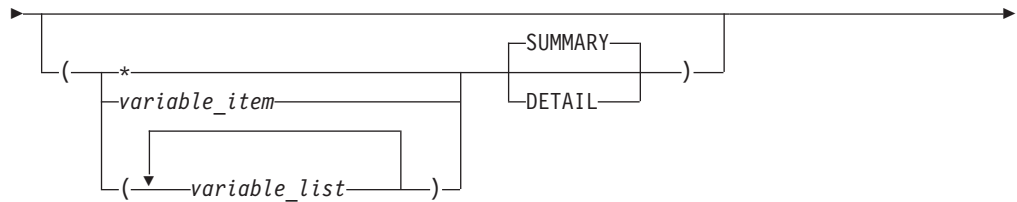
Display the routing control blocks



---

## TCPIP CS SOCKET

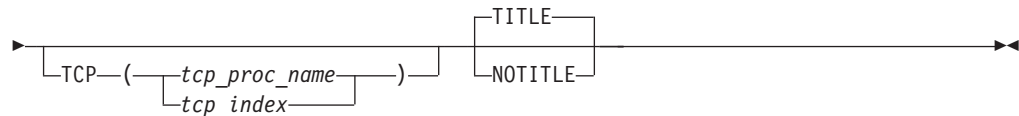
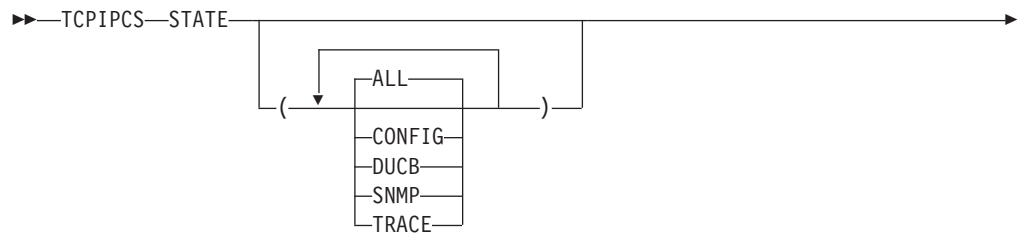
Display the AF\_UNIX sockets or socket control blocks



---

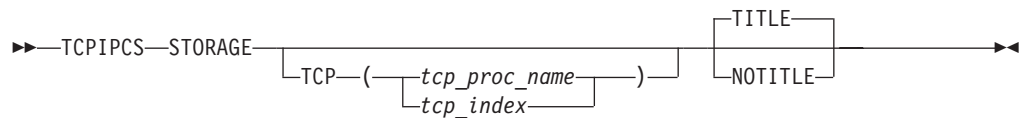
## TCPIP CS STATE

Provide an overall view of TCP/IP



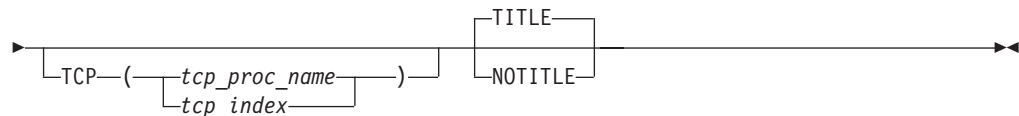
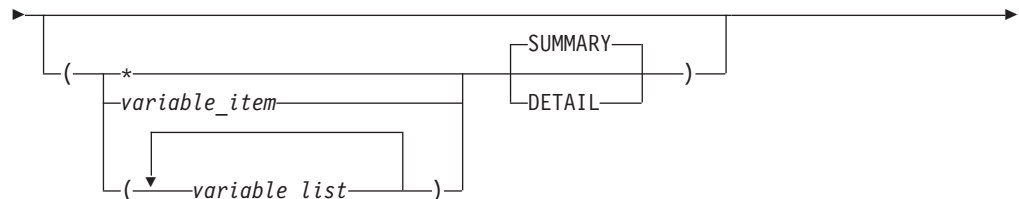
## TCPIP CS STORAGE

Display the TCP/IP storage summary referenced in common cached storage



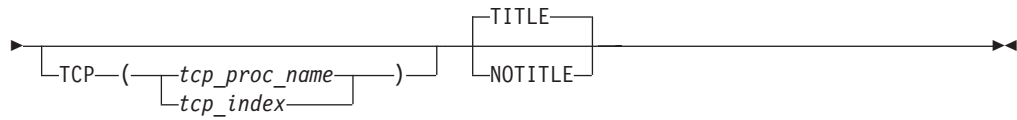
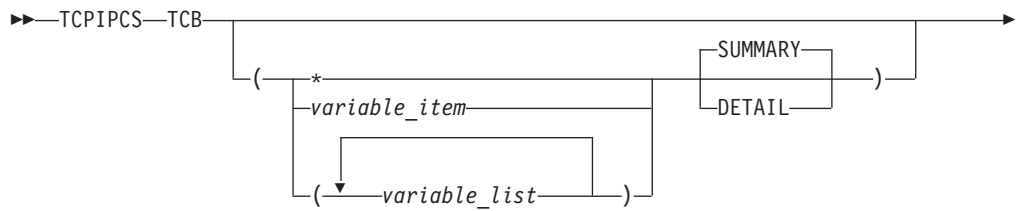
## TCPIP CS STREAM

Display the stream control blocks



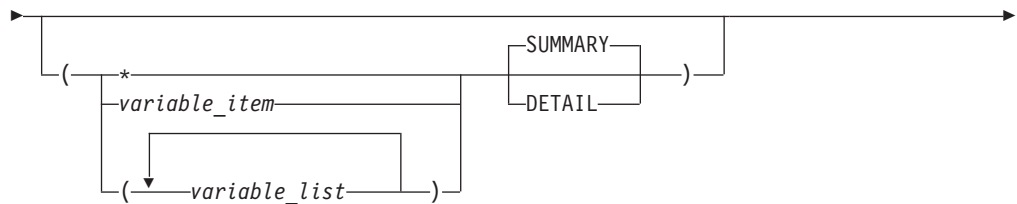
## TCPIP CS TCB

Display the Master Transmission Control Block (MTCB) and any Transmission protocol Control Blocks (TCBs) defined in the MTCB index



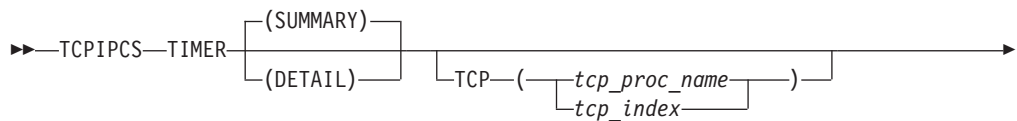
## TCPIP CS TELNET

Display the Telnet control blocks



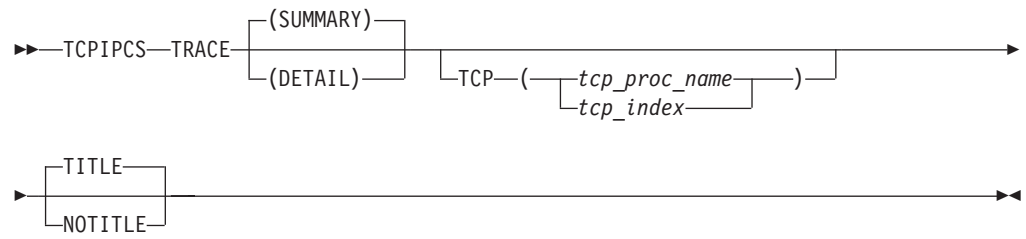
## TCPIP CS TIMER

Display the timer control blocks



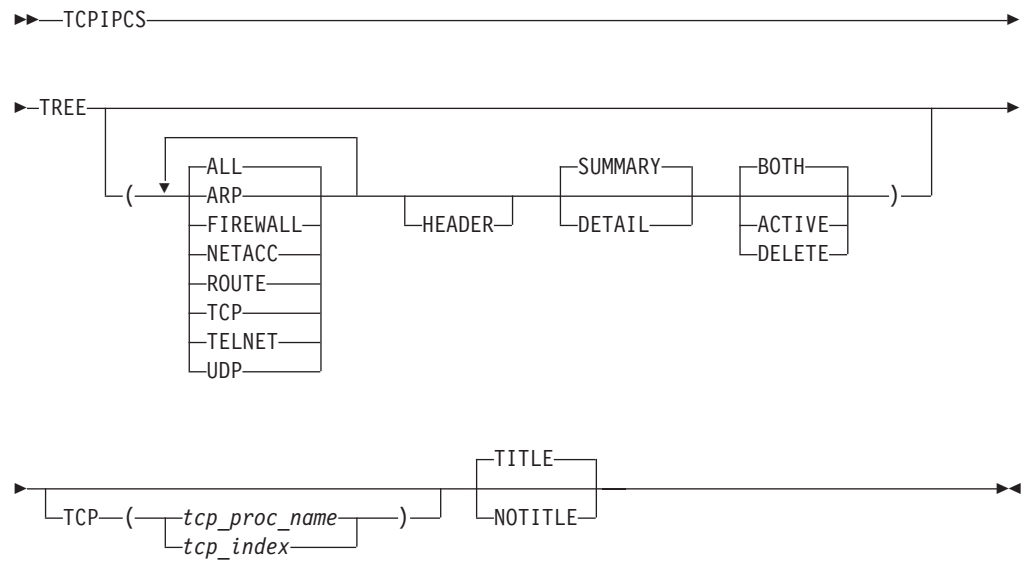
## TCPIP CS TRACE

Display information about CTrace



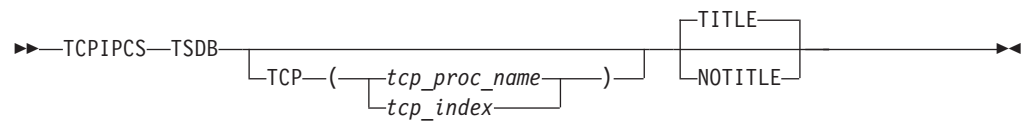
## TCPIPCS TREE

Display the structure of various predefined Patricia trees



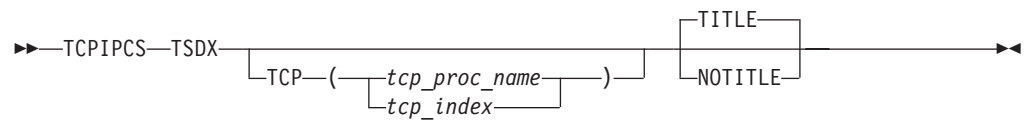
## TCPIPCS TSDB

Display the TSDB server data block



## TCPIPCS TSDX

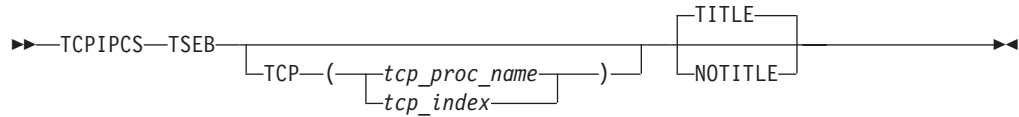
Display the TSDX server data extension



---

## TCPIP CS TSEB

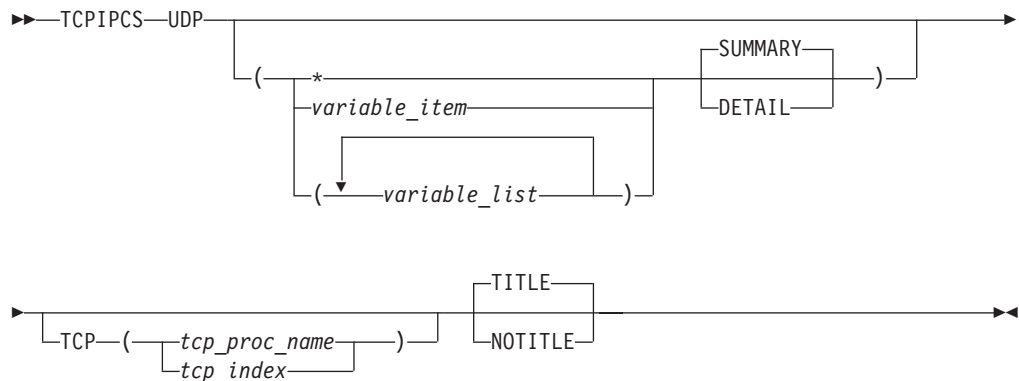
Display the TSEB server anchor block



---

## TCPIP CS UDP

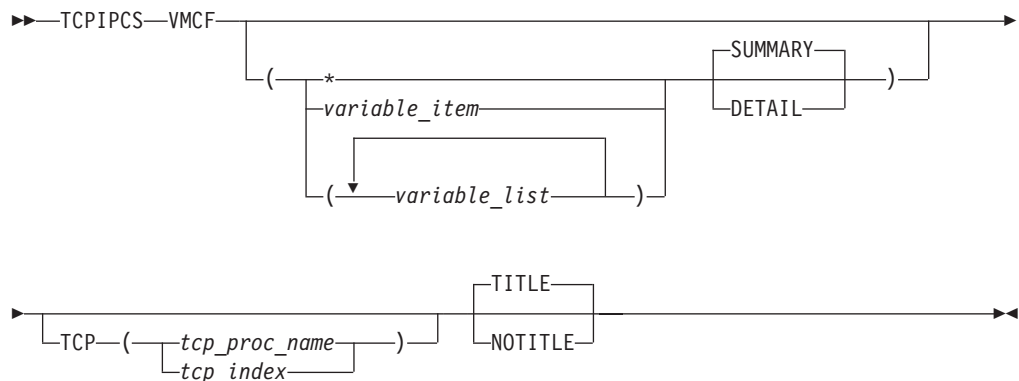
Display the Master UDP Control Block (MUCB) and any UDP Control Blocks (UDPs) defined in the Patricia tree



---

## TCPIP CS VMCF

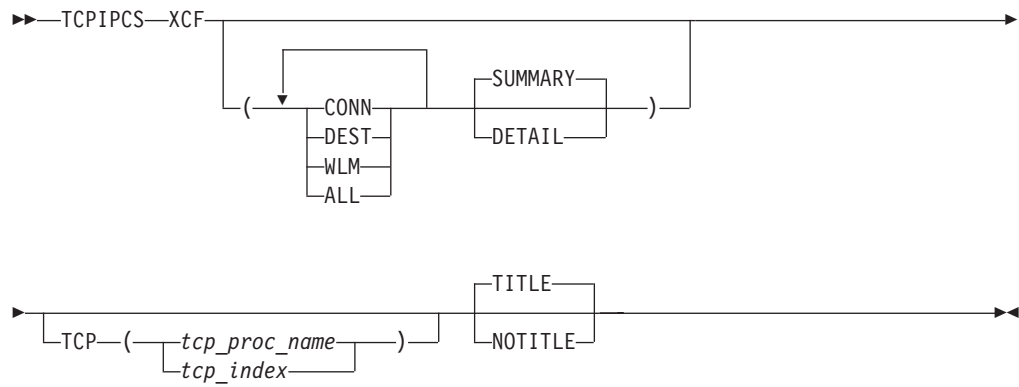
Display information about VMCF (Virtual Machine Communication Facility) and IUCV (Inter-User Communication Vehicle) users



---

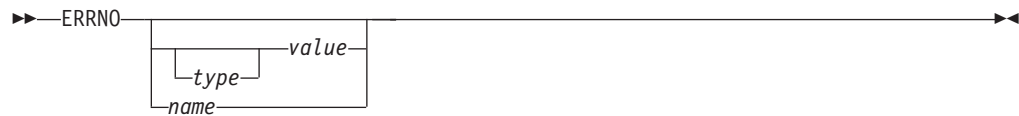
## TCPIP CS XCF

Produce a cross-system coupling facility (XCF) analysis report



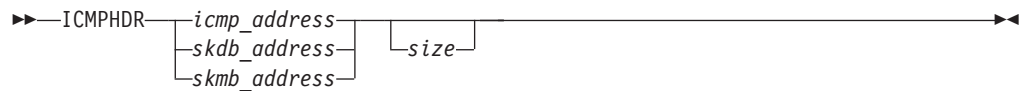
## ERRNO

Search for the name and description of constants used for ERRNO, ErnoJr, module ID, reason code, and ABEND reason code.



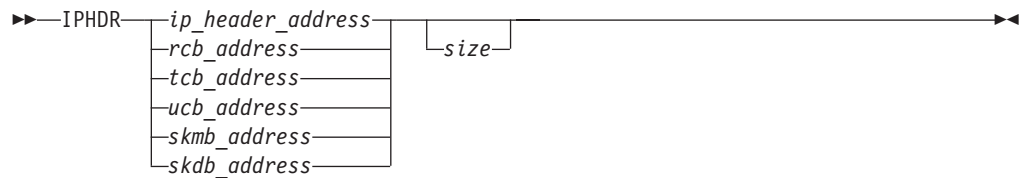
## ICMPHDR

Display the ICMP header fields



## IPHDR

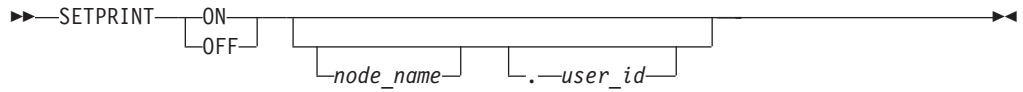
Display the IP header fields



---

## SETPRINT

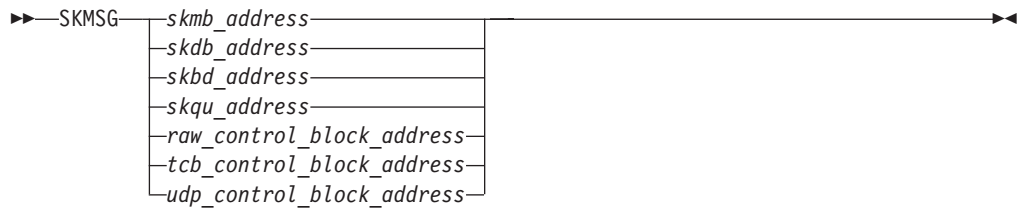
Change the destination of subsequent IPCS command output



---

## SKMSG

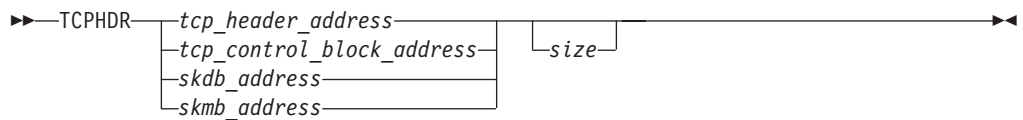
Display the SKMSG fields



---

## TCPHDR

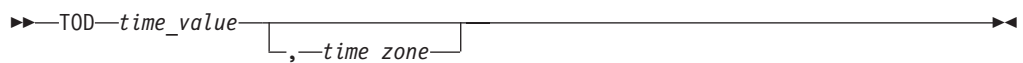
Display the TCP header fields



---

## TOD

Format a hexadecimal time-of-day value into a readable date and time



---

## UDPHDR

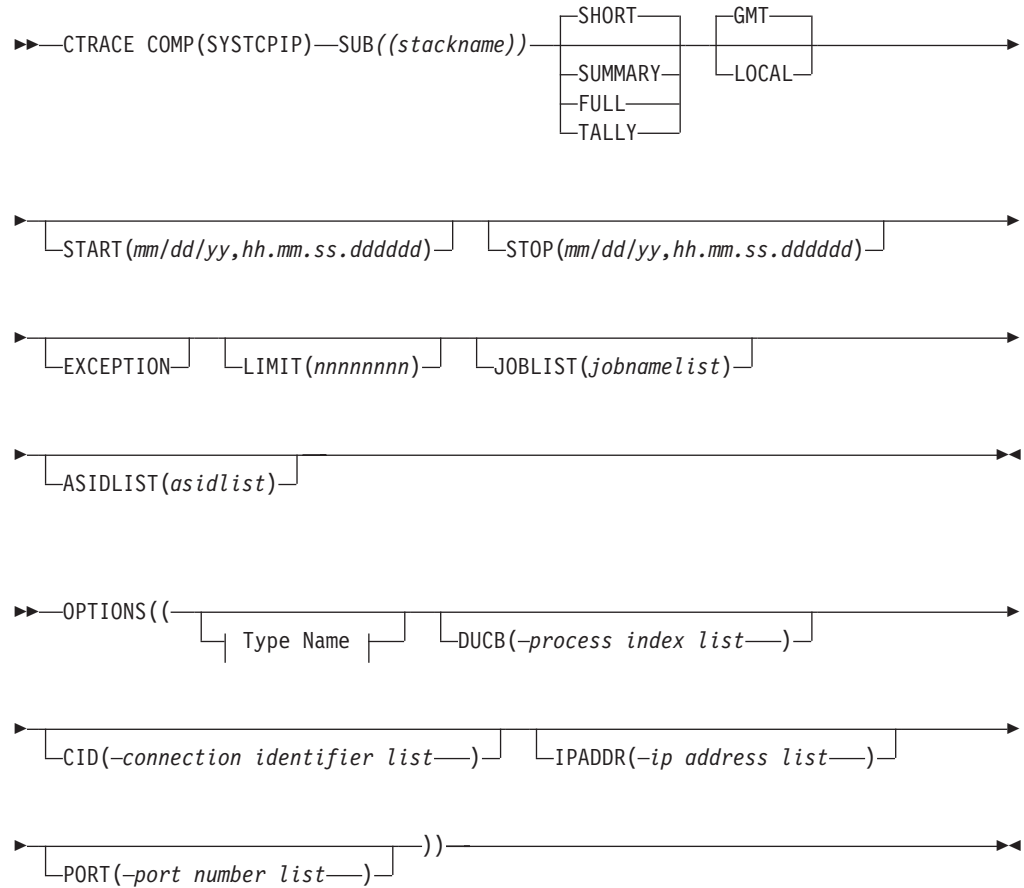
Display the UDP header fields





## Chapter 6. CTRACE Command and Options for TCP/IP

CTRACE command and options for TCP/IP stacks:



**Type Name:**

ALL
ACCESS
AFP
ARP
CLAW
CONFIG
CSOCKET
DLC
ENGINE
FIREWALL
ICMP
IN
INIT
INTERNET
IOCTL
LATCH
LCS
MESSAGE
MINIMUM
NONE
OETCP
OEUDP
OFF
OPCMDS
OPMSGS
PASAPI
PFS
PING
QUEUE
RAW
ROUTE
RW
SERIAL
SMTP
SNMP
SOCKAPI
SOCKET
STORAGE
SYSTEM
TC
TCP
TELNET
TELNETVTAM
TIMER
TN
UD
UDP
VTAM
VTAMDATA
WORKUNIT
XCF

## **Part 2. VTAM Commands**

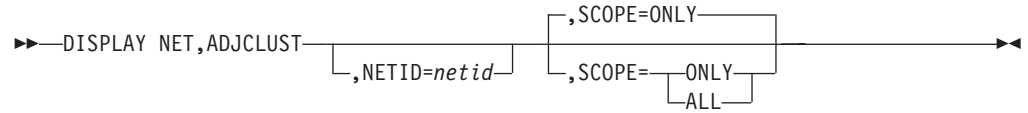
VTAM commands are listed in this section alphabetically. For more information on these commands, refer to *OS/390 IBM Communications Server: SNA Operation*.



## Chapter 7. Display Commands

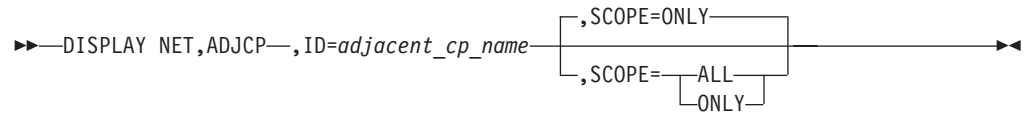
### D ADJCLUST

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



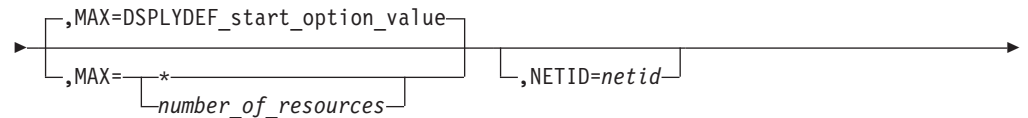
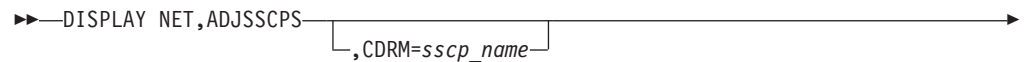
### D ADJCP

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



### D ADJSSCPS

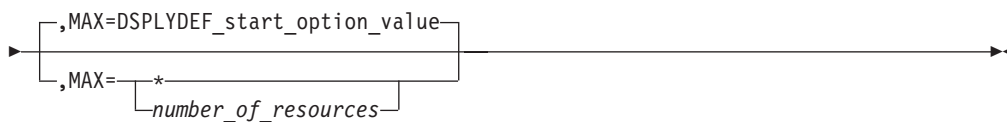
Display user-defined and dynamic adjacent SSCP tables:



Display adjacent SSCP table for specific cross-domain resource:

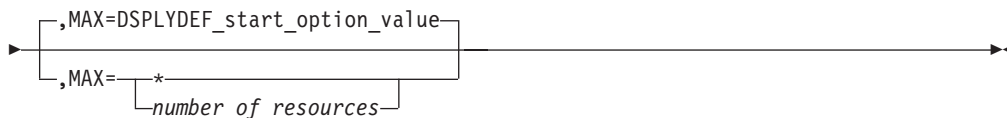


## Display Commands



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

►► `DISPLAY NET,ADJSSCPS—,ADJLIST=list_name` ►►



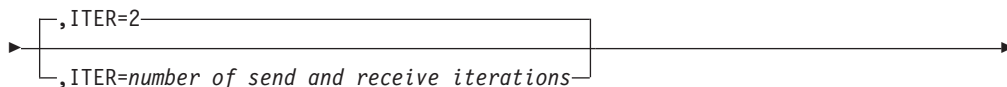
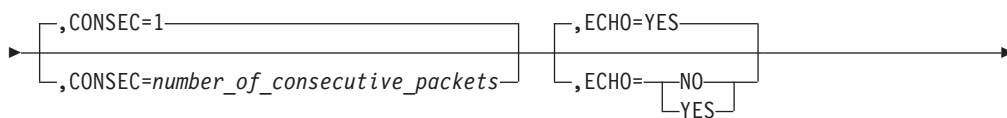
Display all lists of adjacent CDRMs:

►► `DISPLAY NET,ADJSSCPS—,ADJLIST=* ,MAX=DSPLYDEF_start_option_value ,MAX=* number_of_resources` ►►

## D APING

| 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:

►► `DISPLAY NET,APING—,ID=resource_name` ►►



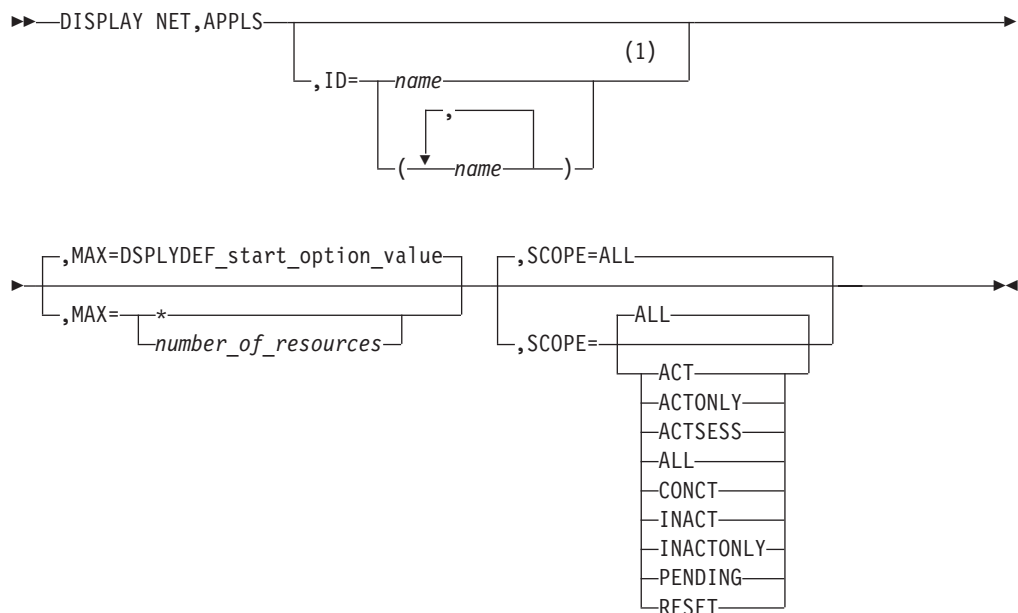
## D APINGDTP

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

▶▶—DISPLAY NET,APINGDTP—▶▶

## D APPLS

| 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

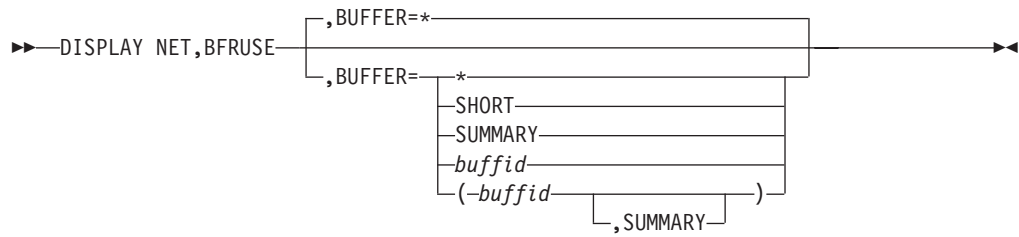
Display the APPN-to-subarea class-of-service mapping table:

▶▶—DISPLAY NET,APPNTOSA—▶▶

## D BFRUSE

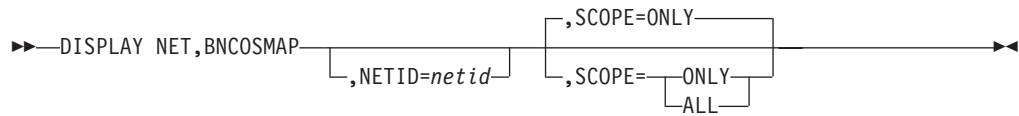
| Display information about VTAM buffer use and storage usage summary information  
| for VTAM modules:

## Display Commands



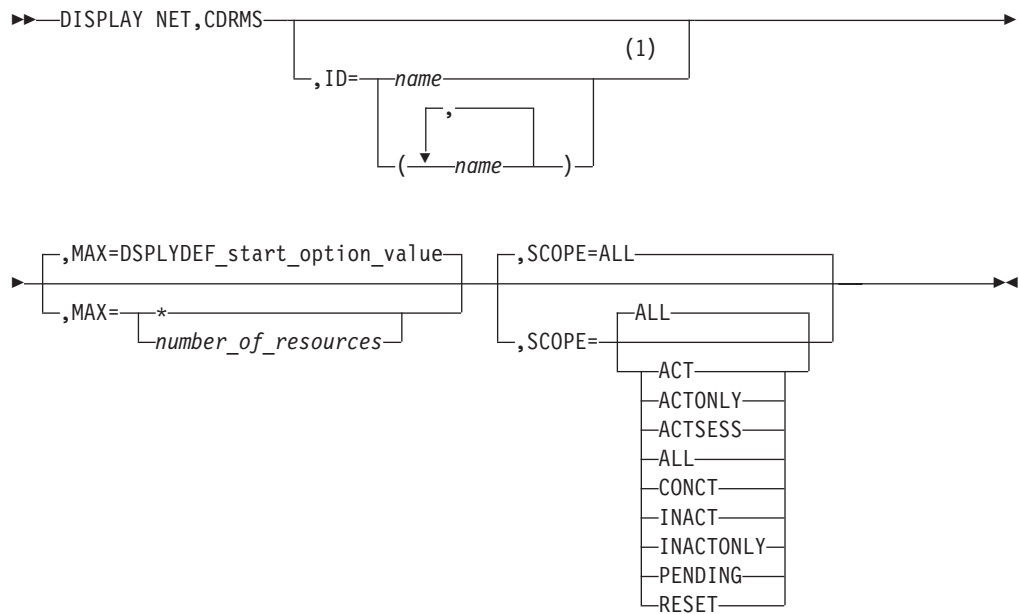
## D BNCOSMAP

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



## D CDRMS

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



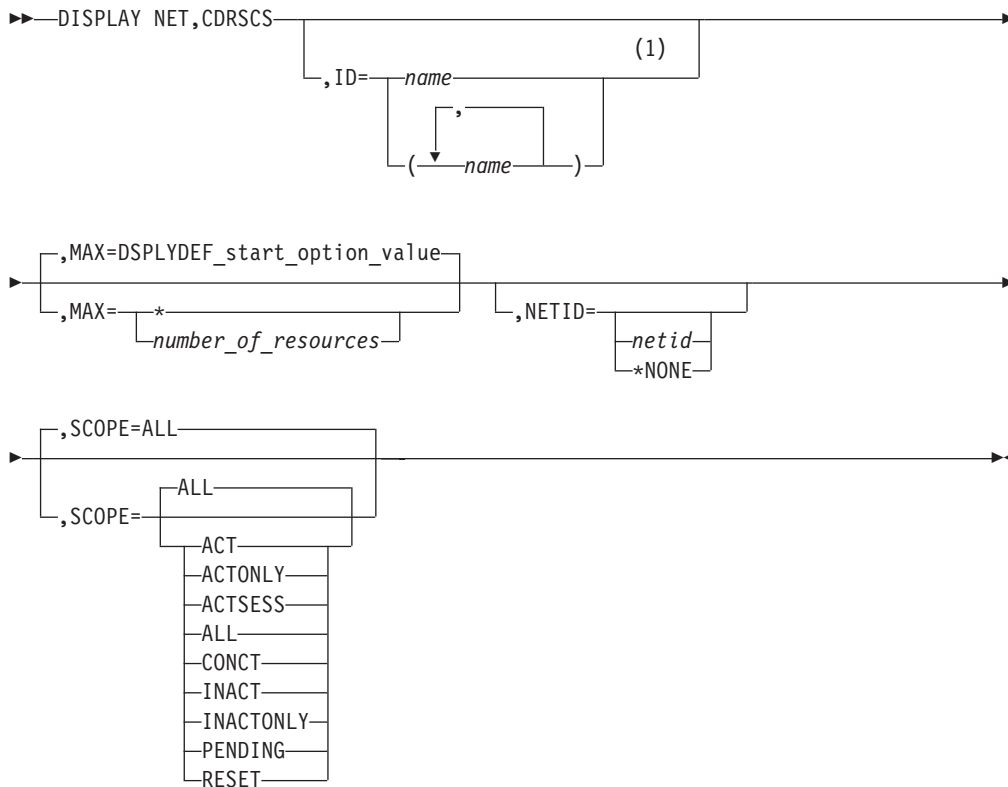
### Notes:

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



## D CDRSCS

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

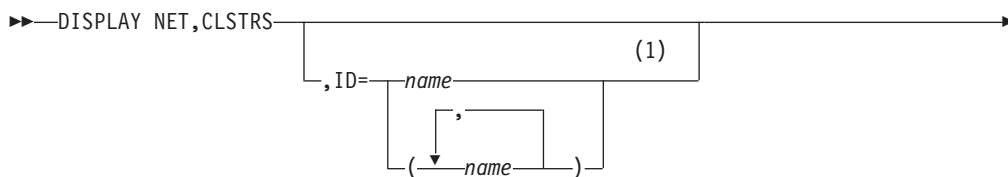


**Notes:**

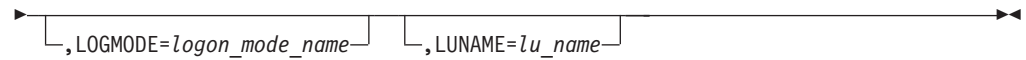
- 1 Depending on the value of the DSPLYWLD start option, wildcard values can be used for this operand.

## D CLSTRS

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







## D COS

|  
|

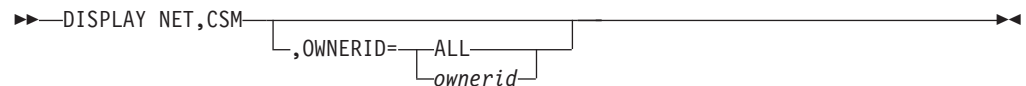
Display the class-of-service (COS) table name for a particular network or all networks associated with a specified PU type 4 or 5:



## D CSM

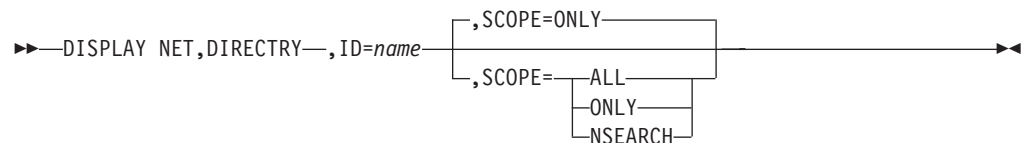
|  
|

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

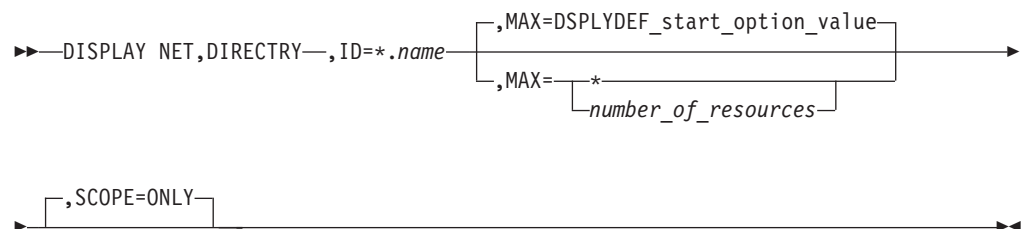


## D DIRECTORY

Display information about a resource:



Display a resource name in any network:



## Display Commands

---

### D DISK

| Provide information about an IBM® 3720 or 3745 Communication Controller's disk  
| contents:

▶▶—DISPLAY NET,DISK—,ID=*ncc\_name*—————▶▶

---

### D DLURS

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

▶▶—DISPLAY NET,DLURS—————▶▶

---

### D EXIT

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

▶▶—DISPLAY NET,EXIT—  
                          ┌,ID=\*  
                          └,ID=\*  
                                  └*exit\_name*┘

▶▶—  
          ┌,MAX=DSPLYDEF\_start\_option\_value  
          └,MAX=\*  
                  └*number\_of\_resources*┘

---

### D GRAFFIN

| Display affinity information for generic resources:

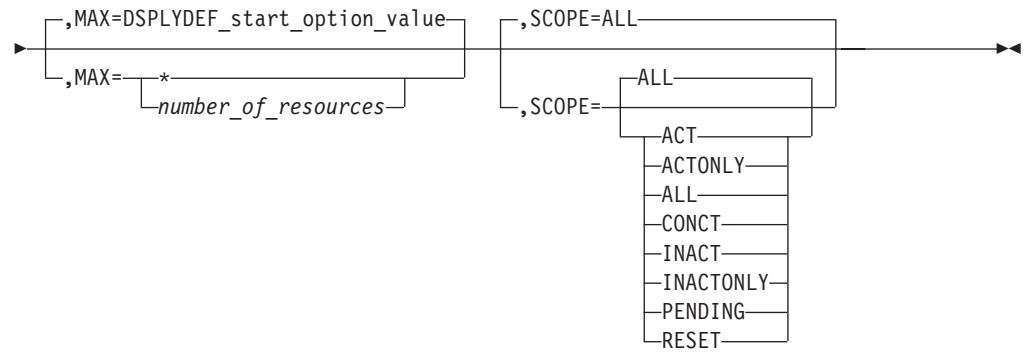
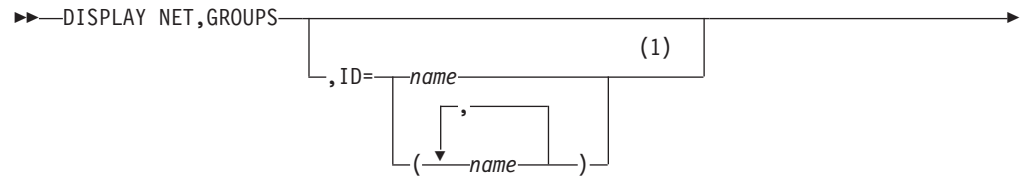
▶▶—DISPLAY NET,GRAFFIN—  
                          ┌,LU=\*. \*  
                          └,LU=name  
                          ┌,GNAME=\*. \*  
                          └,GNAME=name

▶▶—  
          ┌,MAX=DSPLYDEF\_start\_option\_value  
          └,MAX=max\_affinities

---

### D GROUPS

| Provide information about line groups:  
|  
|



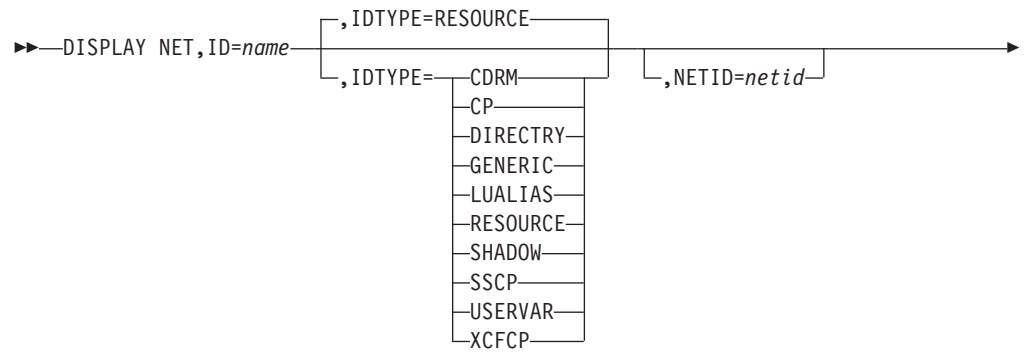
**Notes:**

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

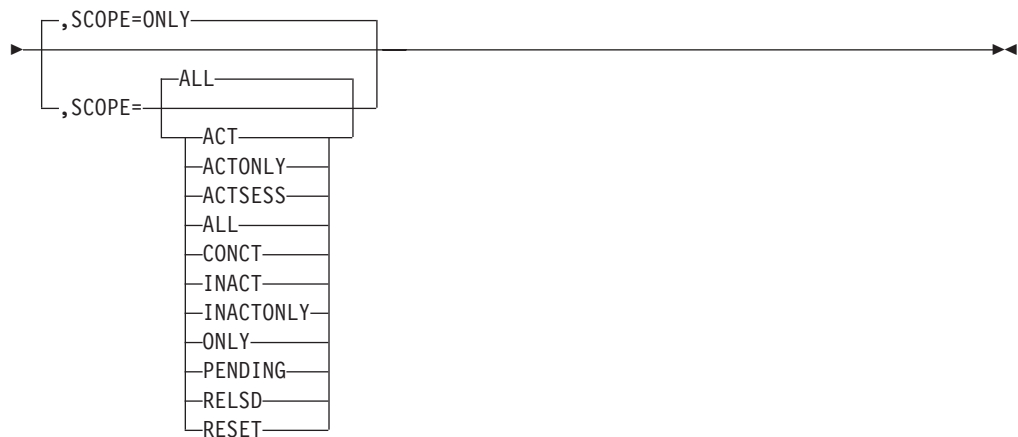
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**D ID**

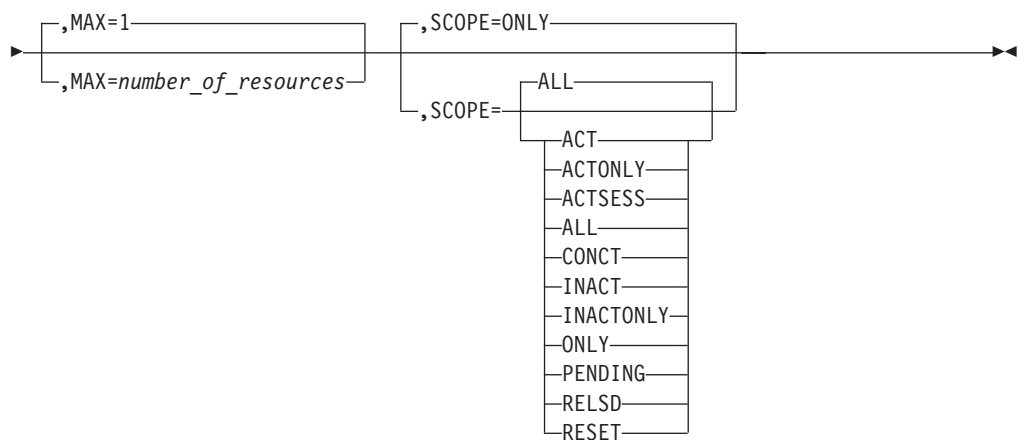
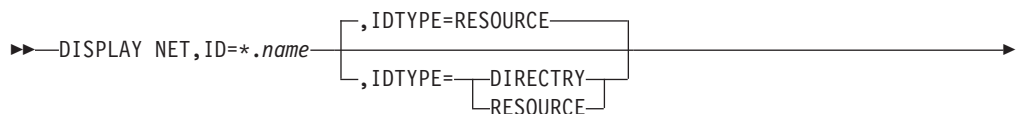
Display a resource:



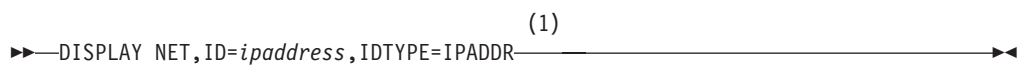
## Display Commands



Display a resource name in any network:



Display a resource name using an IP address:

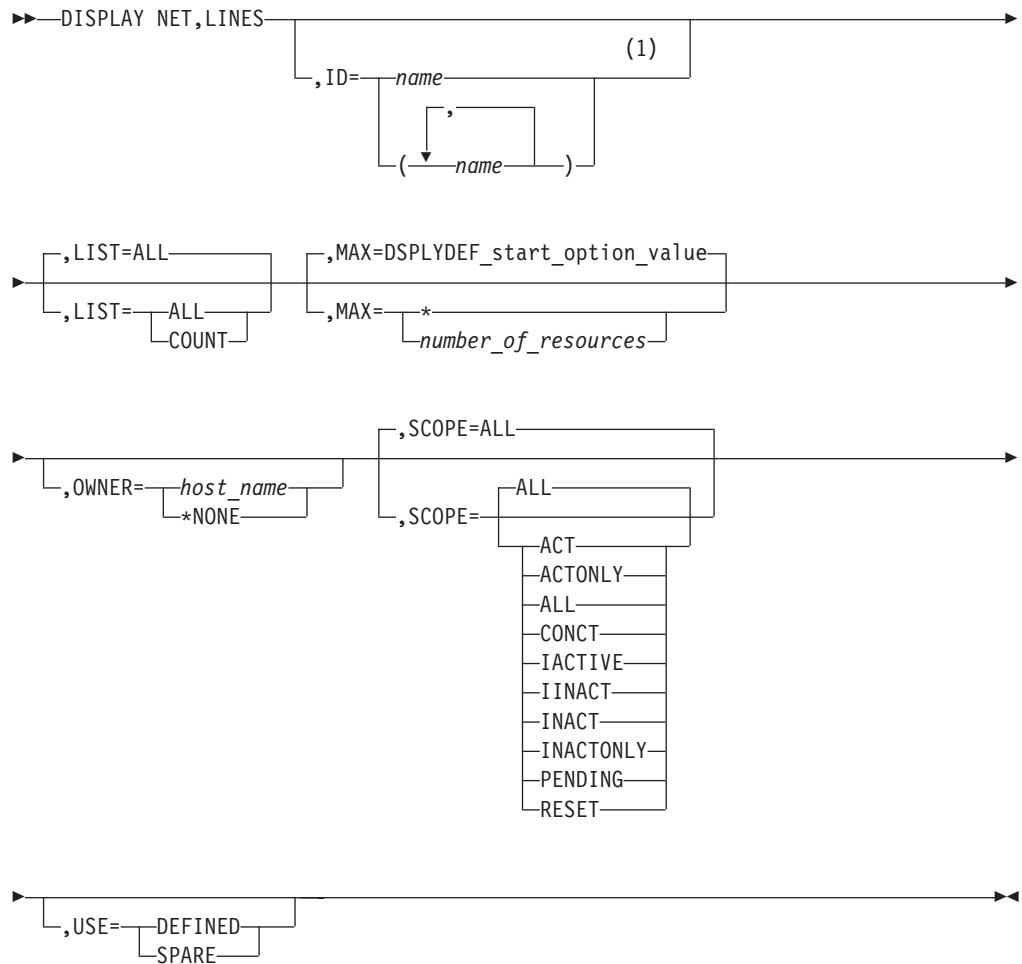


### Notes:

- 1 The ID type of IPADDR is not related to the IPADDR start option.

## D LINES

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

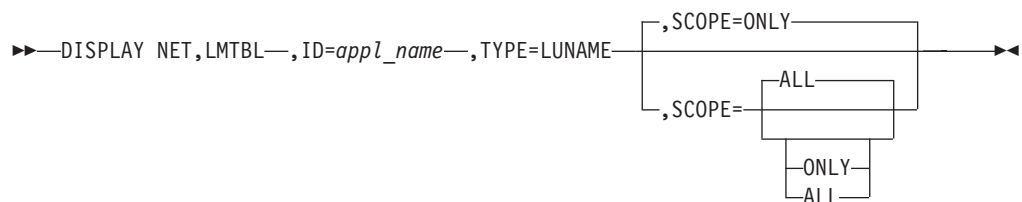


### Notes:

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

## D LMTBL

Display partner LUs in LU-mode table:



Display logon mode names in LU-mode table:

## Display Commands

►►—DISPLAY NET,LMTBL—,ID=*appl\_name*—,LUNAME=*lu\_name*—,TYPE=LOGMODE—►►

---

## D LUGROUPS

Display all LUGROUP major nodes:

►►—DISPLAY NET,LUGROUPS—  
┌,SCOPE=ONLY—  
└,SCOPE=—ONLY—  
└ALL┘ MAX operand ┘

**MAX operand:**

┌,MAX=DSPLYDEF\_start\_option\_value—  
└,MAX=—\*—  
└number\_of\_resources—

Display a specific LUGROUP major node:

►►—DISPLAY NET,LUGROUPS—,ID=*lugroup\_major\_node\_name*—►►

┌,SCOPE=ONLY—  
└,SCOPE=—ONLY—  
└ALL┘ MAX operand ┘

**MAX operand:**

┌,MAX=DSPLYDEF\_start\_option\_value—  
└,MAX=—\*—  
└number\_of\_resources—

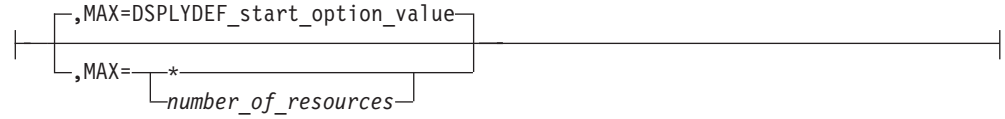
Display a model LU group:

►►—DISPLAY NET,LUGROUPS—,ID=*model\_lu\_group*—►►

┌,SCOPE=ONLY—  
└,SCOPE=—ONLY—  
└ALL┘ MAX operand ┘



**MAX operand:**

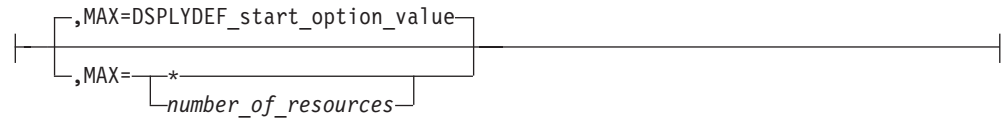


Display a model LU:

►►—DISPLAY NET,LUGROUPS—,ID=*model\_lu\_name*—,GROUP=*model\_lu\_group*—►►

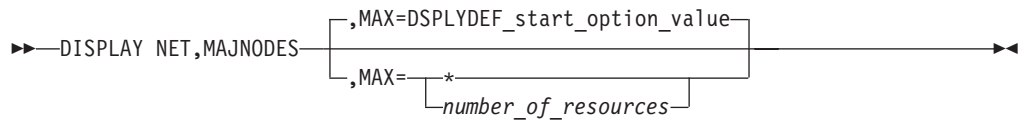


**MAX operand:**



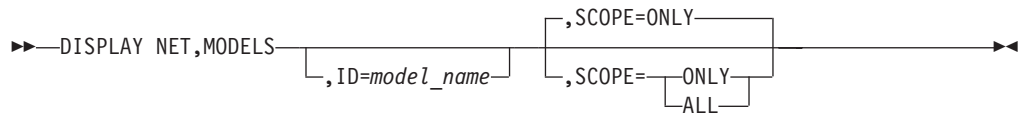
## D MAJNODES

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



## D MODELS

Provide information about model resources, excluding model applications:

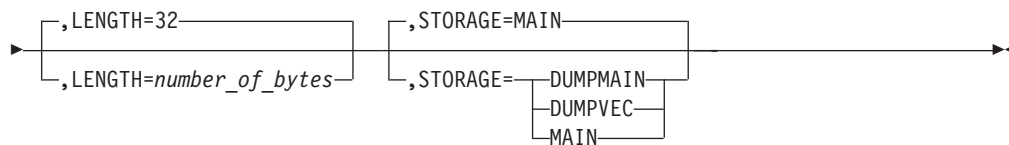


## Display Commands

### D NCPSTOR

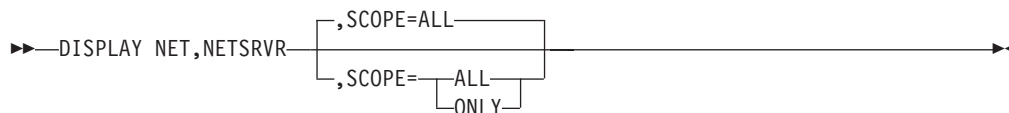
|                   Display either the storage contents of a communication controller running an NCP,  
|                   or an NCP dump stored in an IBM 3720 or 3745 Communication Controller:

▶▶—DISPLAY NET,NCPSTOR—,ADDR=*address*—,ID=*ncp\_name*—▶▶



### D NETSRVR

|                   Display information about network node servers:



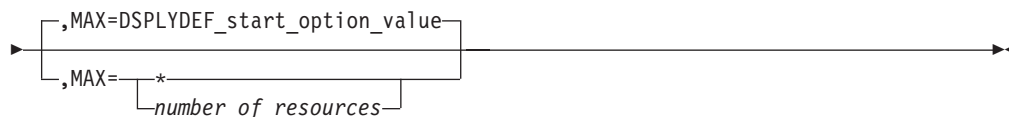
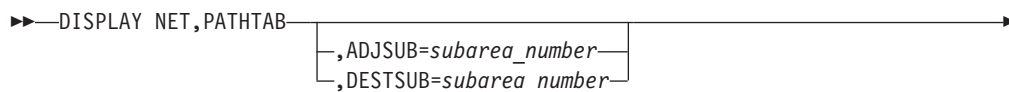
### D PATHS

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

▶▶—DISPLAY NET,PATHS—,ID=*switched\_pu\_name*—▶▶

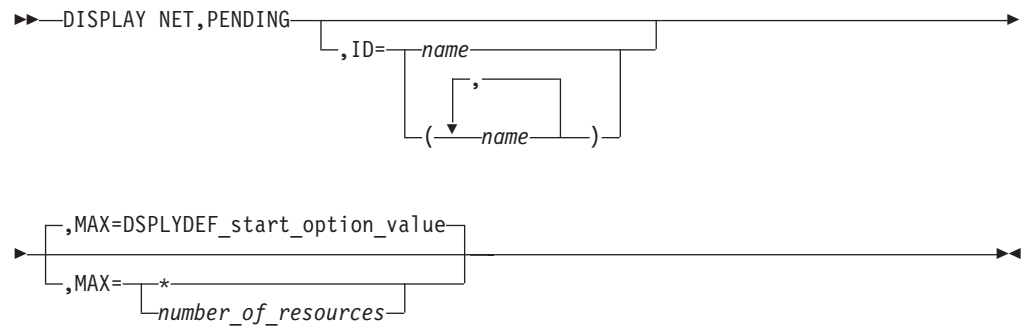
### D PATHTAB

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



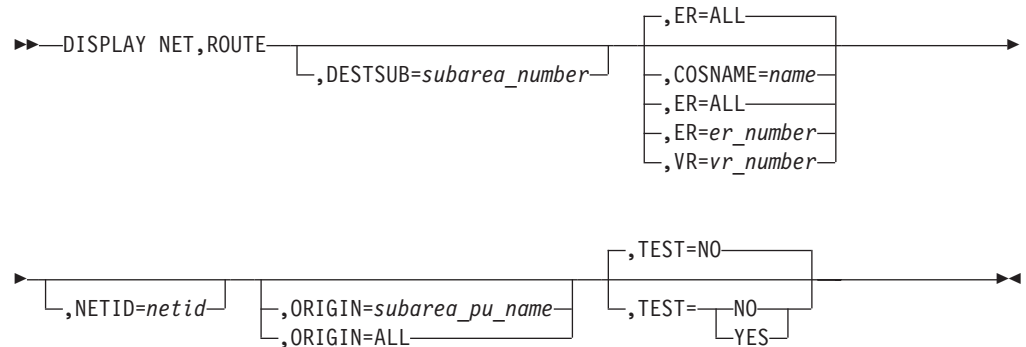
### D PENDING

|                   Display information about resources in the domain that are in a “pending” state:

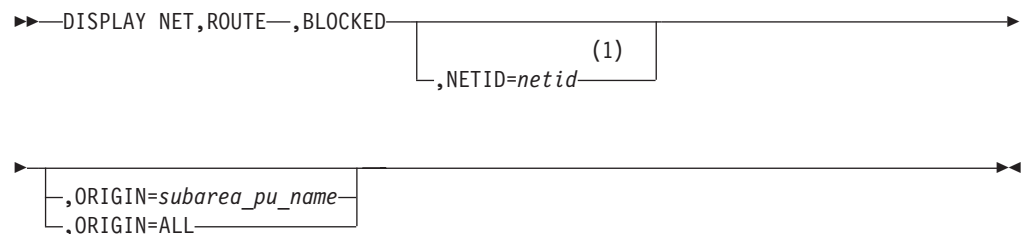


## D ROUTE

Display the status of routes:



Display 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.

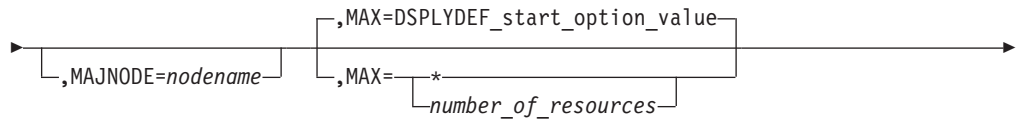
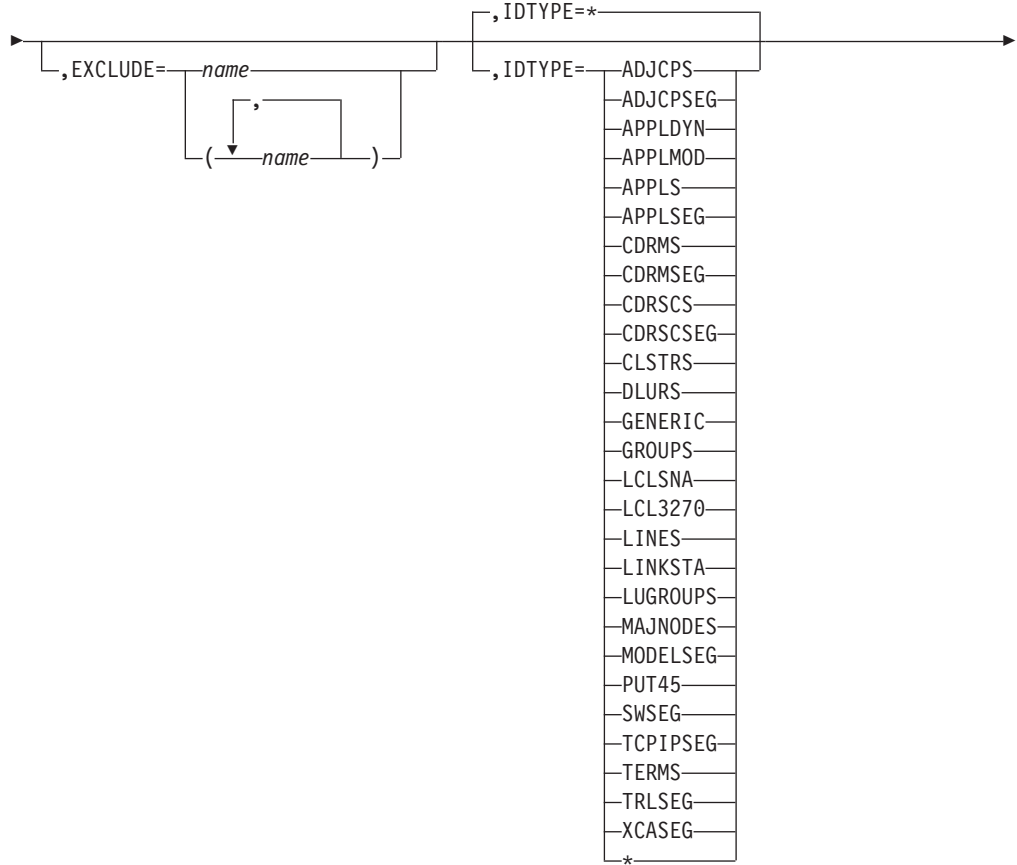
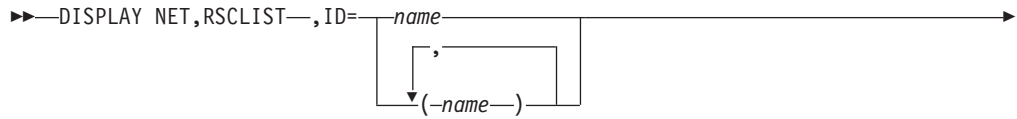
Display held virtual routes:



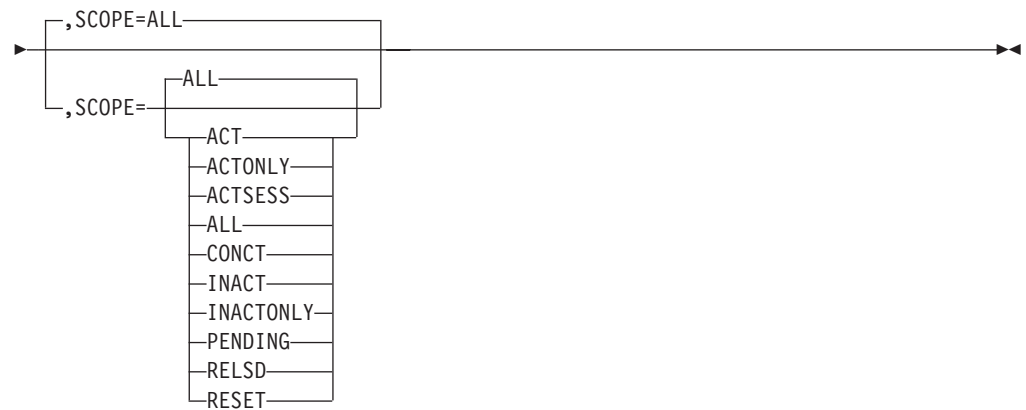
## Display Commands

### D RSCLIST

Display information about resources whose names match a particular pattern:



|



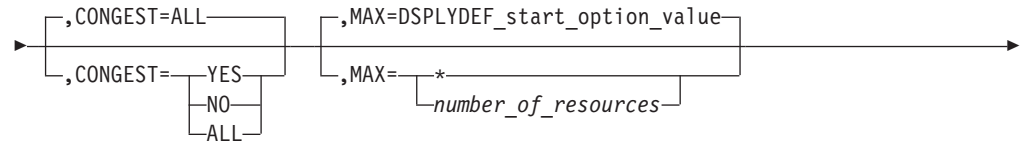
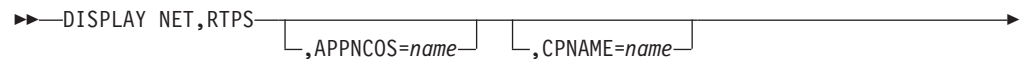
|

|

## D RTPS

|

Display information concerning HPR pipes:



## D SAMAP

|

Display the subarea mapping table from an ICN host:



## D SATOAPPN

|

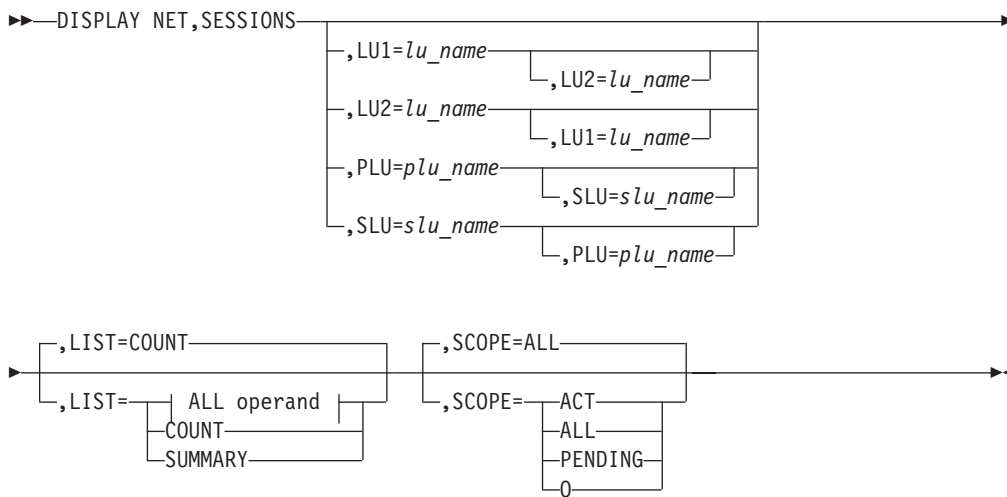
Display the subarea-to-APPN class-of-service mapping table:



## Display Commands

### D SESSIONS

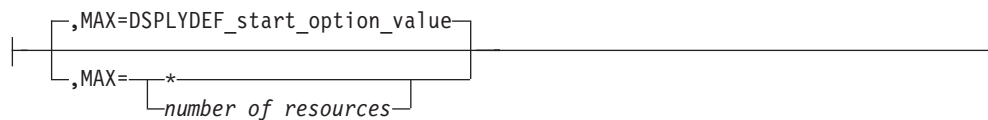
Display all sessions:



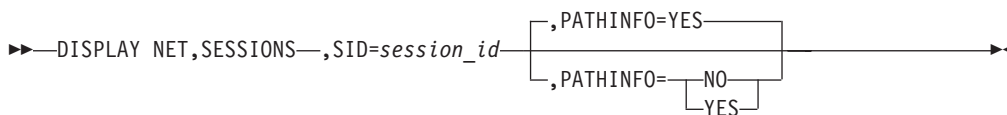
#### ALL operand



#### MAX operand:

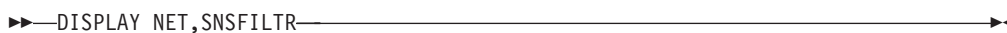


Display a specific session:



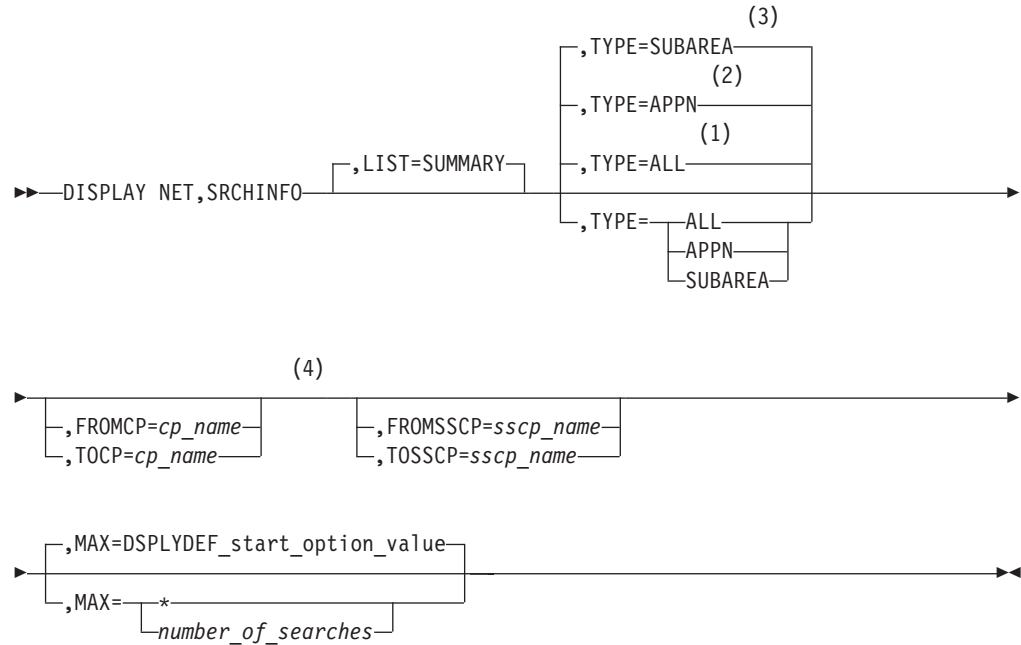
### D SNSFILTR

Display the current active SAW sense filter:



## D SRCHINFO

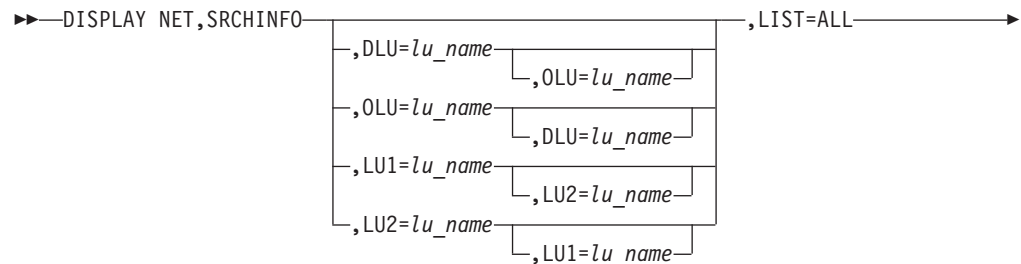
Display summary information about outstanding subarea and APPN® searches:



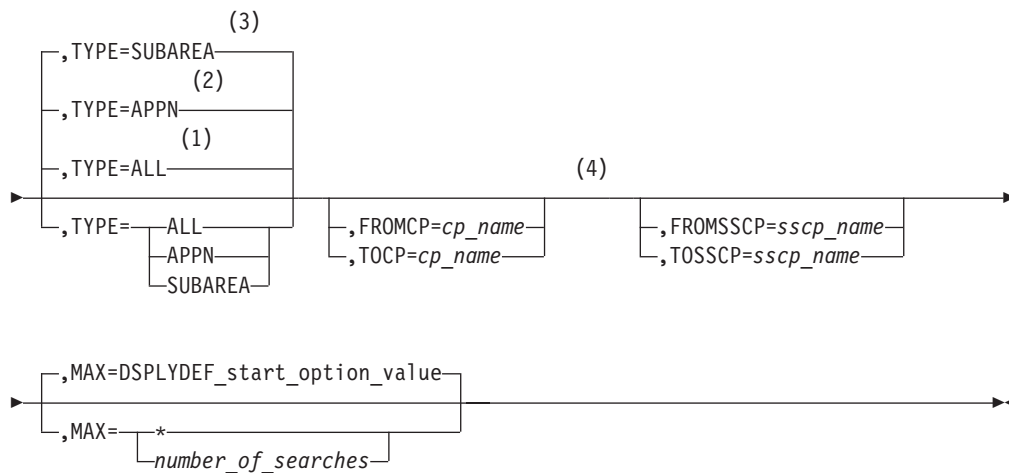
### Notes:

- 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:



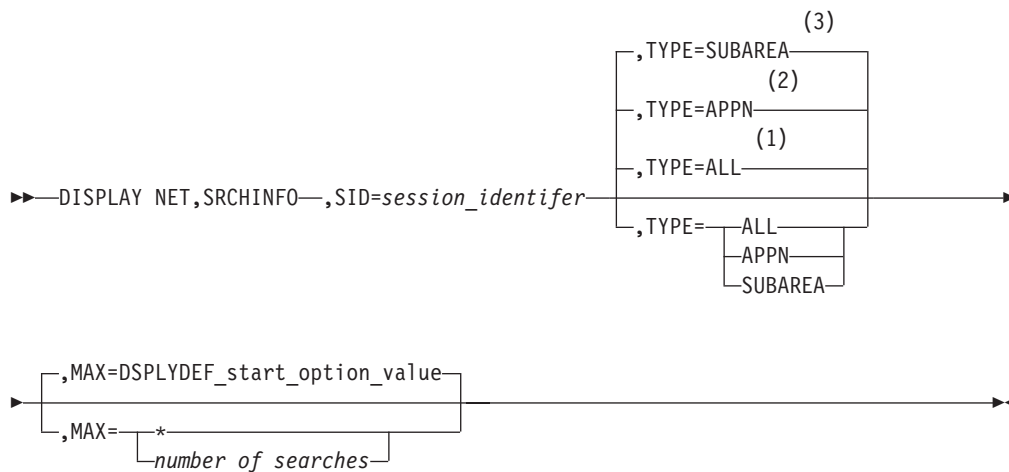
## Display Commands



### 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:



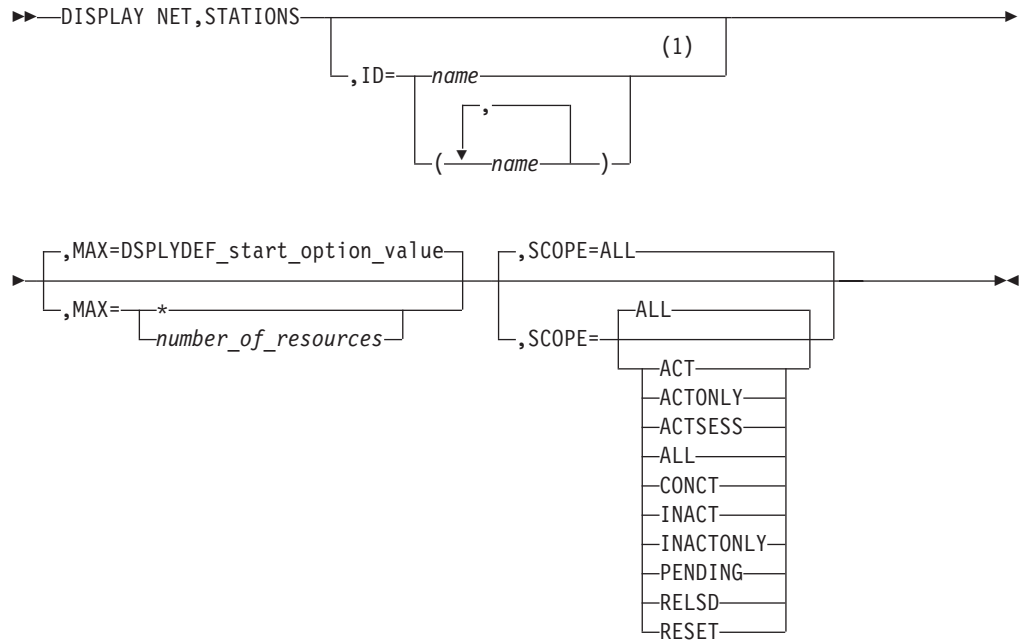
### Notes:

- 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

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

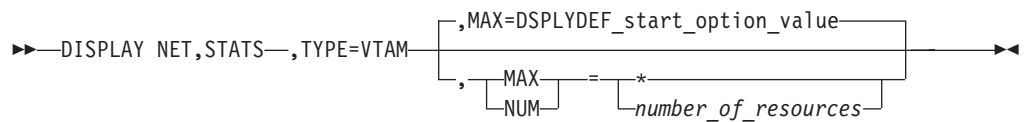


**Notes:**

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

## D STATS

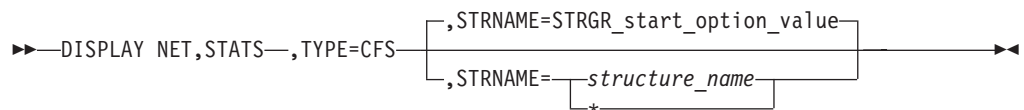
Display resource statistics:



Display data compression statistics:

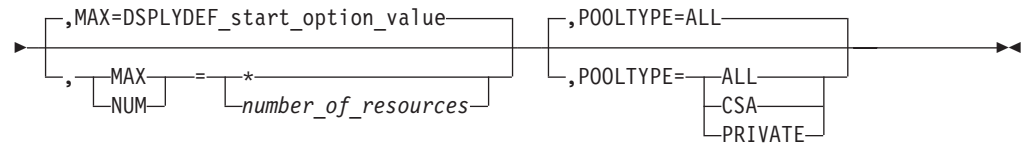


Display coupling facility structure statistics:

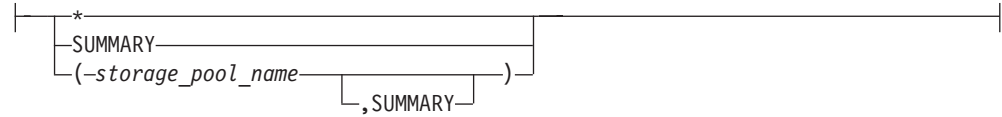




## Display Commands



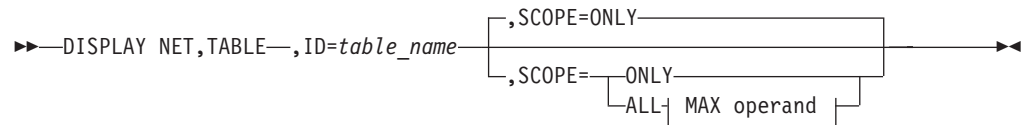
### POOL operands:



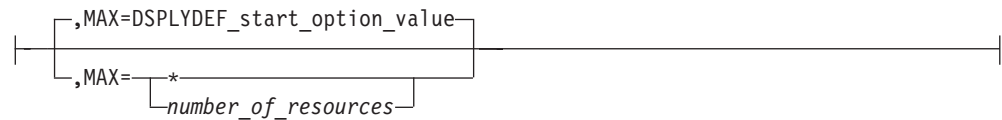
## D TABLE

|  
|

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



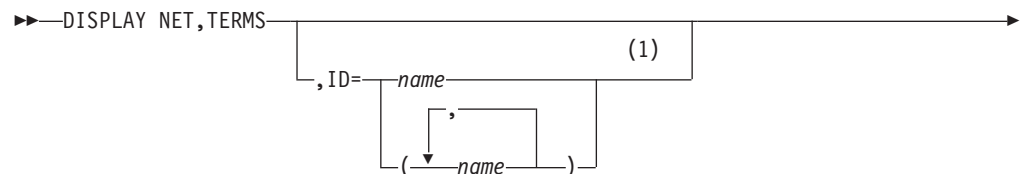
### MAX operand:



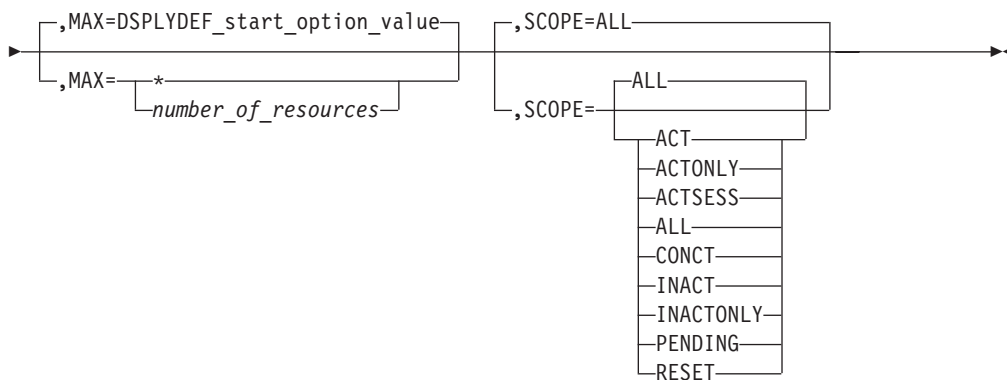
## D TERMS

|  
|

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



## Display Commands

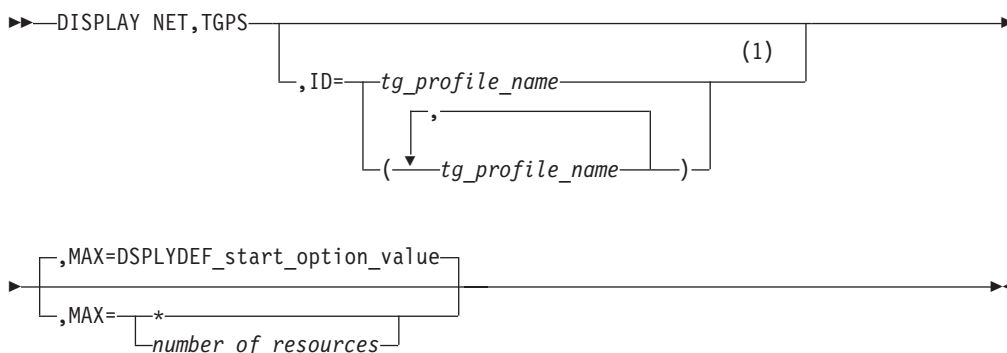


### Notes:

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

## D TGPS

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

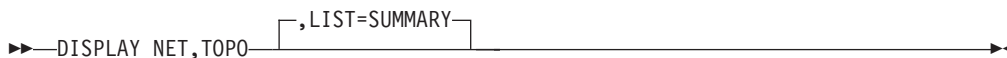


### Notes:

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

## D TOPO

Display a summary of the topology database:



Display a specific node:

## Display Commands

```

▶▶—DISPLAY NET,TOPO—,ID=cp_name—┌,APPNCOS=cos_name—┐┌,LIST=ALL—┐

```

Display adjacent nodes:

```

▶▶—DISPLAY NET,TOPO—,ID=cp_name—,LIST=ADJ—┌,APPNCOS=cos_name—┐

```

Display all nodes of a specific type:

```

▶▶—DISPLAY NET,TOPO—,LIST=┌BN—┐┌,APPNCOS=cos_name—┐
└CDSERV—┘
└EN—┘
└ICN—┘
└NN—┘
└VN—┘

```

```

▶▶—,ID=*. *—┐
┌(1)┐
└,ID=name—┘┌*—┘

```

### 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 NET,TOPO—,LIST=┌EN—┐┌,LOCSIZE=locate_size—┐
└NN—┘

```

Display a specific TG or TGs:

```

▶▶—DISPLAY NET,TOPO—,ORIG=cp_name—,DEST=cp_name—┌,TGN=tg_number—┐
└,TGN=tg_number—┘
▶▶—┌,APPNCOS=cos_name—┐

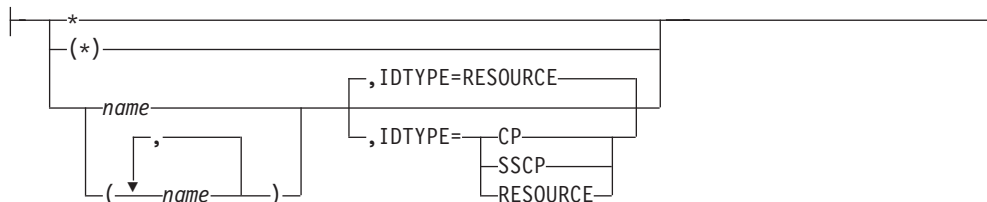
```

## D TRACES

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

►►—DISPLAY NET,TRACES—,TYPE=NODES—,ID=—| ID values |—————►►

**ID values:**



Display the status of a communication network management trace:

►►—DISPLAY NET,TRACES—,TYPE=CNM—————►►

Display the status of the user Exit buffer trace:

►►—DISPLAY NET,TRACES—,TYPE=EXIT—,ID=—| ISEXCAA  
| ISEXCCS  
| ISEXCDM |—————►►

Display the status of a module trace:

►►—DISPLAY NET,TRACES—,TYPE=MODULE—————►►

Display the status of a network controller line trace:

►►—DISPLAY NET,TRACES—,TYPE=NETCTLR—,ID=3710\_pu\_name—————►►

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

►►—DISPLAY NET,TRACES—,TYPE=SMS—| ,ID=VTAMBUF |—————►►

Display the status of a resource state trace:

▶▶—DISPLAY NET,TRACES—,TYPE=STATE—▶▶

Display the status of a TSO user trace:

▶▶—DISPLAY NET,TRACES—,TYPE=TSO—,ID=—\*—  
 (—\*—)  
 (1)  
 —user\_id—  
 (—user\_id—)

**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 NET,TRACES—,TYPE=VTAM—▶▶

Display the status of all active traces:

▶▶—DISPLAY NET,TRACES—,TYPE=ALL—▶▶

## D TRL

Display the entries in the TRL major node:

▶▶—DISPLAY NET,TRL—,CONTROL=ALL—  
 ,CONTROL=—ALL—  
 —MPC—  
 —TCP—,ULPID=*name*—  
 —XCF—  
 ,MAX=DSPLYDEF\_start\_option\_value—  
 ,MAX=—\*—  
 —number\_of\_resources—

Display information about a specific user-defined TRLE:

▶▶—DISPLAY NET,TRL—,TRLE=*trl\_entry\_name*—▶▶

## Display Commands

Display information about a dynamic XCF TRLE:

►►—DISPLAY NET,TRL—,XCFCP=*cp\_name*—►►

---

## D TSOUSER

Display the status of a TSO user ID:

►►—DISPLAY NET,TSOUSER—,ID=*user\_id*—►►

---

## D USERVAR

Display all USERVARs:

►►—DISPLAY NET,USERVAR—  
┌,MAX=DSPLYDEF\_start\_option\_value  
└,MAX=\*  
└number\_of\_resources└

Display a specific USERVAR:

►►—DISPLAY NET,USERVAR—,ID=*uservar\_name*—►►

---

## D VTAMOPTS

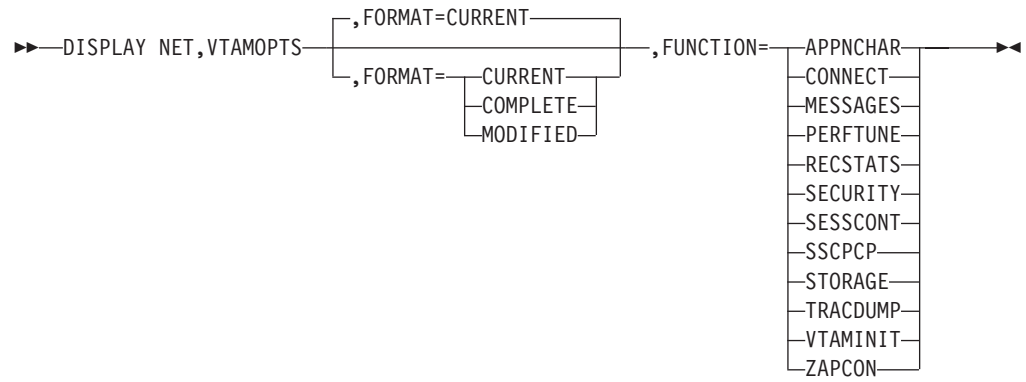
Display selected start options:

►►—DISPLAY NET,VTAMOPTS—  
┌,FORMAT=CURRENT  
└,FORMAT=┌CURRENT  
└COMPLETE  
└MODIFIED

┌,OPTION=\*  
└,OPTION=┌\*  
└(\*)  
└option  
└┌,  
└└option└)

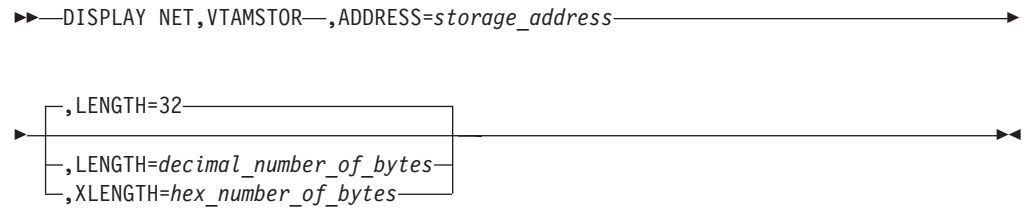
Display a group of related start options:



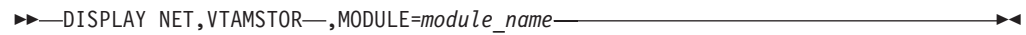


## D VTAMSTOR

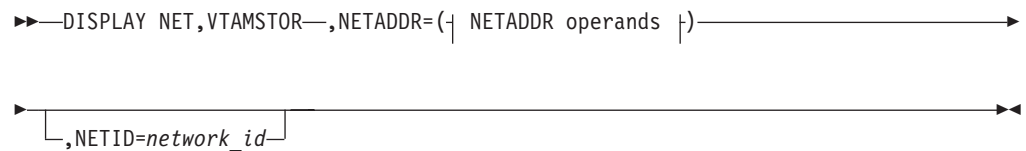
Display storage contents associated with a storage address:



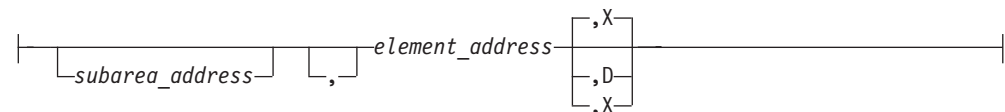
Display storage associated with a module:



Display storage associated with a network address:



**NETADDR operands:**



Display storage associated with a resource name:

## Display Commands

▶▶—DISPLAY NET,VTAMSTOR—,RESOURCE=*resource\_name*—▶▶

---

## Chapter 8. Halt Commands

---

### HALT (Z)

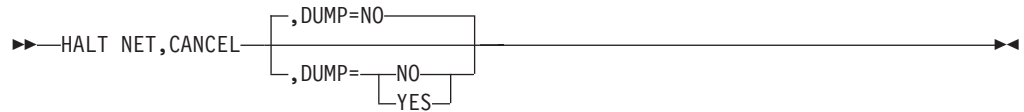
Request a normal halt of VTAM without disrupting active LU-LU sessions:



---

### Z CANCEL

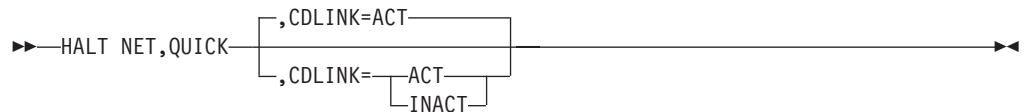
Request a halt of VTAM via abend:



---

### Z QUICK

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



## Halt Commands

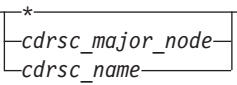
---

## Chapter 9. Modify Commands

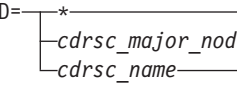
---

### F ALSLIST

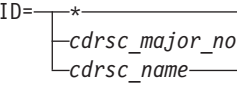
Add an entry to an adjacent link station list:

```
▶▶—MODIFY procname,ALSLIST—,ACTION=ADD—,ID=—————▶  
▶—,NEWALS=adjacent_link_station_name—————▶▶
```

Delete an entry from an adjacent link station list:

```
▶▶—MODIFY procname,ALSLIST—,ACTION=DELETE—,ID=—————▶  
▶—,OLDALS=adjacent_link_station_name—————▶▶
```

Replace an entry in an adjacent link station list:

```
▶▶—MODIFY procname,ALSLIST—,ACTION=REPLACE—,ID=—————▶  
▶—,NEWALS=adjacent_link_station_name—,OLDALS=adjacent_link_station_name—————▶▶
```

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

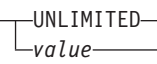
```
▶▶—MODIFY procname,ALSLIST—,ACTION=CREATE—,ID=cdrsc_name—————▶  
▶—,NEWALS=adjacent_link_station_name—————▶▶
```

---

### F APINGDTP

|  
|

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

```
▶▶—MODIFY procname,APINGDTP—,INSTANCE=—————▶▶
```



## Modify Commands

►► `MODIFY procname,CNOS—,ID=appl_name—,LIMITS=(0,0,0)—,LUNAME=lu_name—`►►

►► `—,NBRMODE=ALL` ┌,DRAINL=NO ┌,DRAINR=NO  
└,DRAINL=NO └,DRAINR=NO  
└YES └YES

►► ┌,RESP=LOCAL ┌,SNGSESLU=NO  
└,RESP=LOCAL └,SNGSESLU=NO  
└REMOTE └YES

Set session limits to nonzero:

►► `MODIFY procname,CNOS—,ID=appl_name—,LIMITS=(sesslim,minwinl,minwinr)`►►

►► `—,LOGMODE=logon_mode_name—,LUNAME=lu_name—` ┌,CONVSECL=  
NONE  
CONV  
ALREADYV  
PERSISTV  
AVPV

►► ┌,NBRMODE=ONE ┌,RESP=LOCAL ┌,SNGSESLU=NO  
└,RESP=LOCAL └,SNGSESLU=NO  
└REMOTE └YES

Use existing session limits:

►► `MODIFY procname,CNOS—,ID=appl_name—,LOGMODE=logon_mode_name—`►►

►► `—,LUNAME=lu_name—` ┌,CONVSECL= ┌,NBRMODE=ONE  
NONE  
CONV  
ALREADYV  
PERSISTV  
AVPV

►► ┌,SNGSESLU=NO  
└,SNGSESLU=NO  
└YES

## Modify Commands

### F COMPRESS

Change the compression levels set by the APPL definition statement:

```
►►—MODIFY procname,COMPRESS—,ID=appl_name—————►►
```

```
┌,CMPAPPLI=input_limit—————►►
```

```
└,CMPAPPLO=output_limit—————►►
```

```
└,CMPAPPLI=input_limit,CMPAPPLO=output_limit—►►
```

Change the compression level set by start option:

```
►►—MODIFY procname,COMPRESS—,CMPVTAM=overall_limit—————►►
```

### F CSALIMIT

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

```
►►—MODIFY procname,CSALIMIT=value—————►►
```

```
└(value ┌,F┐)┐
```

```
┌,OPTION=TOTAL—————►►
```

```
└,OPTION=┌BELOW┐
```

```
└TOTAL┐
```

### F CSDUMP

Dump the current address space and VIT data space, setup a trigger that will invoke a dump of the current address space and VIT data space when a particular sense code and when a particular message is issued:

```
►►—MODIFY procname,CSDUMP—————►►
```

```
┌,SENSE=sense_code—————►►
```

```
└,RU=ru_code—————►►
```

```
┌,MESSAGE=message_id_number—————►►
```

```
└(message_id_number,message_value_field)┐
```

```
┌,MATCHLIM=matchlim_value—————►►
```



## F CSM

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 procname,CSM—,ECSA=maxecsa—,FIXED=maxfix—►►
```

## F DEFAULTS

Modify the DLOGMOD value for a resource:

```
►►—MODIFY procname,DEFAULTS—,ID=resource_name—,DLOGMOD=logon_mode_name—►►
```

Change the delay timer for disconnection of a switched PU:

```
►►—MODIFY procname,DEFAULTS—,ID=resource_name—,DISCNTIM=time_period—►►
```

## F DEFINE

Set session limit to zero:

```
►►—MODIFY procname,DEFINE—,ID=appl_name—,DLIMITS=(0,0,0)—►►
```

```
►►,LOGMODE=logon_mode_name—,LUNAME=lu_name—►►
```

```
►►,AUTOSSES=number_of_winner_sessions—,DELETE=NALLOW—►►
```

```
►►,DDRAINL=ALLOW—,DRESPL=ALLOW—►►
```

Set session limits to nonzero:

```
►►—MODIFY procname,DEFINE—,ID=appl_name—►►
```

```
►►,DLIMITS=(dseslim,dminwinl,dminwinr)—,LOGMODE=logon_mode_name—►►
```



```
|-----|
|  new_cp_name
|  (new_cp_name,old_cp_name)
|-----|
```

Delete a resource from the directory database:

```
►►—MODIFY procname,DIRECTRY—,FUNCTION=DELETE—,ID= cdrsc_major_node_name
|-----|
| resource_name
|-----|
```

## F DR

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

```
►►—MODIFY procname,DR—,TYPE=DELETE—,ID=lu_name,FROM=pu_name
|-----|
|,ID=pu_name,FROM=line_name
|-----|
```

Move a physical unit:

```
►►—MODIFY procname,DR—,TYPE=MOVE—,ID=pu_name—,FROM=line_name—————►
```

```
►—,TO=line_name
|-----|
|,ACTIVATE=NO
|-----|
|,ACTIVATE=NO
|-----|
|,YES
|-----|
|,ADDR=link_station_address
|-----|
```

## F DUMP

Static dump of remote NCP (via link station) to host:

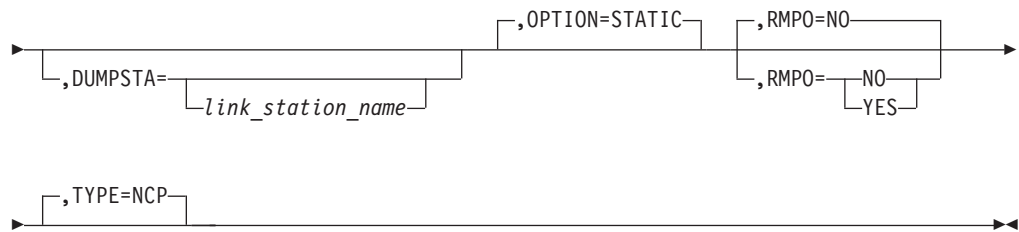
```
►►—MODIFY procname,DUMP—,ID=link_station_name—,DUMPDS=name—————►
```

```
►—,ACTION=COMP
|-----|
|,OPTION=STATIC
|-----|
|,RMPO=NO
|-----|
|,TYPE=NCP
|-----|
|,RMPO=NO
|-----|
|,YES
|-----|
```

Static dump of NCP to host:

```
►►—MODIFY procname,DUMP—,ID=ncp_name
|-----|
|,ACTION=COMP
|-----|
|,DUMPDS=name
|-----|
```

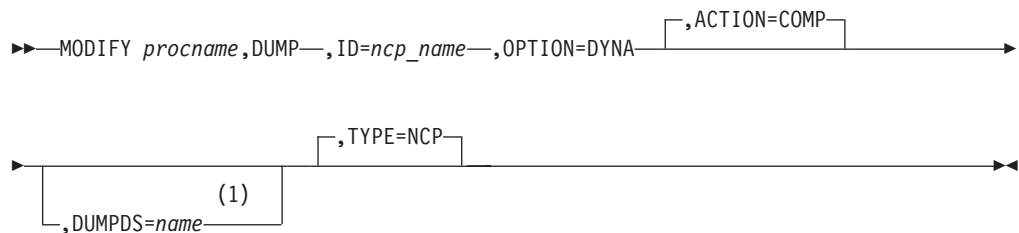
## Modify Commands



Static dump of NCP to hard disk:



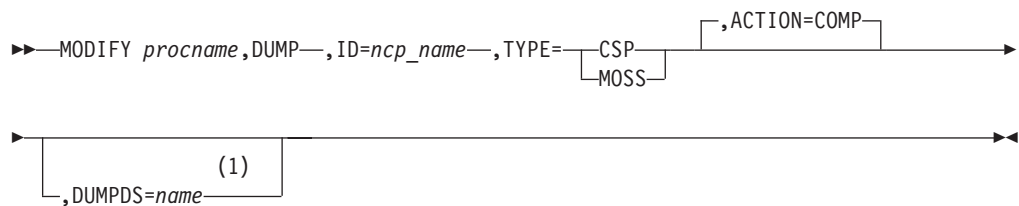
Dynamic dump of NCP to host:



### Notes:

1 If the NCP has been acquired before activation, DUMPDS is required.

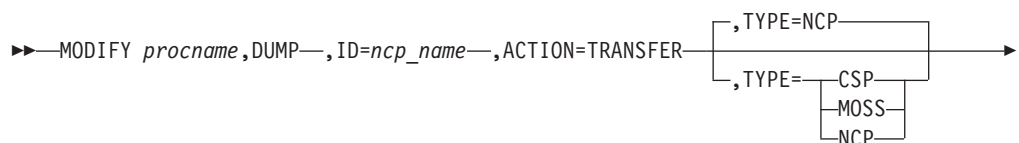
Transfer CSP or MOSS dump from hard disk to host:

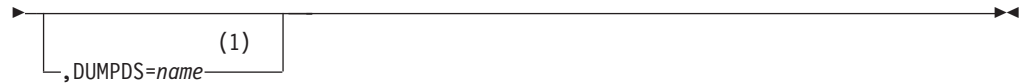


### Notes:

1 If the NCP has been acquired before activation, DUMPDS is required.

Transfer NCP, CSP, or MOSS dump from hard disk to host:

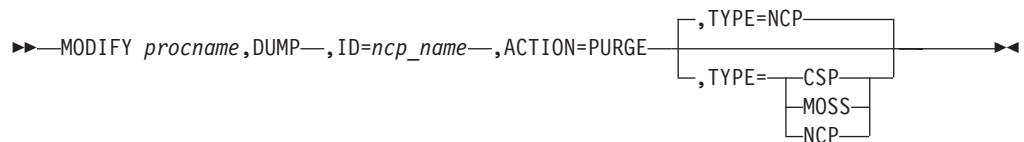




**Notes:**

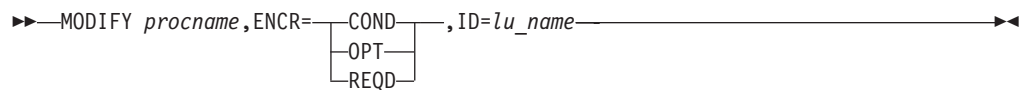
1 If the NCP has been acquired before activation, DUMPDS is required.

Purge dump from hard disk:



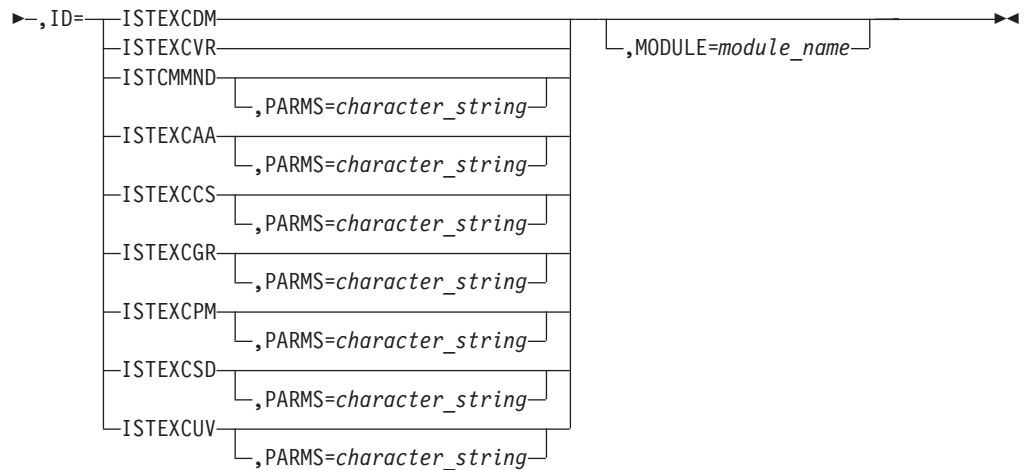
## F ENCR

Change the cryptography specifications for logical units:



## F EXIT

Activate or replace an exit routine:



Activate a multiple instance of ISTEVCPM:



## F IMR

Start intensive mode recording:

```

▶▶—MODIFY procname,IMR—,ID=link_station_name
                               pu_name
                               ,OPTION=ACT
▶▶—,RECLIM=10
▶▶—,RECLIM=number_of_errors

```

Stop intensive mode recording:

```

▶▶—MODIFY procname,IMR—,ID=link_station_name
                               pu_name
                               ,OPTION=INACT

```

## F IOPD

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

```

▶▶—MODIFY procname,IOPD—,IOINT=number_of_seconds

```

## F IOPURGE

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

```

▶▶—MODIFY procname,IOPURGE=timeout_value

```

## F LINEDEF

Dynamically change the definition of a redefinable line:

```

▶▶—MODIFY procname,LINEDEF—,ID=line_name—,USE=DEFINED
                                               SPARE

```

## F LL2

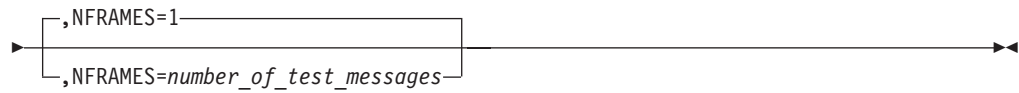
Start a continuous link level 2 test:

```

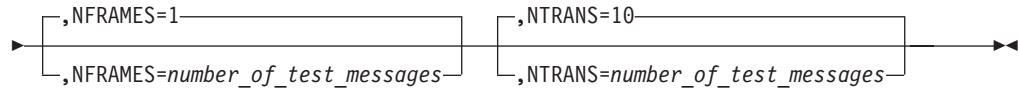
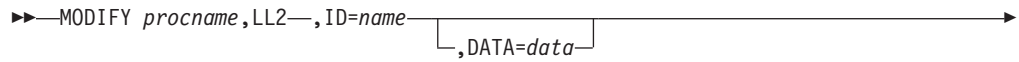
▶▶—MODIFY procname,LL2—,ID=name—,OPTION=CONT
                                               ,DATA=data

```

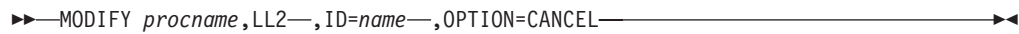
## Modify Commands



Start a brief link level 2 test:



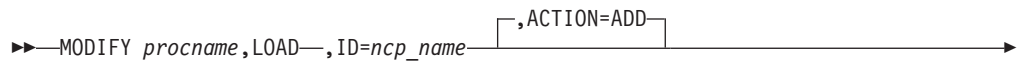
Stop a link level 2 test:



---

## F LOAD

Store a load module on the hard disk, and optionally for a 3745, schedule an IPL:



**NOTIFY Operand:**



Replace a load module on the hard disk, and optionally for a 3745, schedule an IPL:

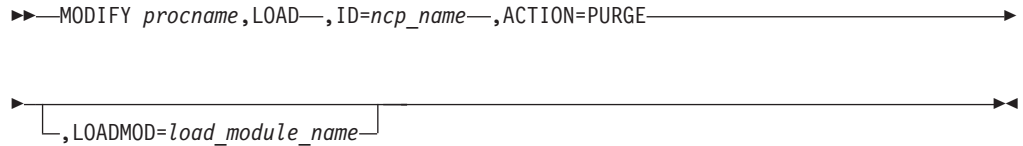




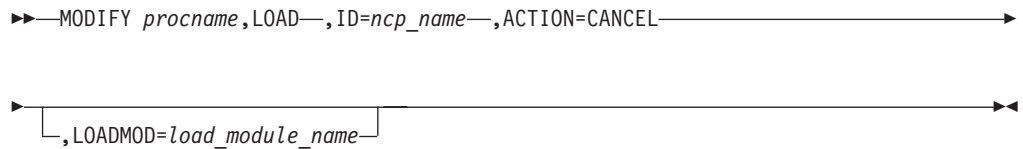
**NOTIFY Operand:**



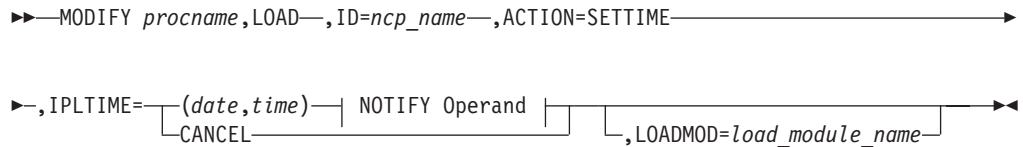
Purge a load module from the hard disk:



Cancel an ADD or REPLACE operation in progress:



Schedule or cancel an automatic IPL for an NCP load module in a 3745:



**NOTIFY Operand:**



Rename a load module on the 3745 hard disk for MOSS:



## Modify Commands

►,LOADMOD=*load\_module\_name*—,NEWNAME=*new\_load\_module\_name*—►

---

### F MSGMOD

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

►►—MODIFY *procname*,MSGMOD=NO  
YES—►

---

### F NCP

| Send a request to NCP to execute the specified command for the specified  
| resource:

►►—MODIFY *procname*,NCP—,ID=*ncp\_name*—,COMMAND=TRSWITCH—,RESNM=*resource\_name*—►

---

### F NEGPOLL

| Request that an NCP change the negative polling limit (the maximum number of  
| consecutive negative polling responses accepted before polling another terminal on  
| the line) for a nonswitched, multipoint line to one or more attached start/stop or  
| BSC terminals:

►►—MODIFY *procname*,NEGPOLL=*number\_of\_responses*—,ID=*line\_name*—►

---

### F NOTNSTAT

| Stop recording tuning statistics:

►►—MODIFY *procname*,NOTNSTAT—►

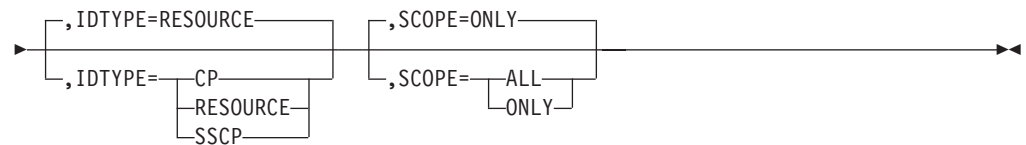
---

### F NOTRACE

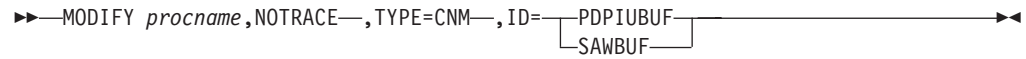
Stop a buffer contents trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=BUF—,ID=*node\_name*—►

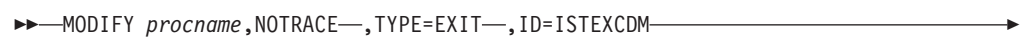
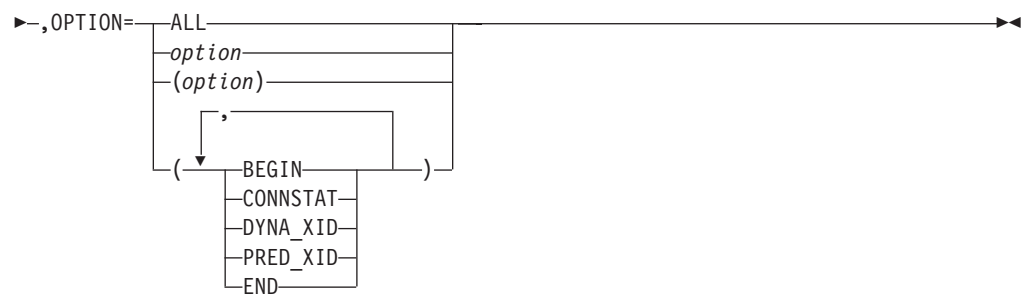
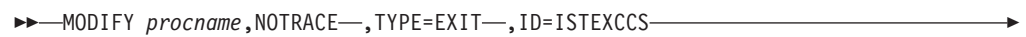
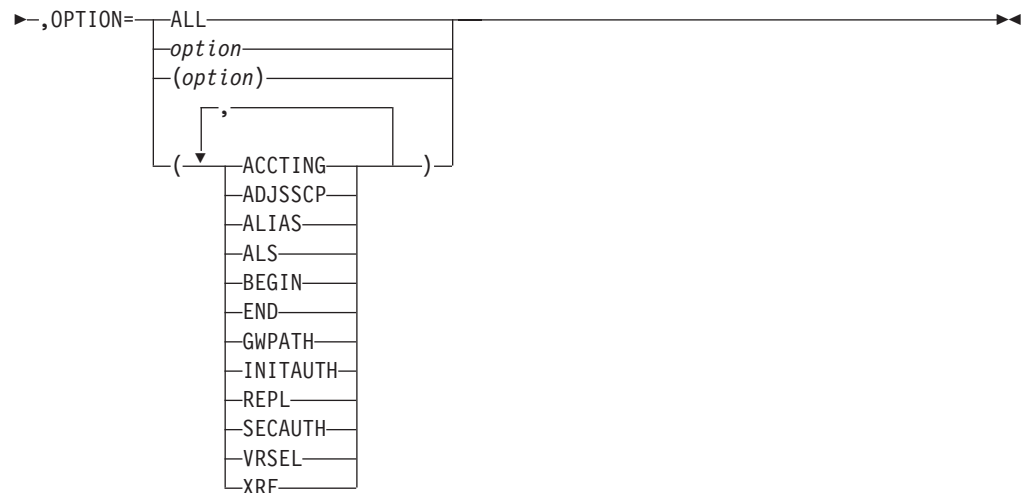
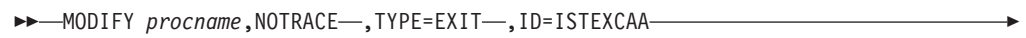
## Modify Commands



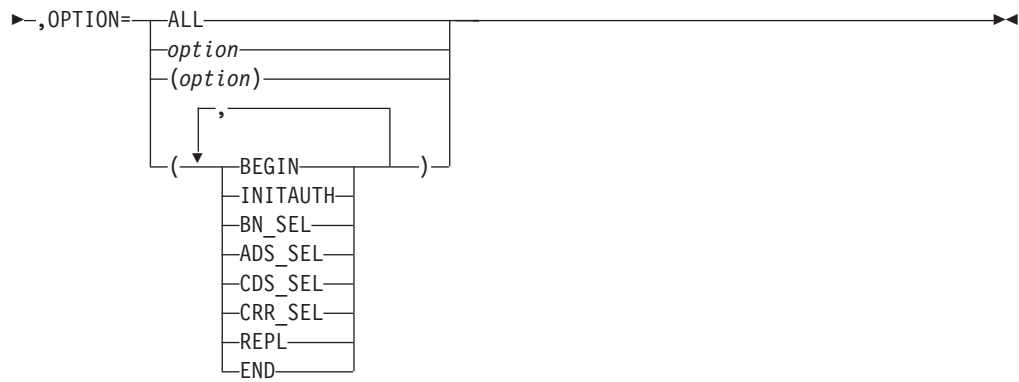
Stop a communication network management trace:



Stop a user Exit buffer trace:

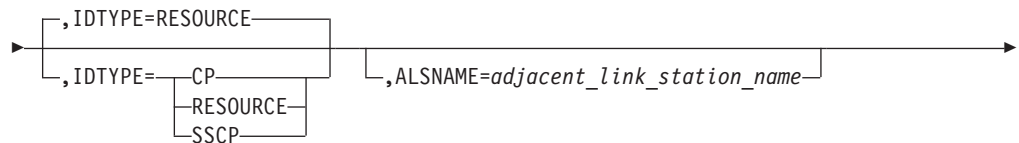


## Modify Commands



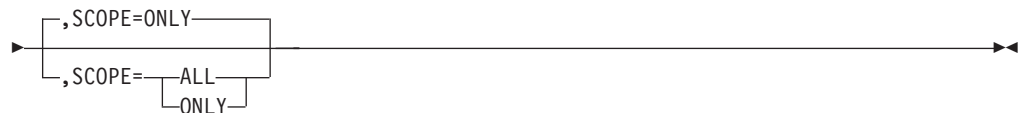
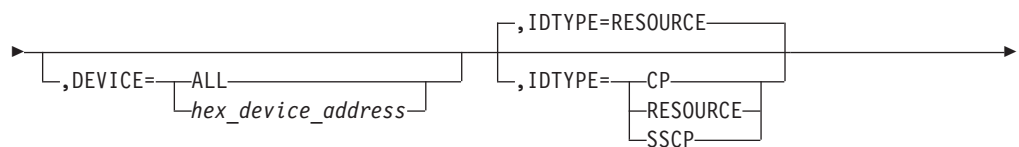
Stop a generalized PIU trace:

►► `MODIFY procname,NOTRACE—,TYPE=GPT—,ID=node_name—`



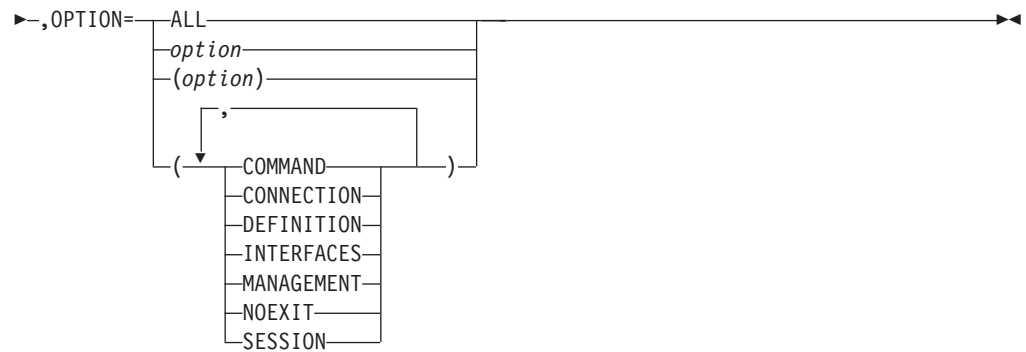
Stop an input/output trace:

►► `MODIFY procname,NOTRACE—,TYPE=IO—,ID=node_name—`



Stop a module trace:

►► `MODIFY procname,NOTRACE—,TYPE=MODULE—`



Stop an NCP line trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=LINE—,ID=*line\_name*—►►

Stop a 3710 Network Controller line trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=NETCTLR—,ID=*pu\_name*—,LINE=*line\_name*—►►

►—,PU=*3710\_pu\_name*—►►

Stop a scanner interface trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=SIT—,ID=*line\_name*—►►

Stop an SMS (buffer use) trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=SMS—,ID=VTAMBUF—►►

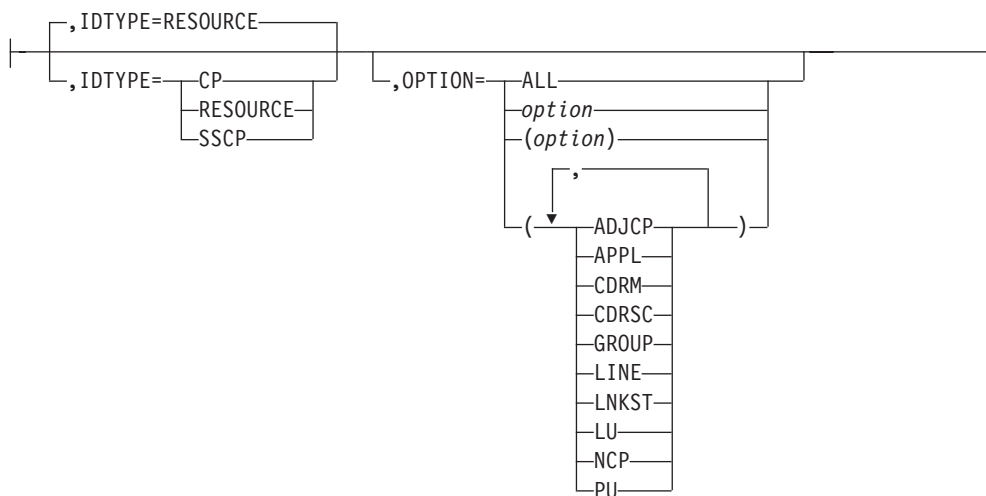
Stop a resource state trace:

►►—MODIFY *procname*,NOTRACE—,TYPE=STATE—►►

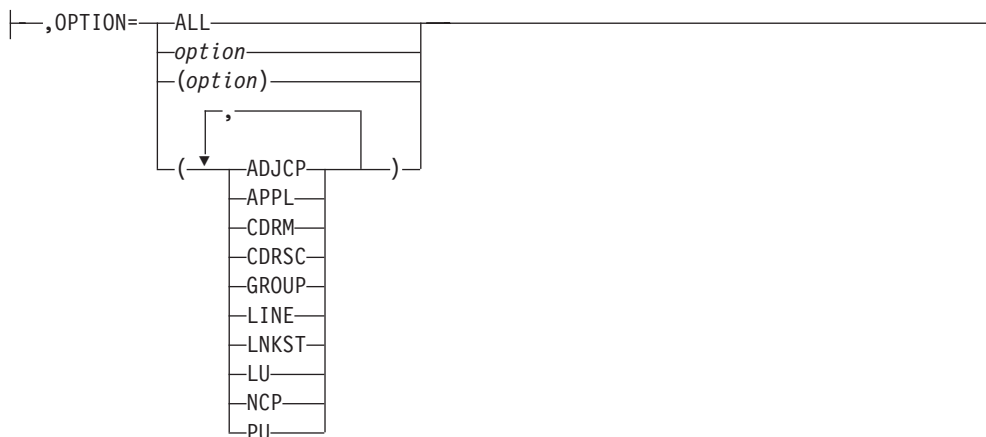
►—,ID=*node\_name*—| Operands used with ID |  
 | OPTION Operand |  
 ►►

**Operands used with ID:**

## Modify Commands



### OPTION Operand:



Stop a transmission group trace:

```

▶▶ MODIFY procname,NOTRACE,TYPE=TG,ID=line_name
    
```

Stop a TSO user ID trace:

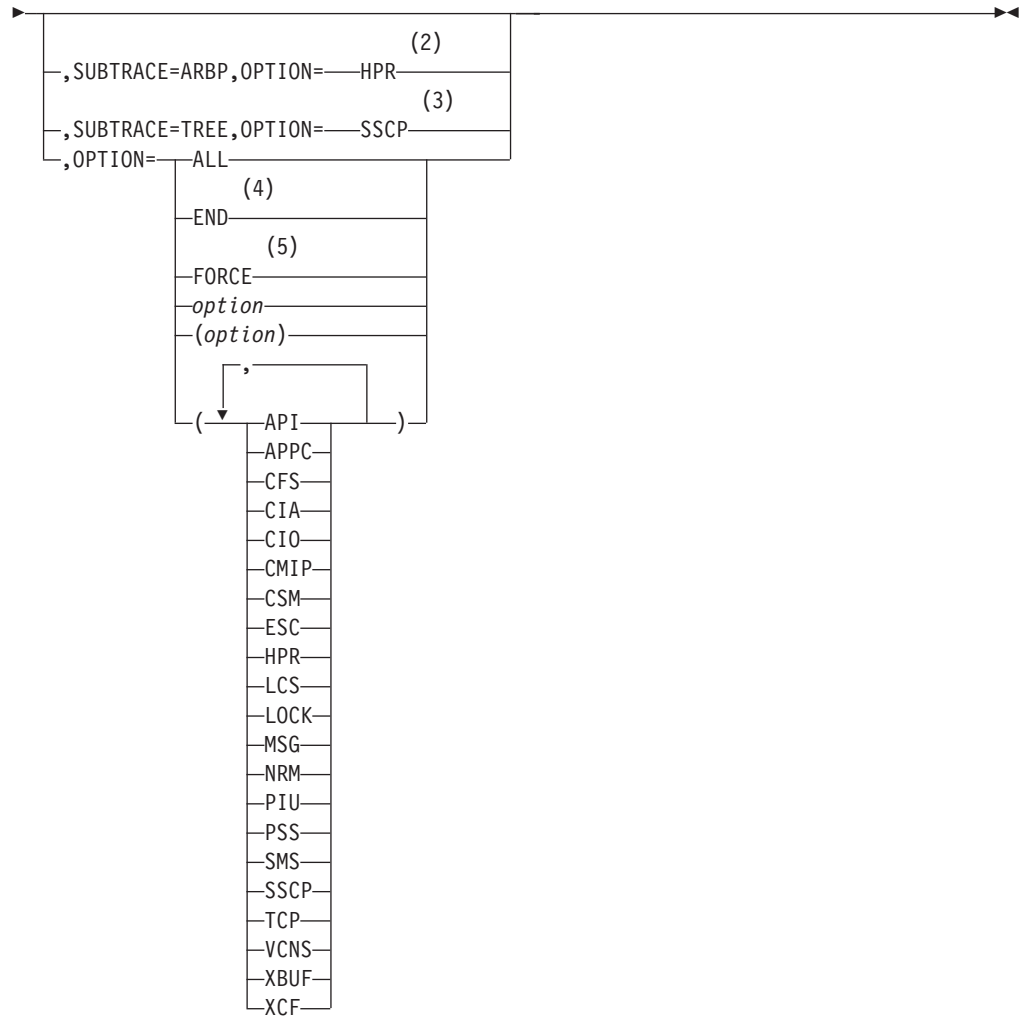
```

▶▶ MODIFY procname,NOTRACE,TYPE=TSO,ID=tso_user_id
    
```

Stop a VTAM internal trace:

```

▶▶ MODIFY procname,NOTRACE,TYPE=VTAM
,MODE=INT
(1)
,MODE=EXT
,MODE=INT
EXT
    
```



**Notes:**

- 1 If you do not specify the mode, both internal and external recording are stopped. However, any default options that you have stopped are immediately restarted by VTAM and recorded on the internal trace table.
- 2 OPTION=HPR must be specified when SUBTRACE=ARBP is specified.
- 3 OPTION=SSCP must be specified when SUBTRACE=TREE is specified.
- 4 To stop external recording with OPTION=END, MODE=EXT must be explicitly specified.
- 5 OPTION=FORCE is not valid when MODE=EXT is specified.

---

## F POLL

|  
|  
|

Request that an NCP change the polling delay (the time delay between polling sequences) for a nonswitched, polled line to one or more attached BSC IBM 3270 terminals:

►►—MODIFY *procname*,POLL=*number\_of\_seconds*—,ID=*line\_name*—◄◄

## Modify Commands

---

### F PPOLOG

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

```
▶▶—MODIFY procname,PPOLOG=—YES—  
                                  └─NO—┘
```

---

### F PROFILES

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

```
▶▶—MODIFY procname,PROFILES—,ID=appl_name—
```

---

### F RESOURCE

Modify the DLOGMOD value for a resource:

```
▶▶—MODIFY procname,RESOURCE—,ID=resource_name—,DLOGMOD=—  
                                                          └─logon_mode_name—┘
```

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

```
▶▶—MODIFY procname,RESOURCE—,ID=resource_name—,ADJLIST=list_name—  
▶—,ACTION=UPDATE—
```

Delete the ADJLIST value for a cross-domain resource:

```
▶▶—MODIFY procname,RESOURCE—,ID=resource_name—,ADJLIST=list_name—  
▶—,ACTION=DELETE—
```

Change the delay timer for disconnection of a switched PU:

```
▶▶—MODIFY procname,RESOURCE—,ID=resource_name—,DISCNTIM=time_period—
```

Change the number of search requests for a resource:

```
▶▶—MODIFY procname,RESOURCE—,ID=resource_name—
```



## Modify Commands

►,SRCOUNT=*number\_of\_search\_requests*►►

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

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,SRTIMER=*number\_of\_seconds*►►

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

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,SIRFMSG=

OLUSSCP
ALLSSCP
STARTOPT
NONE

►►

Reset the search reduction entry for a resource:

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,SRCLEAR=YES►►

Modify the registration value for a resource:

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,REGISTER=

CDSRVR
NETSRVR
NO

►►

Modify the ASRCVLM value for an application program:

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,ASRCVLM=*amount\_of\_storage*►►

Modify the MODSRCH value for an application program:

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,MODSRCH=

FIRST
LAST
NEVER

►►

Modify the VTAMTOPO value for a reporting status:

►►MODIFY *procname*,RESOURCE—,ID=*resource\_name*—,VTAMTOPO=

REPORT
NOREPORT
NOLLINES
NOSWPUS
INCLUDE
IGNORE

►►

## Modify Commands

---

### F RTP

| 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:

►►—MODIFY *procname*,RTP—,ID=*rtp\_pu\_name*—►►

---

### F SECURITY

Increase the cryptography specification for an LU:

►►—MODIFY *procname*,SECURITY—,ID=*lu\_name*—,ENCR=

COND
OPT
REQD

—►►

(1)  
►►—

ENCRTYPE=DES
--------------

—ENCRTYPE=TDES24—►►

#### Notes:

- 1 ENCRTYPE can not be downleveled. If the current value is TDES24, MODIFY SECURITY ENCRTYPE=DES will not be allowed.

Modify which cryptographic key name is used for an LU:

►►—MODIFY *procname*,SECURITY—,ID=*lu\_name*—,CKEY=

ALTERNATE
PRIMARY

—►►

Initiate SLU authentication for an LU:

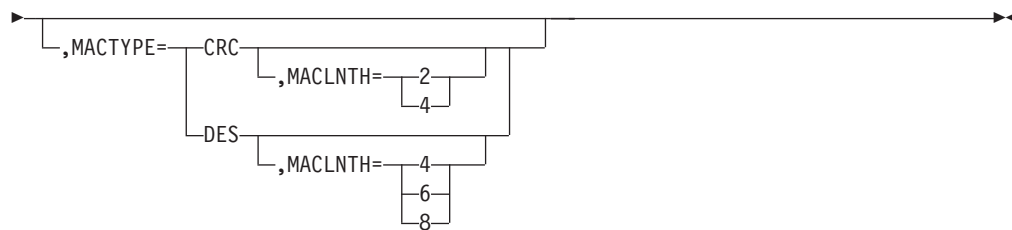
►►—MODIFY *procname*,SECURITY—,ID=*lu\_name*—,CERTIFY=YES—►►

Increase the message authentication specification for an LU:

►►—MODIFY *procname*,SECURITY—,ID=*lu\_name*—,MAC=

COND
REQD

—►►



## F SESSION

Request that an NCP change the session limit (the maximum number of concurrent line scheduling sessions allowed) for a nonswitched multipoint line to one or more attached start/stop or BSC terminals:

```
>>—MODIFY procname,SESSION=number_of_sessions—,ID=line_name—>>
```

## F SUPP

Change the message suppression level after VTAM has been started:

```
>>—MODIFY procname,SUPP=
|
|—NOSUP
|—INFO
|—WARN
|—NORM
|—SER
```

## F TABLE

Change resource associations:

```
>>—MODIFY procname,TABLE—,OPTION=ASSOCIATE—>>
```

```
>>—,TYPE=
|
|—ASLTAB
|—FLDTAB
|—LOGTAB
|—MDLTAB
|—MODETAB
|—USSTAB
|
|—COSTAB,NETID=netid,ORIGIN=ncp_name
|
| ID and OLDTAB |
|
|—NEWTAB=new_table_name—>>
```

### ID and OLDTAB:

```
|—,ID=name,OLDTAB=
|   |
|   |—*
|   |—old_table_name
```

Delete resource associations:

## Modify Commands

```

▶▶—MODIFY procname,TABLE—,OPTION=DELETE—————▶
|
|▶,TYPE=
|   ASLTAB
|   —FLDTAB
|   —LOGTAB
|   —MDLTAB
|   —MODETAB
|   —USSTAB
|   —COSTAB,NETID=netid,ORIGIN=ncp_name
|   —FILTER
|   ID and OLDTAB
|—————▶

```

### ID and OLDTAB:

```

|——,ID=name,OLDTAB=*—————|
|   |—————|
|   |old_table_name|
|—————|

```

Load a replacement table (other than a filter table):

```

▶▶—MODIFY procname,TABLE—,OPTION=LOAD—,NEWTAB=new_table_name—————▶
|
|▶,OLDTAB=old_table_name—————▶
|—————▶

```

Load a replacement filter table:

```

▶▶—MODIFY procname,TABLE—,OPTION=LOAD—,TYPE=FILTER—,NEWTAB=new_table_name—————▶

```

Load an updated directory definition file:

```

▶▶—MODIFY procname,TABLE—,OPTION=LOAD—,TYPE=CMIPDDF—————▶

```

---

## F TGP

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

```

▶▶—MODIFY procname,TGP—,TGPNAME=tg_profile_name—————▶
|
|▶,ID=adjacent_link_station_name—————▶
|   |—————|
|   |cp_name—,TGN=tg_number—————|
|—————▶

```

## F TNSTAT

|  
|

Reopen the tuning statistics file if it was closed by a previous MODIFY NOTNSTAT command:

```

▶▶—MODIFY procname,TNSTAT—  

    [ ,CNSL=NO ]  

    [ ,CNSL= [ NO ] ]  

    [ ,CNSL= [ YES ] ] [ ,TIME=number_of_minutes ]
  
```

## F TOPO

Delete a node:

```

▶▶—MODIFY procname,TOPO—,ID=cp_name— [ ,FUNCTION=DELETE ]
  

▶ [ ,SCOPE=LOCAL ]  

  [ ,SCOPE= [ LOCAL ] ]  

  [ ,SCOPE= [ NETWORK ] ] [ ,TYPE=FORCE ]
  
```

Delete a transmission group:

```

▶▶—MODIFY procname,TOPO— [ ,FUNCTION=DELETE ] ,ORIG=cp_name—,DEST=cp_name—
  

▶—,TGN=tg_number— [ ,SCOPE=LOCAL ]  

  [ ,SCOPE= [ LOCAL ] ]  

  [ ,SCOPE= [ NETWORK ] ] [ ,TYPE=FORCE ]
  
```

Modify the status of a node for route calculation:

```

▶▶—MODIFY procname,TOPO—,ID=cp_name—,FUNCTION= [ NORMAL ]  

  [ QUIESCE ]
  

▶ [ ,SCOPE=LOCAL ]  

  [ ,SCOPE= [ LOCAL ] ]  

  [ ,SCOPE= [ NETWORK ] ]
  
```

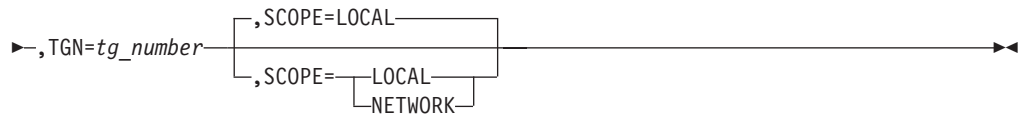
Modify the status a transmission group for route calculation:

```

▶▶—MODIFY procname,TOPO—,FUNCTION= [ NORMAL ] ,ORIG=cp_name—,DEST=cp_name—  

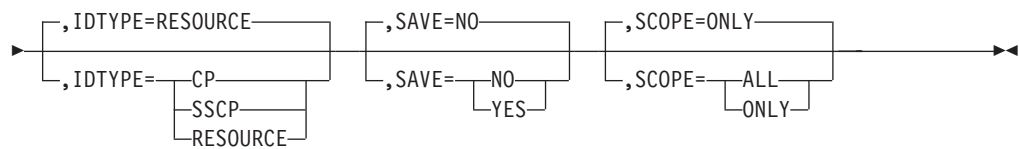
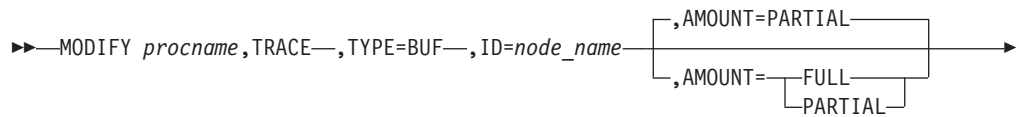
  [ QUIESCE ]
  
```

## Modify Commands

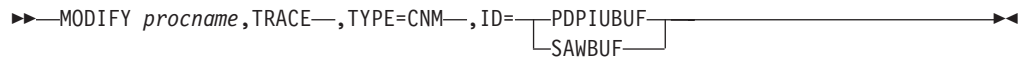


## F TRACE

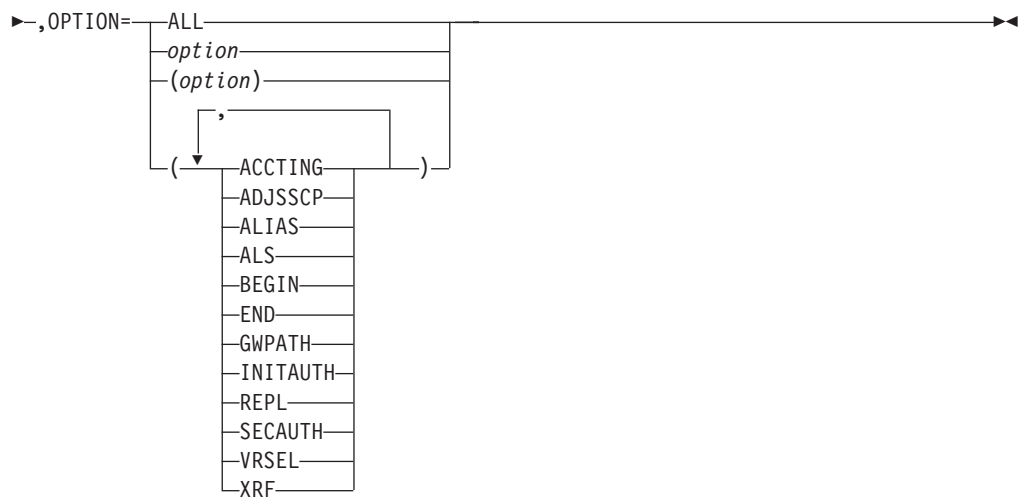
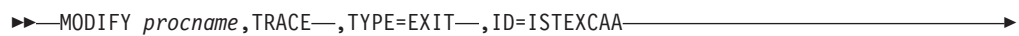
Start or modify a buffer contents trace:



Start or modify a communication network management trace:

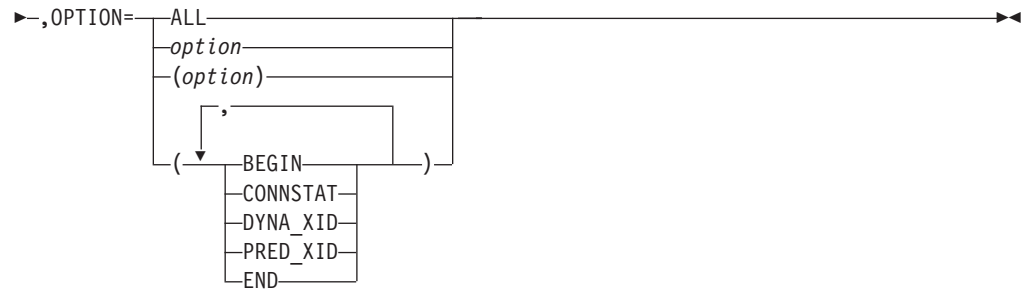


Start or modify a user Exit buffer trace:

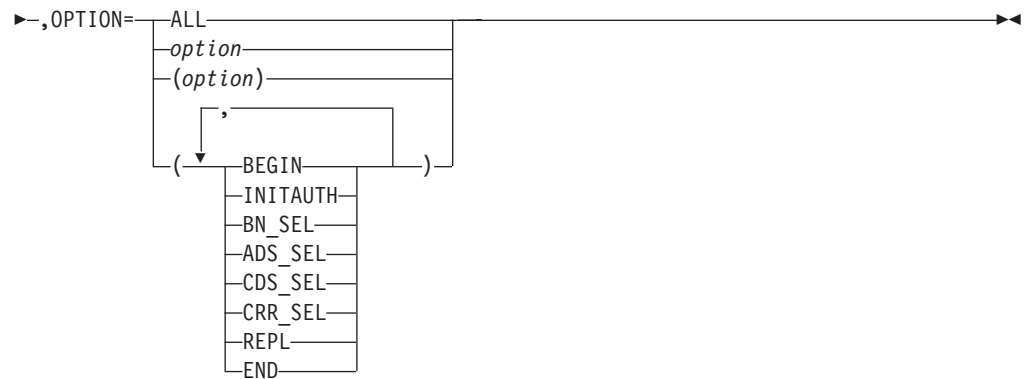


## Modify Commands

►► MODIFY *procname*, TRACE—, TYPE=EXIT—, ID=ISTEXCCS—►►

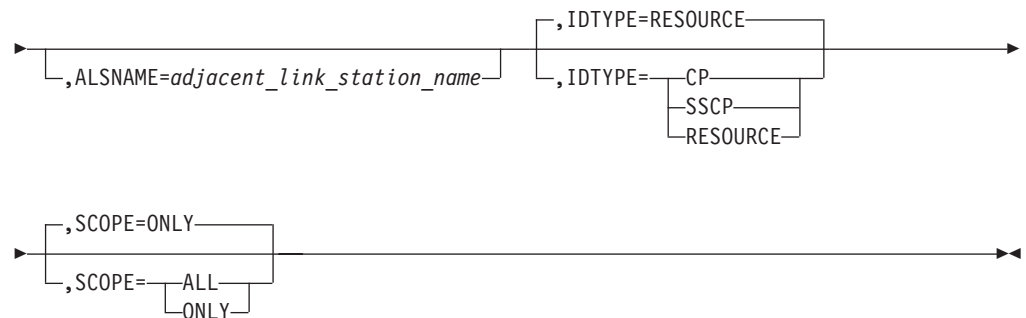


►► MODIFY *procname*, TRACE—, TYPE=EXIT—, ID=ISTEXCDM—►►



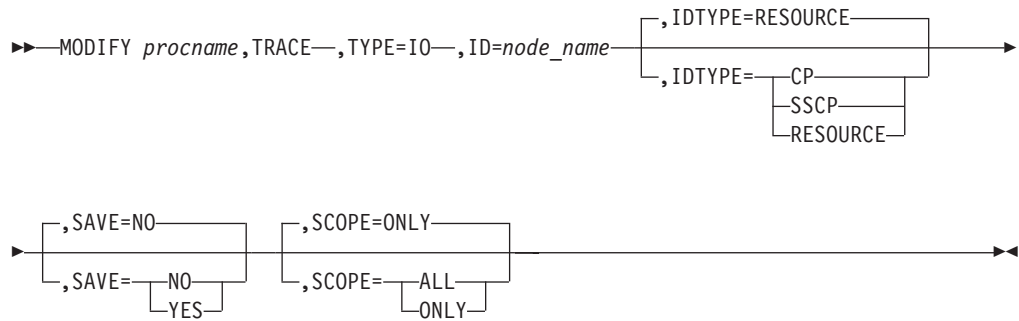
Start or modify a generalized PIU trace:

►► MODIFY *procname*, TRACE—, TYPE=GPT—, ID=*node\_name*—►►

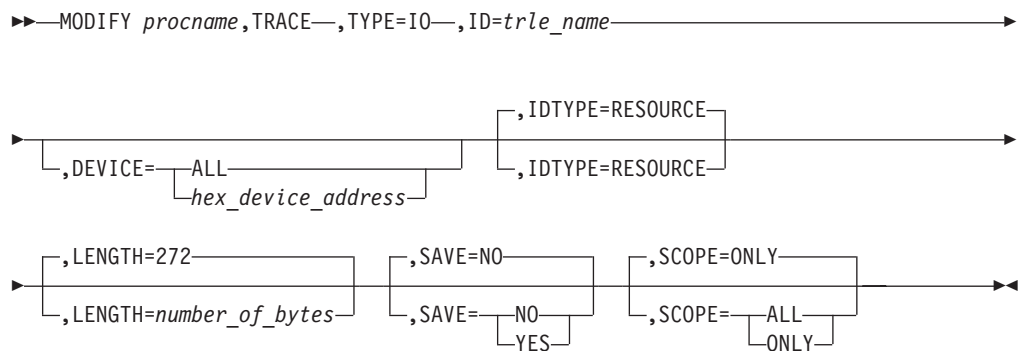


Start or modify an input/output trace:

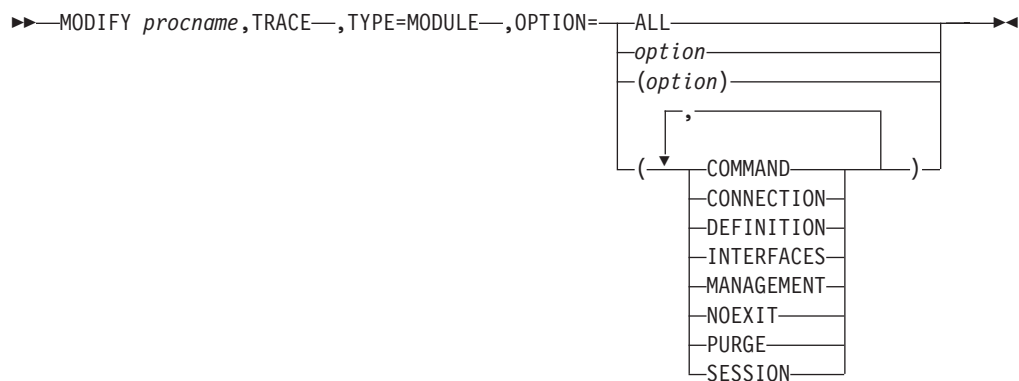
## Modify Commands



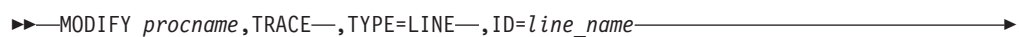
Start or modify an input/output trace for a TRLE with the DATAPATH operand coded:



Start or modify a module trace:



Start or modify an NCP line trace:



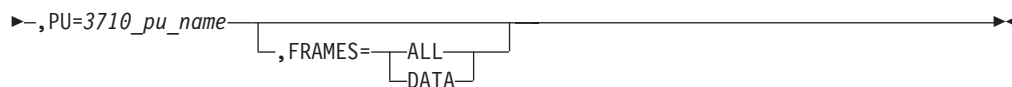


## Modify Commands



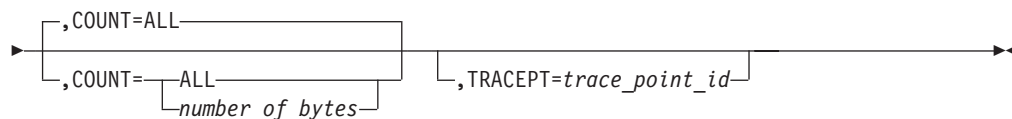
Start or modify a 3710 Network Controller line trace:

►► `MODIFY procname, TRACE, TYPE=NETCTLR, ID=pu_name, LINE=line_name` ►►



Start or modify a scanner interface trace:

►► `MODIFY procname, TRACE, TYPE=SIT, ID=line_name` ►►



Start or modify an SMS (buffer use) trace:

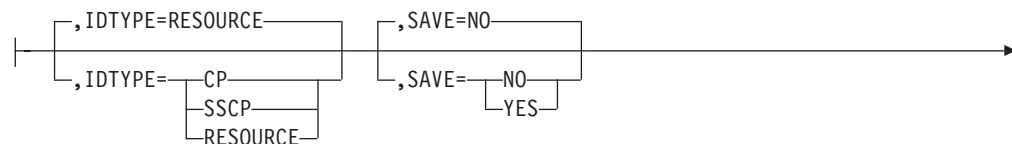
►► `MODIFY procname, TRACE, TYPE=SMS, ID=VTAMBUF` ►►

Start or modify a resource state trace:

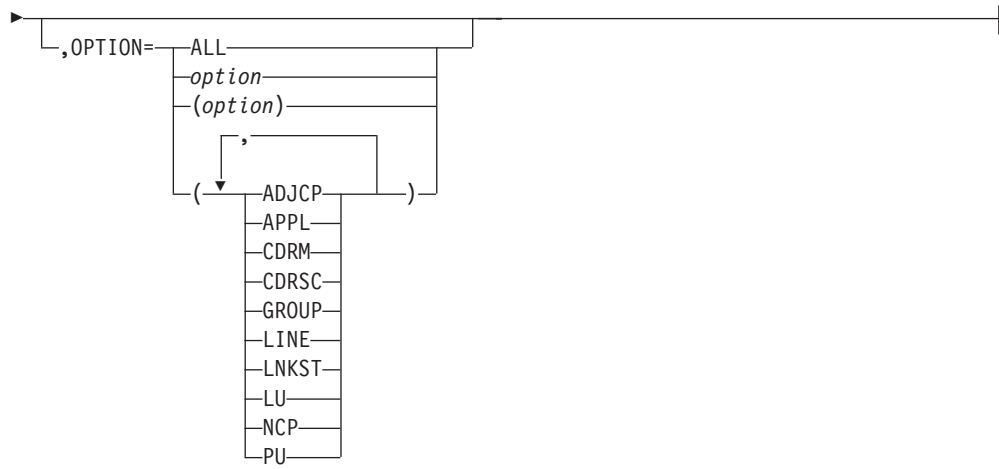
►► `MODIFY procname, TRACE, TYPE=STATE` ►►



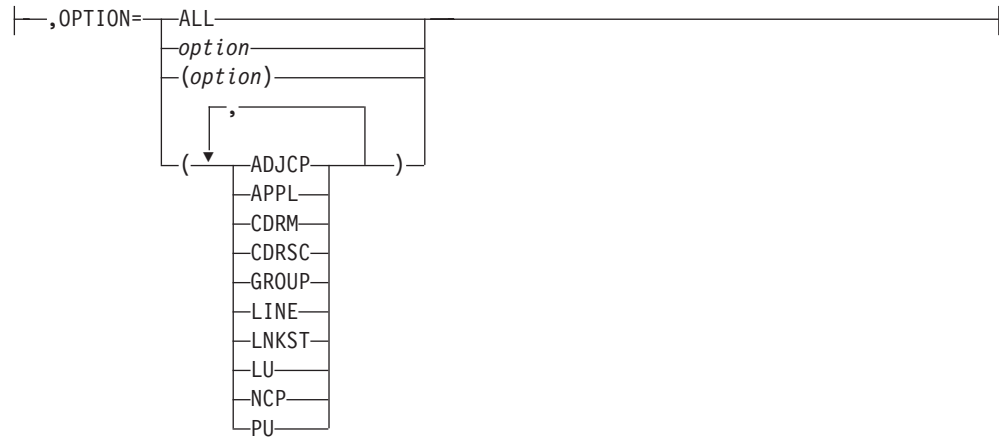
**Operands used with ID:**



## Modify Commands



### OPTION Operand:



Start or modify a transmission group trace:

```

▶▶—MODIFY procname,TRACE—,TYPE=TG—,ID=line_name—————▶▶
  
```

Start or modify a TSO user ID trace:

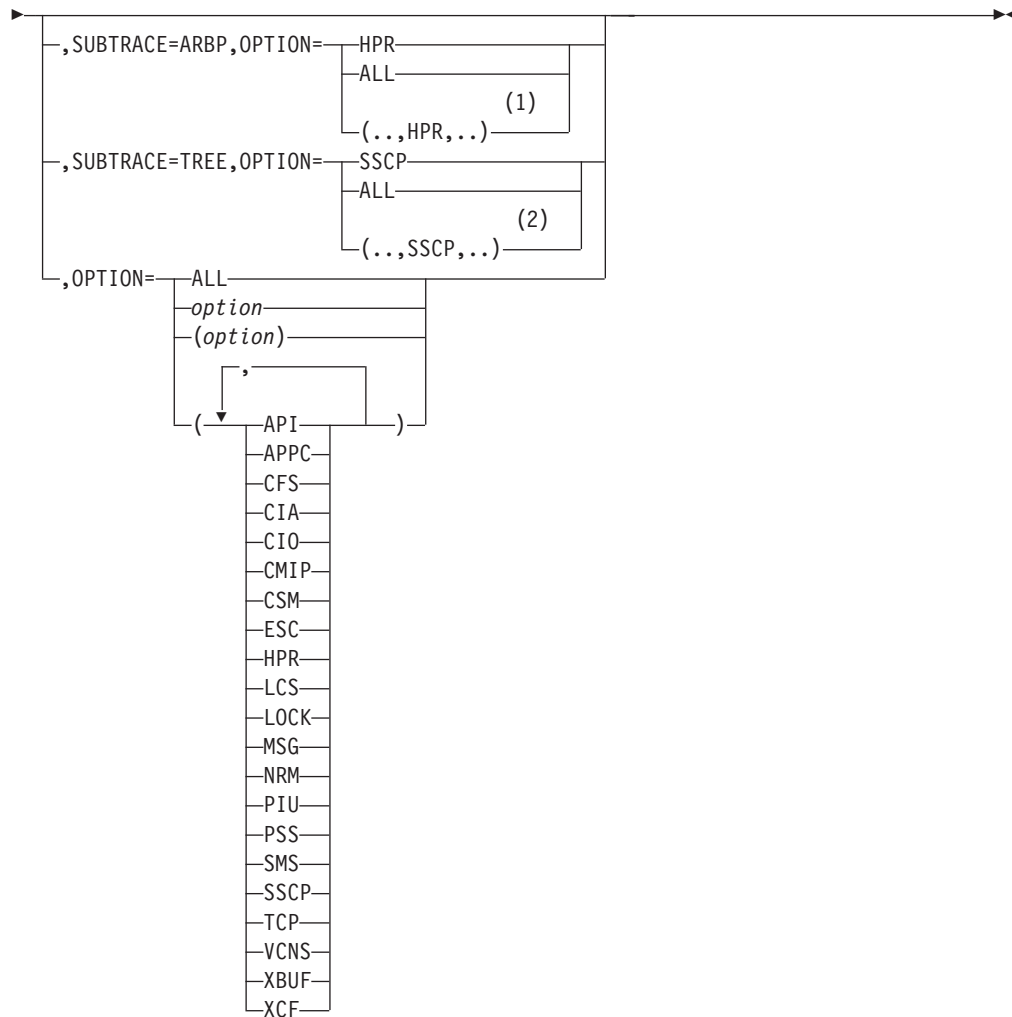
```

▶▶—MODIFY procname,TRACE—,TYPE=TSO—,ID=tso_user_id—————▶▶
  
```

Start or modify the VTAM internal trace:

```

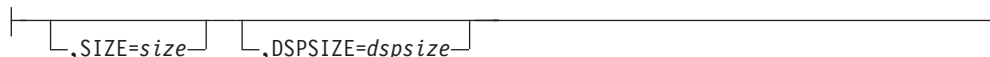
▶▶—MODIFY procname,TRACE—,TYPE=VTAM—,MODE=
                                     |
                                     | EXT| EXT Operands
                                     | INT| INT Operands
  
```



**EXT Operands:**



**INT Operands:**

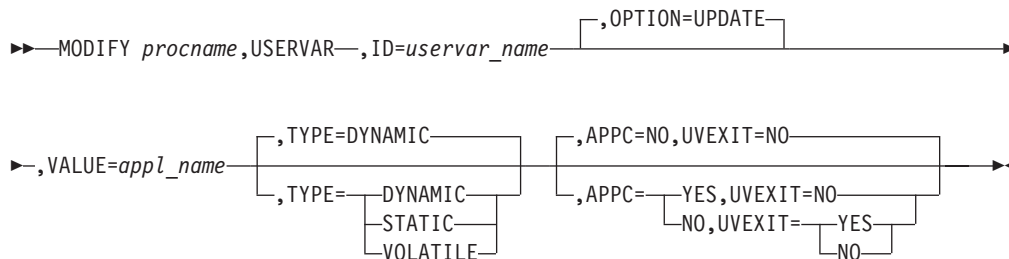


**Notes:**

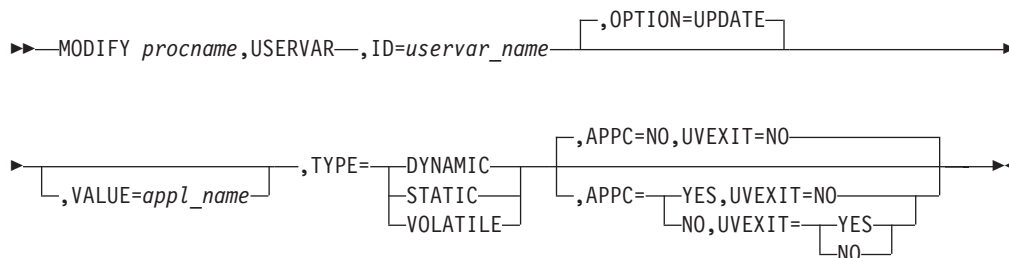
- 1 If multiple trace options are coded in parentheses, HPR must be one of the options coded inside the parentheses when `SUBTRACE=ARBP` is coded.
- 2 If multiple trace options are coded in parentheses, SSCP must be one of the options coded inside the parentheses when `SUBTRACE=TREE` is coded.

## F USERVAR

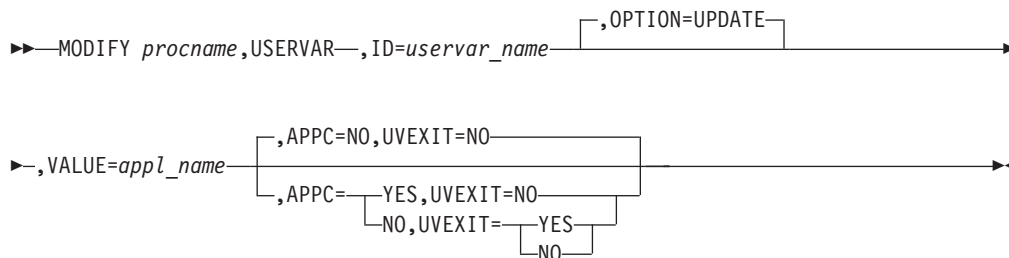
Create a new USERVAR:



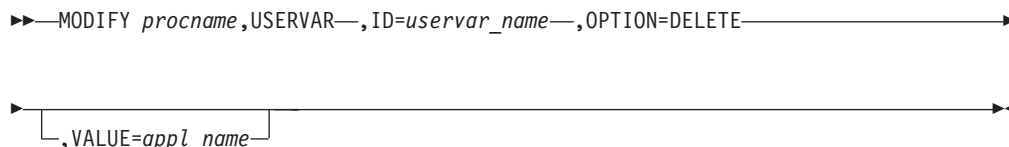
Update an existing USERVAR and change the TYPE:



Update an existing USERVAR, leaving the TYPE unchanged:

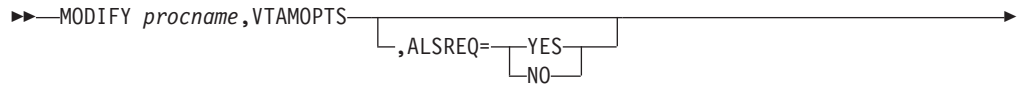


Delete a USERVAR:

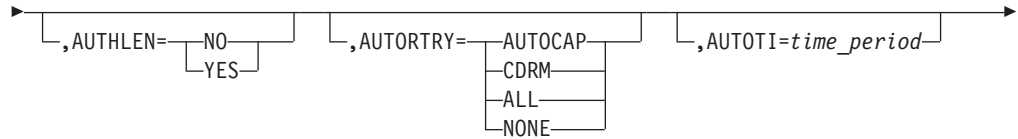
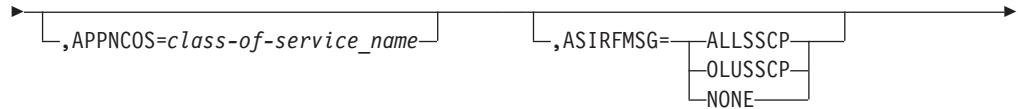


## F VTAMOPTS

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

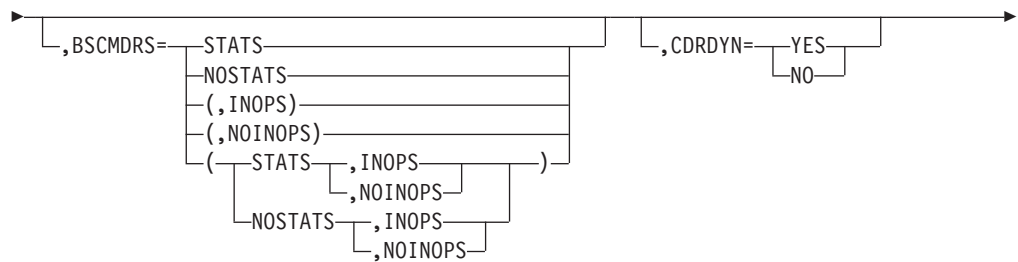
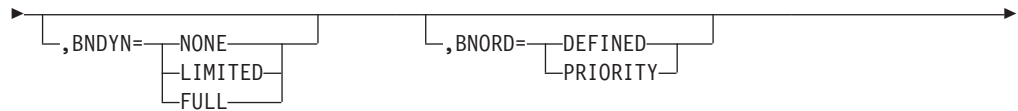


(1)



(2)

(3)



(5)

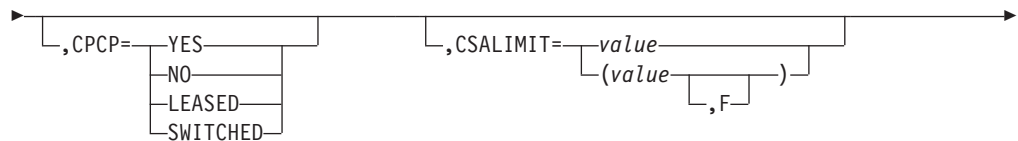


(4)

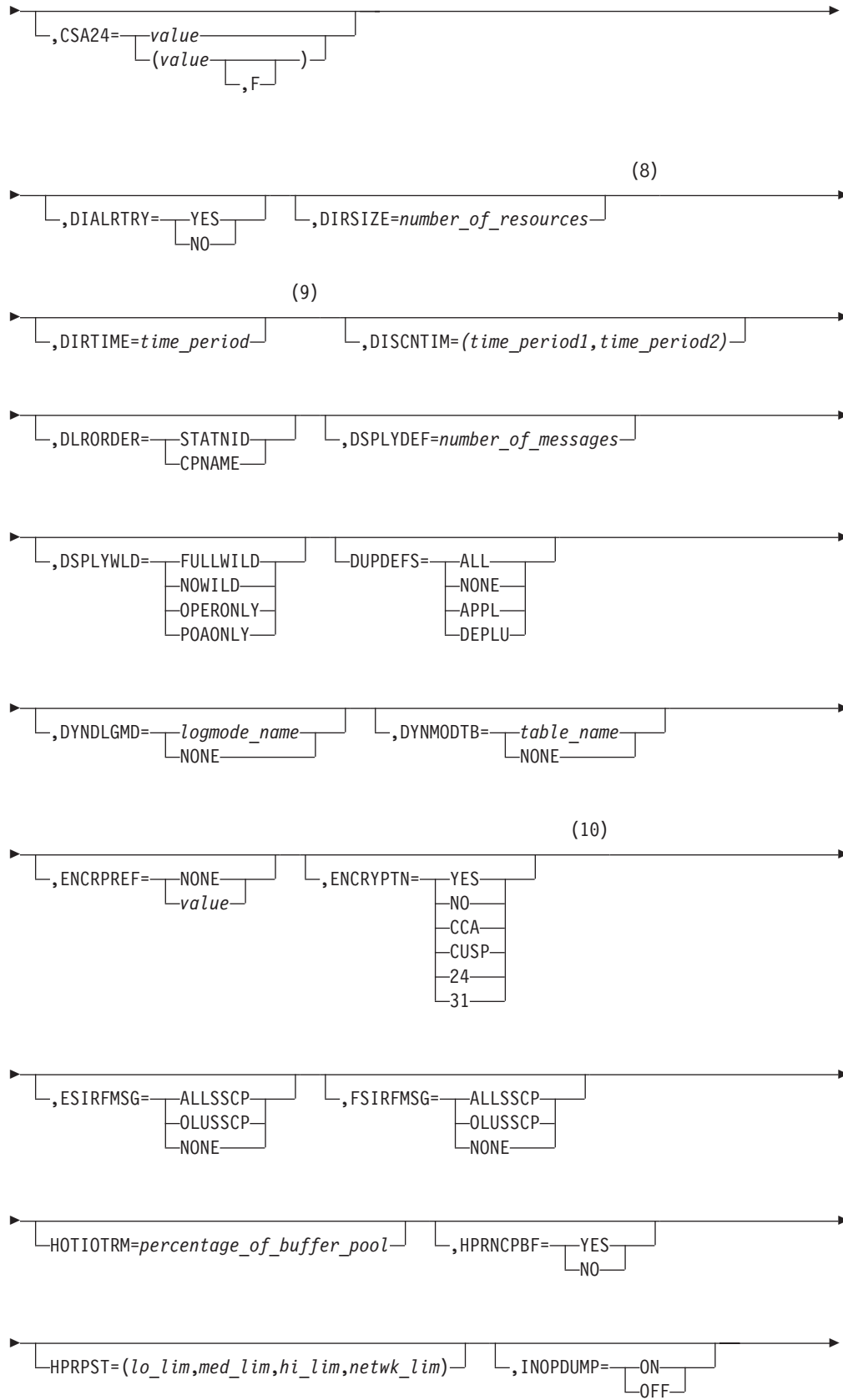
(6)



(7)



## Modify Commands



## Modify Commands

└─,IOINT=*number\_of\_seconds*┘ └─,IOMGLIM=*number\_of\_message\_pairs*┘

└─IPADDR=*ip\_address*┘ (11) └─,ISTCOSDF=┘

- └─ALL┘
- └─APPL┘
- └─DEPLU┘
- └─INDLU┘
- └─NONE┘

└─(┘ └─,┘ └─)┘

- └─APPL┘
- └─DEPLU┘
- └─INDLU┘

└─LIMINTCP=*number\_of\_seconds*┘

(12)

└─,MAXLOCAT=*max\_locate\_congestion\_threshold*┘ └─,MAXLURU=*ru\_length*┘

└─,MAXSSCPS=*number\_of\_sscps*┘ └─,MIHTMOUT=*units\_of\_time*┘

└─,MSGLEVEL=┘ └─,MSGMOD=┘

- └─BASE┘
- └─V4R1┘
- └─V4R2┘
- └─V4R3┘
- └─V4R4┘
- └─CS390┘

- └─YES┘
- └─NO┘

└─NNSPREF=┘ └─,NQNMOME=┘

- └─NONE┘
- └─(13)┘
- └─*network\_node\_server*┘

- └─NAME┘
- └─NQNAME┘

(14)

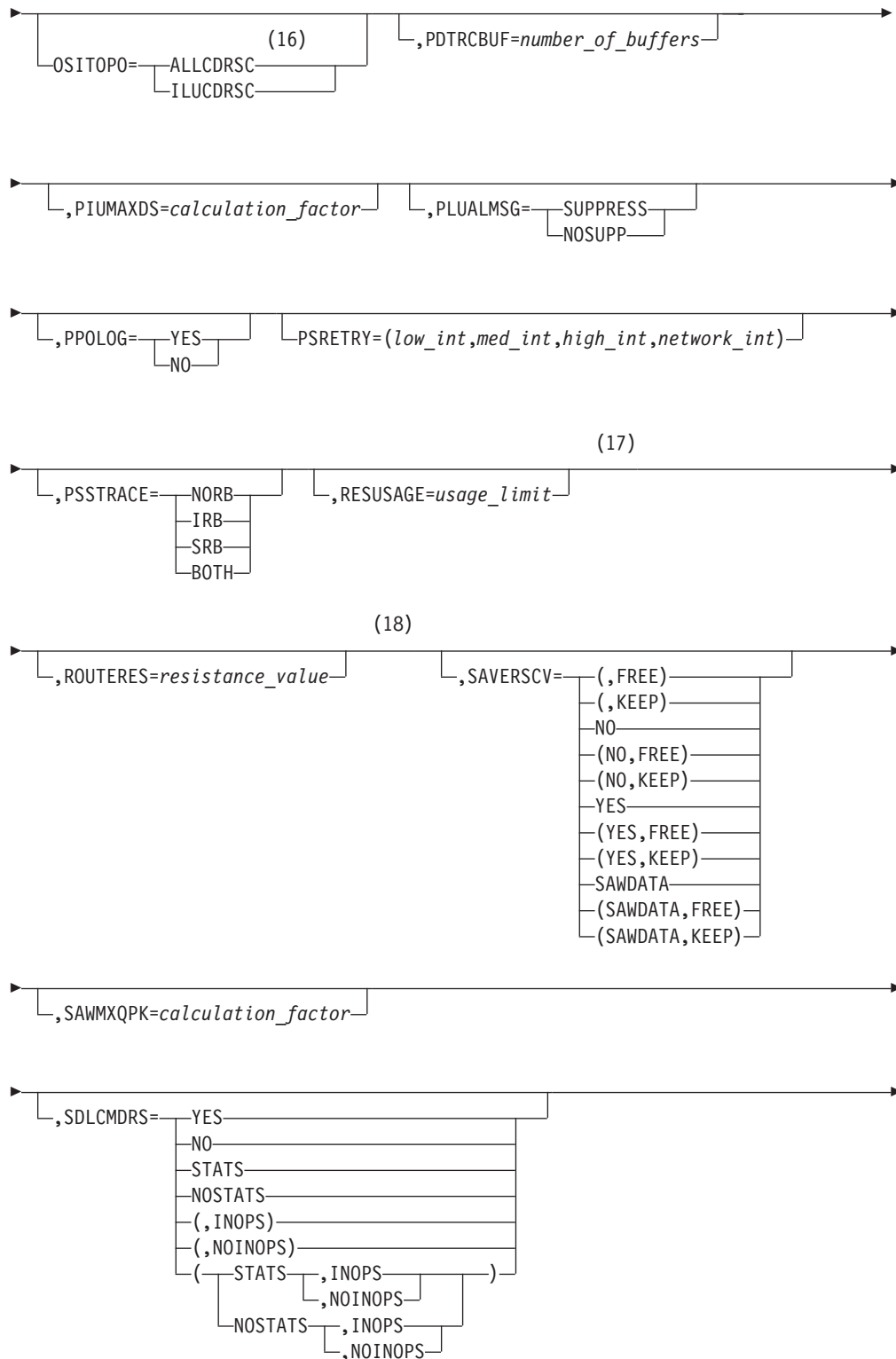
└─,NUMTREES=*number\_of\_routing\_trees*┘

└─OSIEVENT=┘ └─OSIMGMT=┘

- └─ALL┘
- └─NONE┘
- └─(15)┘
- └─PATTERNS┘

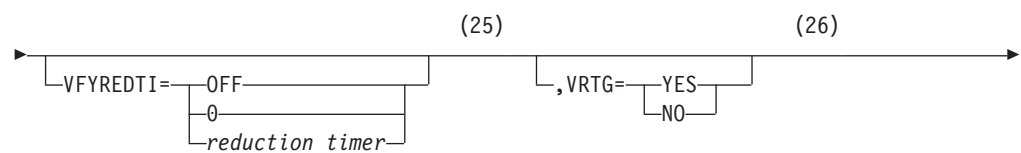
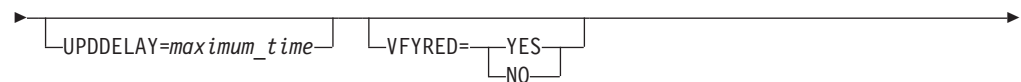
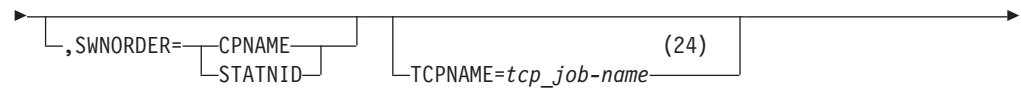
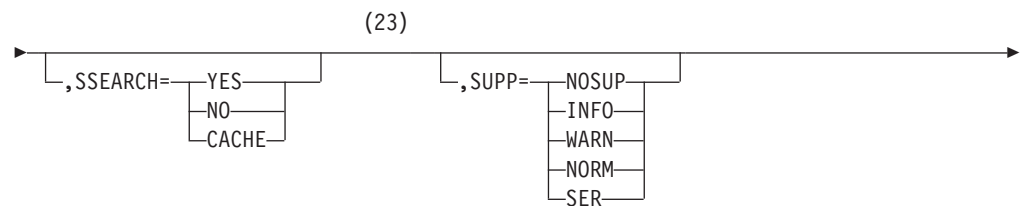
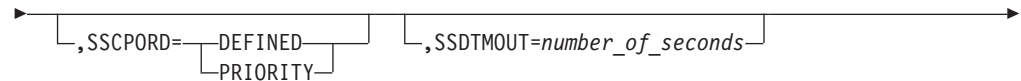
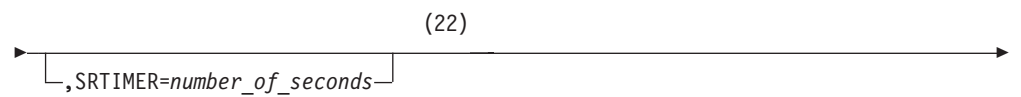
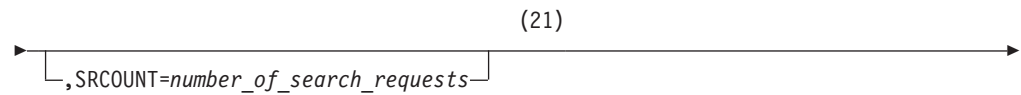
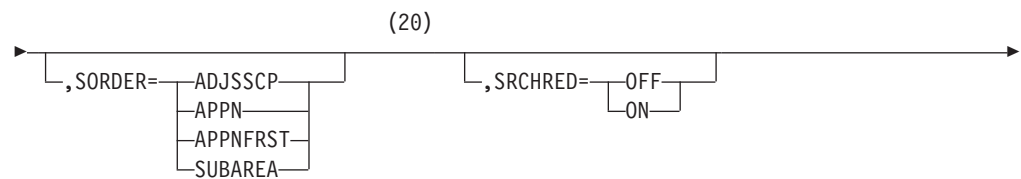
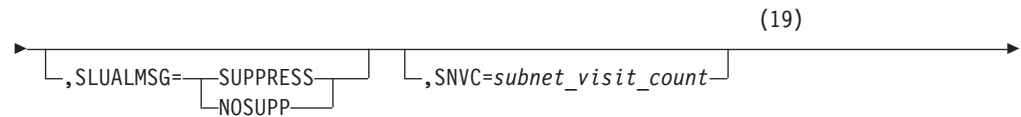
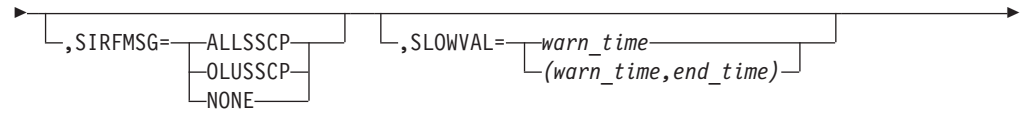
- └─YES┘
- └─NO┘

## Modify Commands





## Modify Commands





### Notes:

- 1 APPNCOS can be modified only if NODETYPE was specified during VTAM START processing.
- 2 BNDYN can be modified only if BN=YES was specified during VTAM START processing.
- 3 BNORD can be modified only if BN=YES was specified during VTAM START processing.
- 4 CDSREFER can be modified only if NODETYPE=NN and CDSERVER=NO were specified during VTAM START processing.
- 5 CMPMIPS is meaningful only if the value for CMPVTAM is greater than 1.
- 6 CONNTYPE can be modified only if NODETYPE was specified during VTAM START processing.
- 7 CPCP can be modified only if NODETYPE was specified during VTAM START processing.
- 8 DIRSIZE can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 9 DIRTIME can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 10 The ENCRYPTN start option cannot be modified if ENCRYPTN=NO was specified during VTAM START processing.
- 11 IPADDR can be modified but 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 IPADDR value.
- 12 MAXLOCAT can be modified only if NODETYPE was specified during VTAM START processing.
- 13 NNSPREF can be specified only if NODETYPE=EN is specified during VTAM START processing.
- 14 NUMTREES can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 15 OSIEVENT=PATTERNS is not valid when OSIMGMT=YES.
- 16 OSITOPO=ALLCDRSC is not valid when OSIMGMT=YES.
- 17 RESUSAGE can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 18 ROUTERES can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 19 SNVC can be modified only if BN=YES was specified during VTAM START processing.

## Modify Commands

- 20 SORDER can be modified only if VTAM has been started as an interchange node or a migration data host.
- 21 SRCOUNT is meaningful only when SRCHRED=ON.
- 22 SRTIMER is meaningful only when SRCHRED=ON.
- 23 SSEARCH can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 24 TCPNAME can be modified but 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.
- 25 VFYREDTI can be modified only if NODETYPE=NN was specified during VTAM START processing.
- 26 VRTG can be modified only if NODETYPE and HOSTSA are specified.
- 27 VRTGCPCP can be modified only if NODETYPE and HOSTSA are specified.

## Modify Commands

---

## Chapter 10. Starting VTAM

---

### START

▶▶—START *procname* , , , ( { Options } ) —▶▶

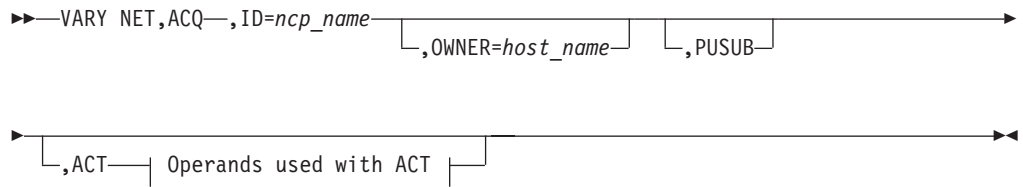
For the syntax of the start options that you can specify on this command, see “Chapter 12. Start Options” on page 171.

## Starting VTAM

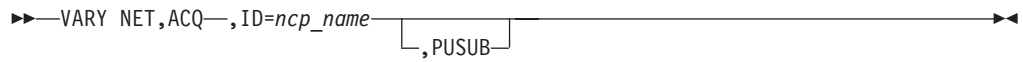
# Chapter 11. Vary Commands

## V ACQ

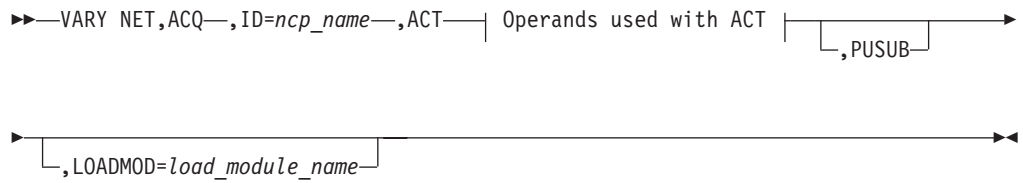
Acquire an NCP, and optionally its subordinate resources, from another host:



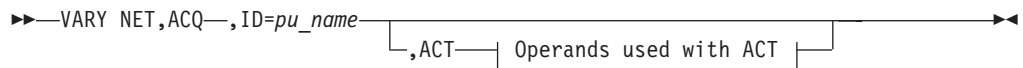
Acquire “inactive” NCP, and optionally its subordinate resources, without activating them:



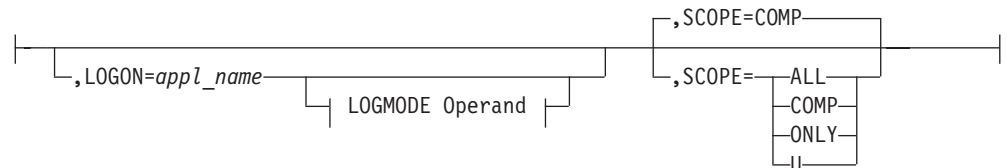
Acquire “inactive” NCP, and optionally its subordinate resources, and activate them:



Acquire nonswitched PU and its LUs:



### Operands used with ACT:



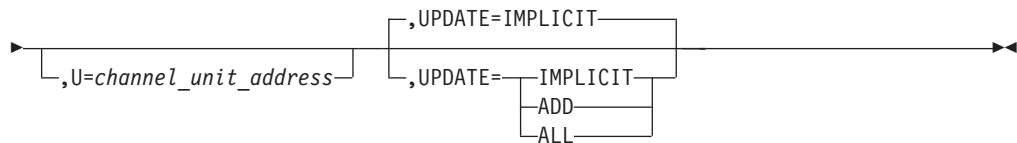
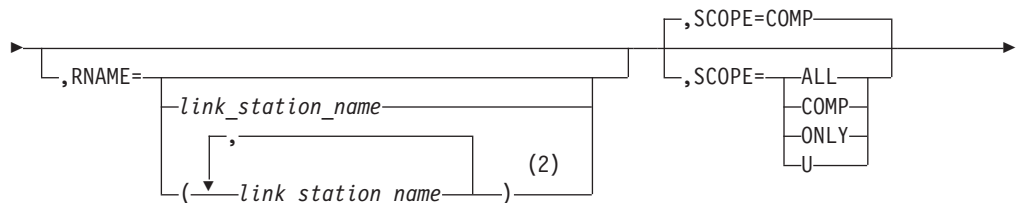
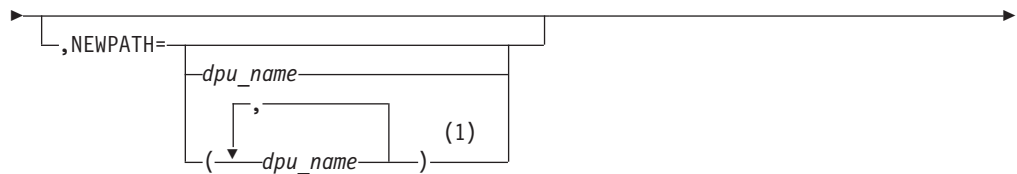
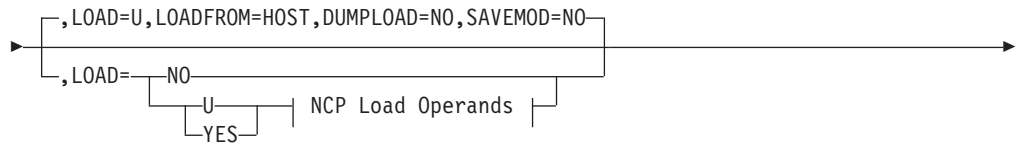
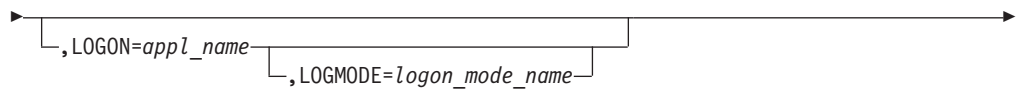
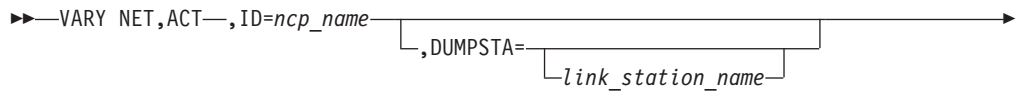
## Vary Commands

### LOGMODE Operand:

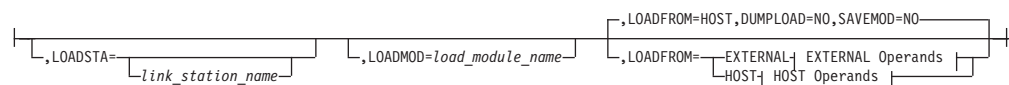


## V ACT

Activate an NCP major node:

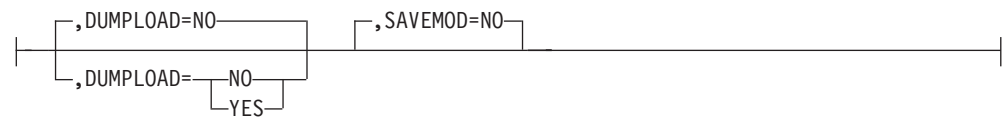


### NCP LOAD Operands:

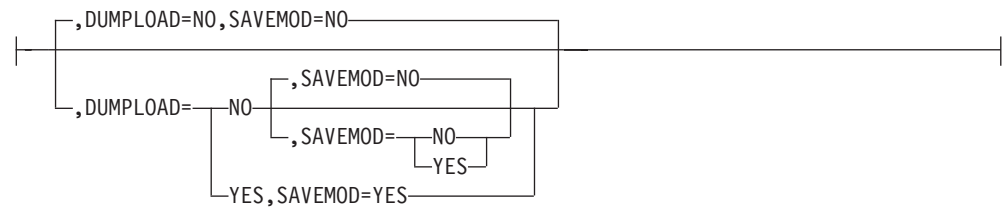




**EXTERNAL Operands:**



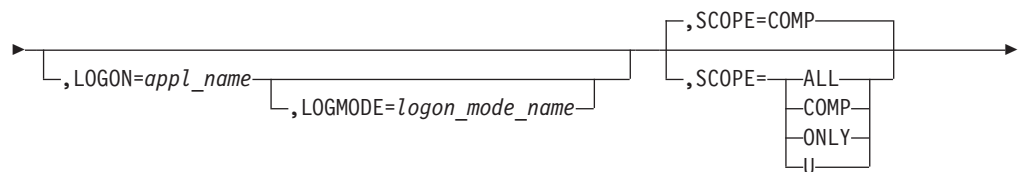
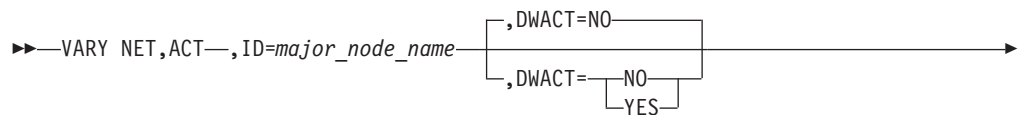
**HOST Operands:**



**Notes:**

- 1 You can specify up to three dynamic path update member names on the NEWPATH operand.
- 2 You can specify up to 13 link station names on the RNAME operand.

Activate a switched major node:



Activate the dynamic XCF local SNA major node:



Activate a switched line:

## Vary Commands

```

>> VARY NET,ACT--,ID=line_name
                                     ,ANS=OFF
                                     ,ANS=ON
  
```

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

```

>> VARY NET,ACT--,ID=
                                     pu_name
                                     line_name
                                     ,CPCP=YES
                                     ,CPCP=NO
  
```

```

(1)
>> VARY NET,ACT--,ID=
                                     ,HPR=NO
                                     ,HPR=YES
                                     ,LOGON=appl_name
                                     ,LOGMODE=logon_mode_name

(2)
>> VARY NET,ACT--,ID=
                                     ,SCOPE=COMP
                                     ,SCOPE=ALL
                                     ,SCOPE=COMP
                                     ,SCOPE=ONLY
                                     ,SCOPE=U
                                     ,U=channel_unit_address
  
```

### 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:

```

>> VARY NET,ACT--,ID=name
                                     ,IDTYPE=XCFCP
  
```

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

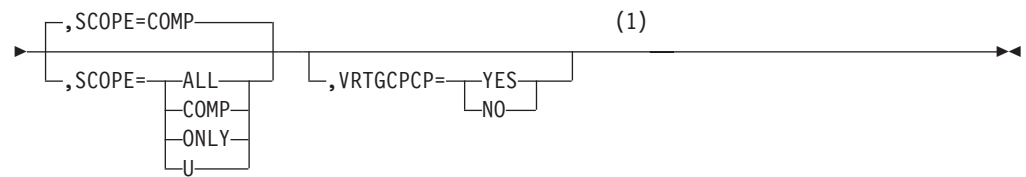
```

>> VARY NET,ACT--,ID=name
                                     ,IDTYPE=RESOURCE
                                     ,IDTYPE=CP
                                     ,IDTYPE=RESOURCE
                                     ,SCOPE=COMP
                                     ,SCOPE=ALL
                                     ,SCOPE=COMP
                                     ,SCOPE=ONLY
                                     ,SCOPE=U
  
```

Activate an SSCP (CDRM minor node):

```

(1)
>> VARY NET,ACT--,ID=name
                                     ,HPR=NO
                                     ,HPR=YES
                                     ,IDTYPE=RESOURCE
                                     ,IDTYPE=SSCP
                                     ,IDTYPE=RESOURCE
  
```



**Notes:**

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

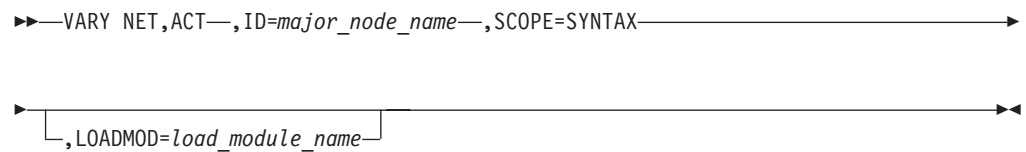
Warm start a major node:



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

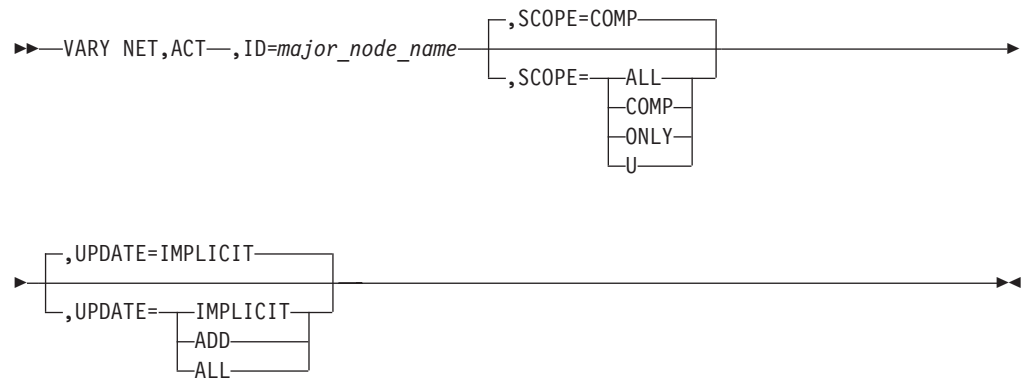


Check the syntax of a definition file (major node):



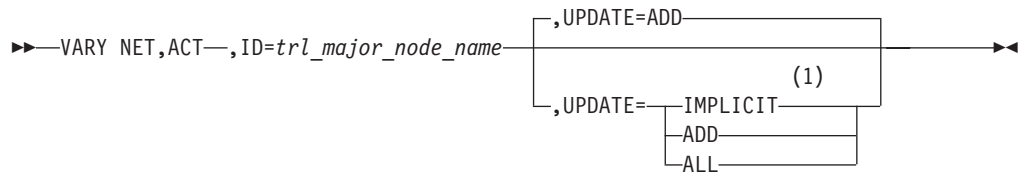
Dynamically reconfigure resources in a major node:

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



Dynamically reconfigure TRLEs in a TRL major node:

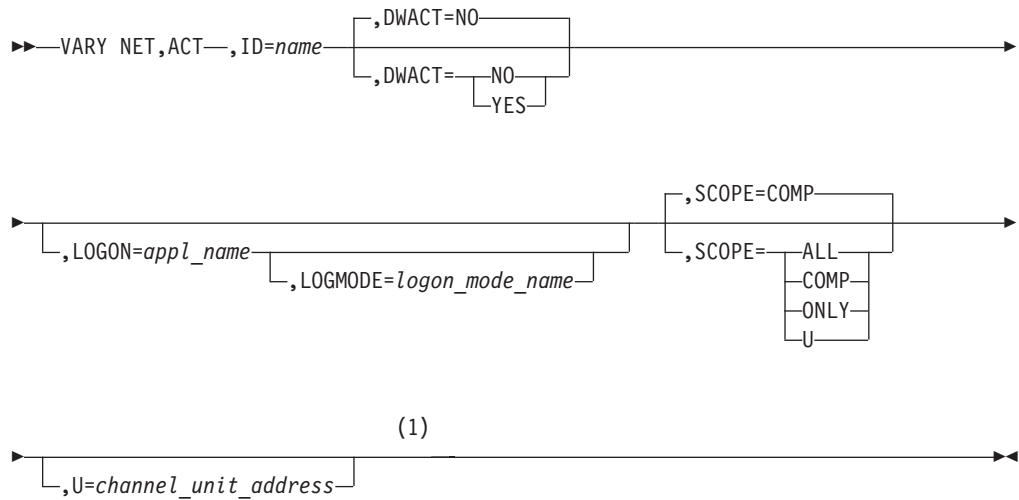
## Vary Commands



### Notes:

- 1 Specifying `UPDATE=IMPLICIT` is the same as `UPDATE=ADD`.

Activate other resources:

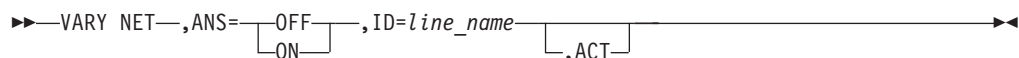


### Notes:

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

## V ANS

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 DIAL

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

Dynamically reconfigure an NCP or a nonswitched peripheral node:

►►—VARY NET,DRDS—,ID=*dr\_file\_name*—►►

## V HANGUP

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

►►—VARY NET,HANGUP—,ID=*link\_station\_name*—►►

## V INACT

Deactivate an NCP major node:

►►—VARY NET,INACT—,ID=*ncp\_name*—

CDLINK=ACT	RMPO=NO
CDLINK=	RMPO=
INACT	YES

►►

►►

,TYPE=	FORCE
IMMED	REACT
UNCOND	

►►

Deactivate an NCP line:

►►—VARY NET,INACT—,ID=*line\_name*—

,TYPE=	FORCE
GIVEBACK	IMMED
UNCOND	

►►

Deactivate a CDRM major node:

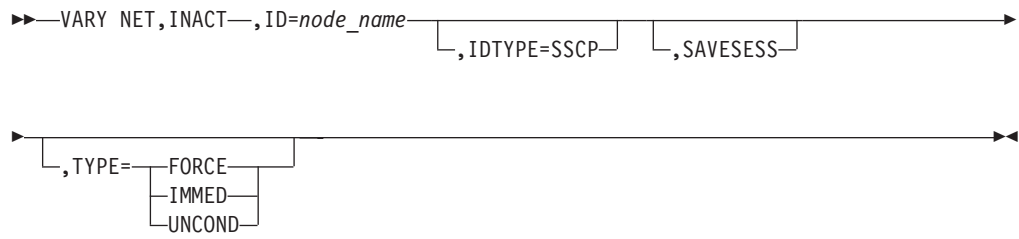
►►—VARY NET,INACT—,ID=*node\_name*—

,SAVESESS	,TYPE=	FORCE
	IMMED	UNCOND

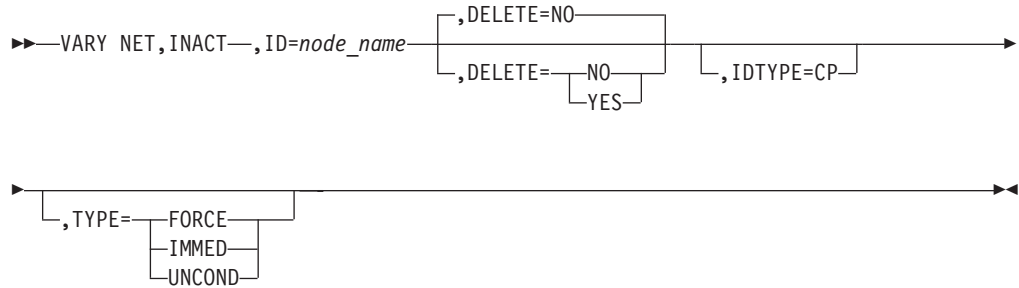
►►

Deactivate a CDRM minor node:

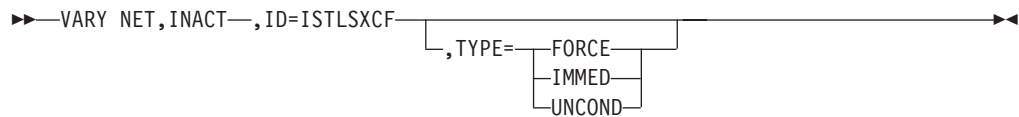
## Vary Commands



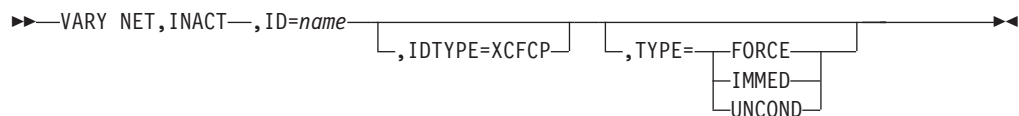
I Deactivate a CDRSC minor node:



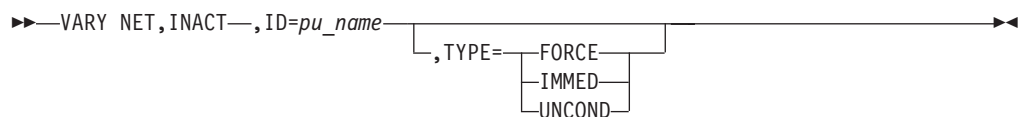
I Deactivate the dynamic XCF local SNA major node:



I Deactivate a dynamic XCF local SNA PU:



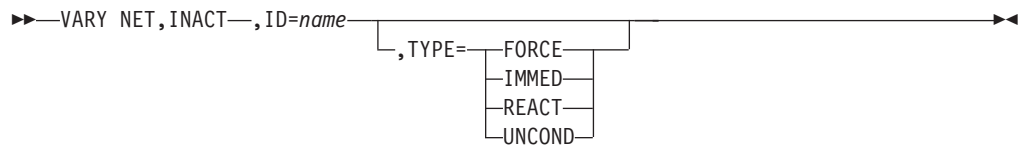
I Deactivate a dynamic switched PU:



I Deactivate a dependent LU requester (DLUR):



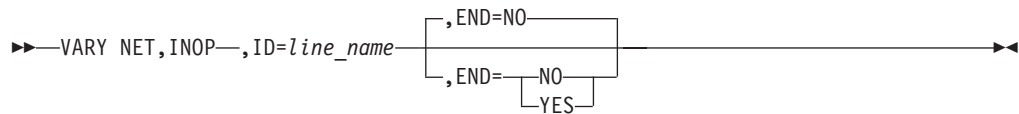
## Vary Commands



---

## V INOP

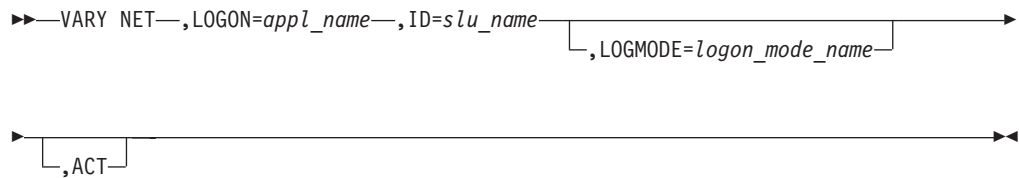
| Terminate a manual dial operation if the VTAM operator is unable to complete the  
| call:



---

## V LOGON

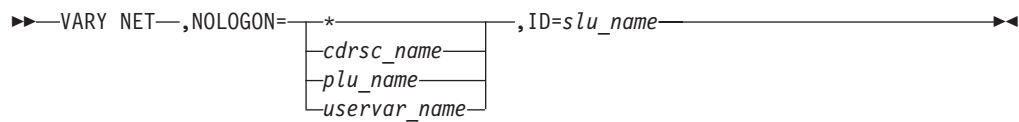
| Create or change an automatic logon specification:



---

## V NOLOGON

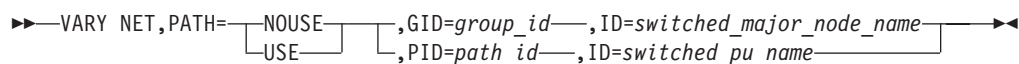
| Delete an existing automatic logon specification:



---

## V PATH

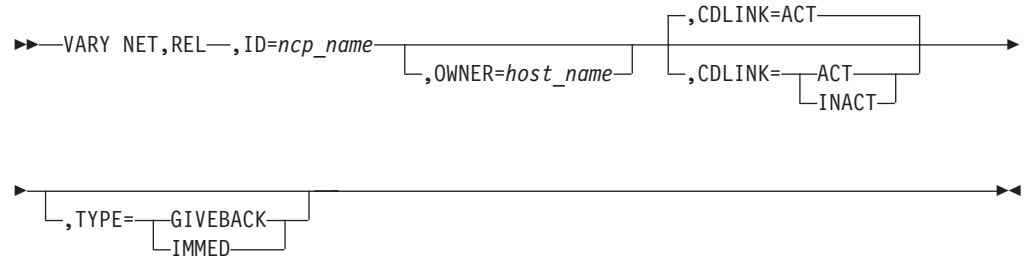
| Modify the availability of a dial-out path to a specific switched physical unit or a  
| group of dial-out paths within a switched major node:



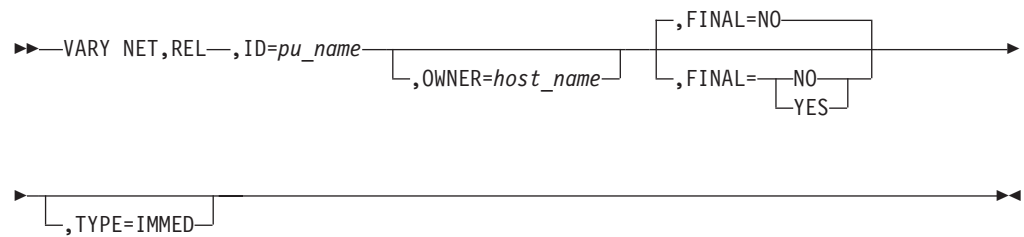


## V REL

Release a previously acquired NCP:

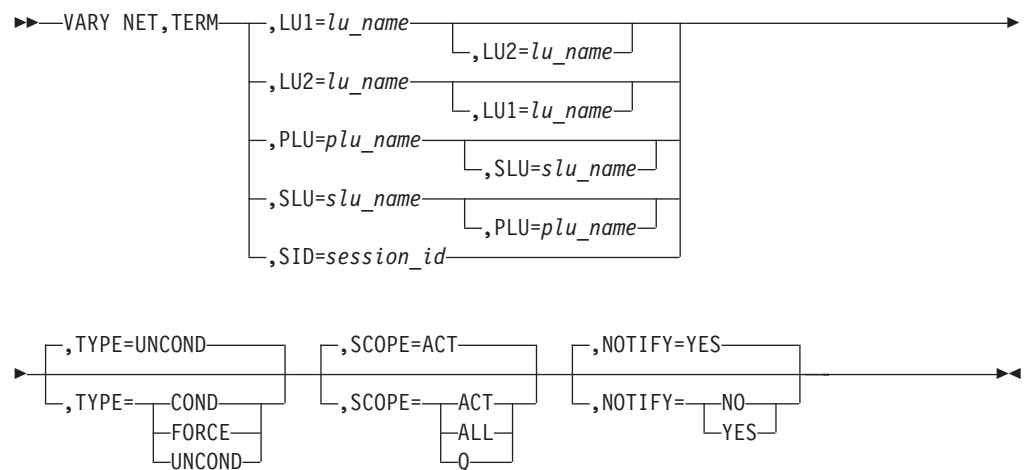


Release a PU:



## V TERM

Terminate a session or group of sessions:



## Vary Commands

## Chapter 12. Start Options

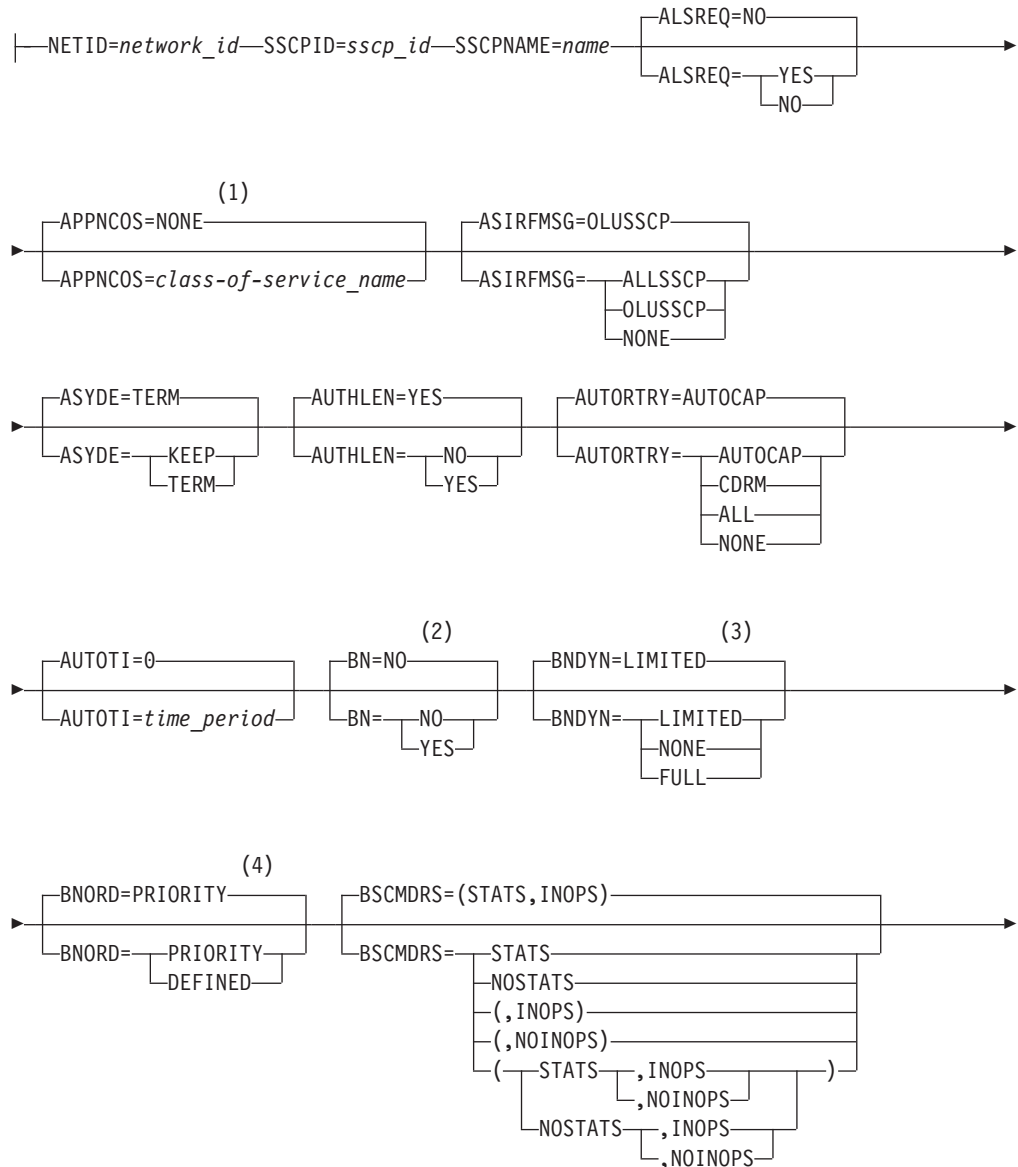
Start options are listed in this section alphabetically; however, you can code them in any order.

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

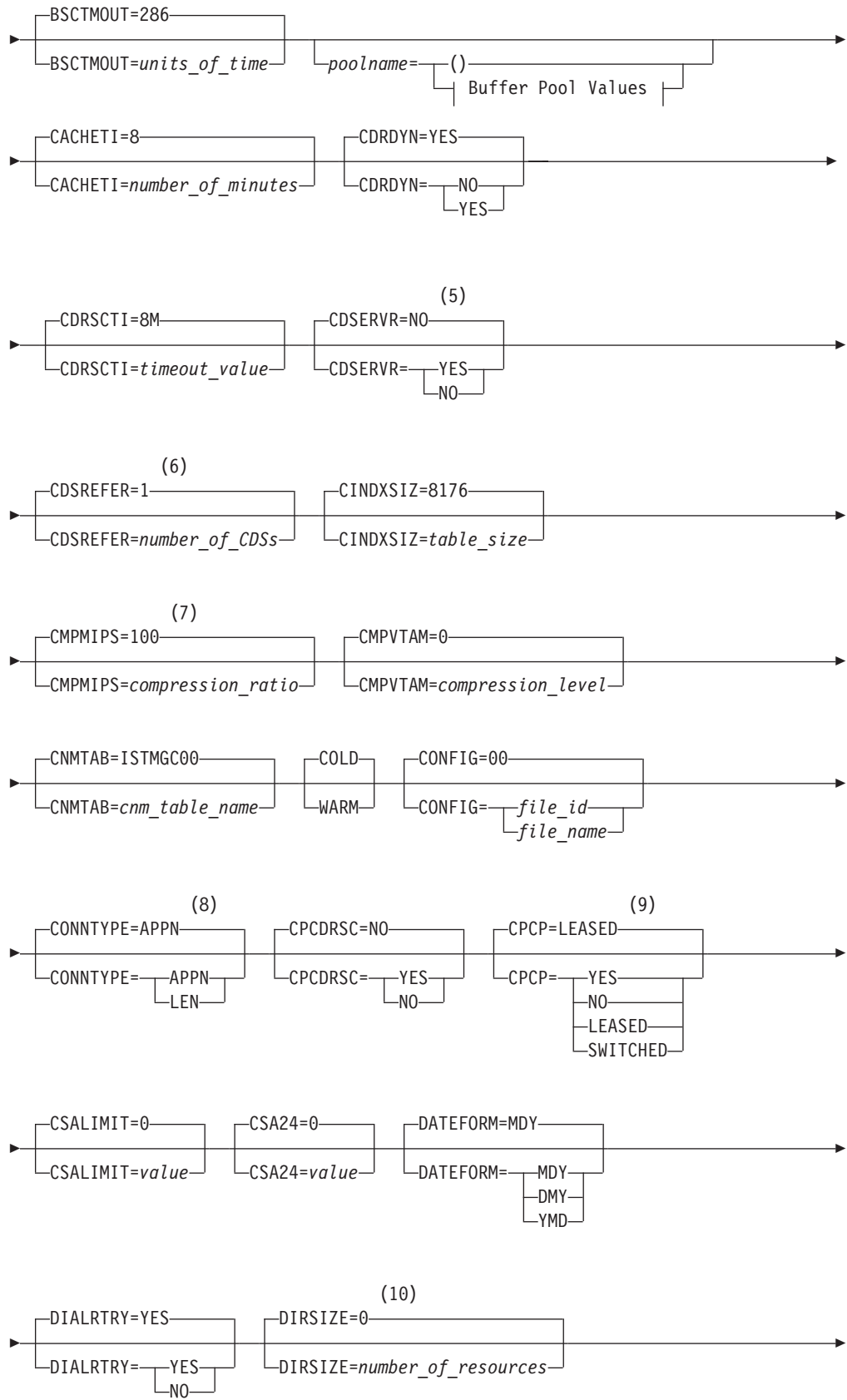
Start options that are entered on the START command must be separated by commas. Do not leave any blanks between options.

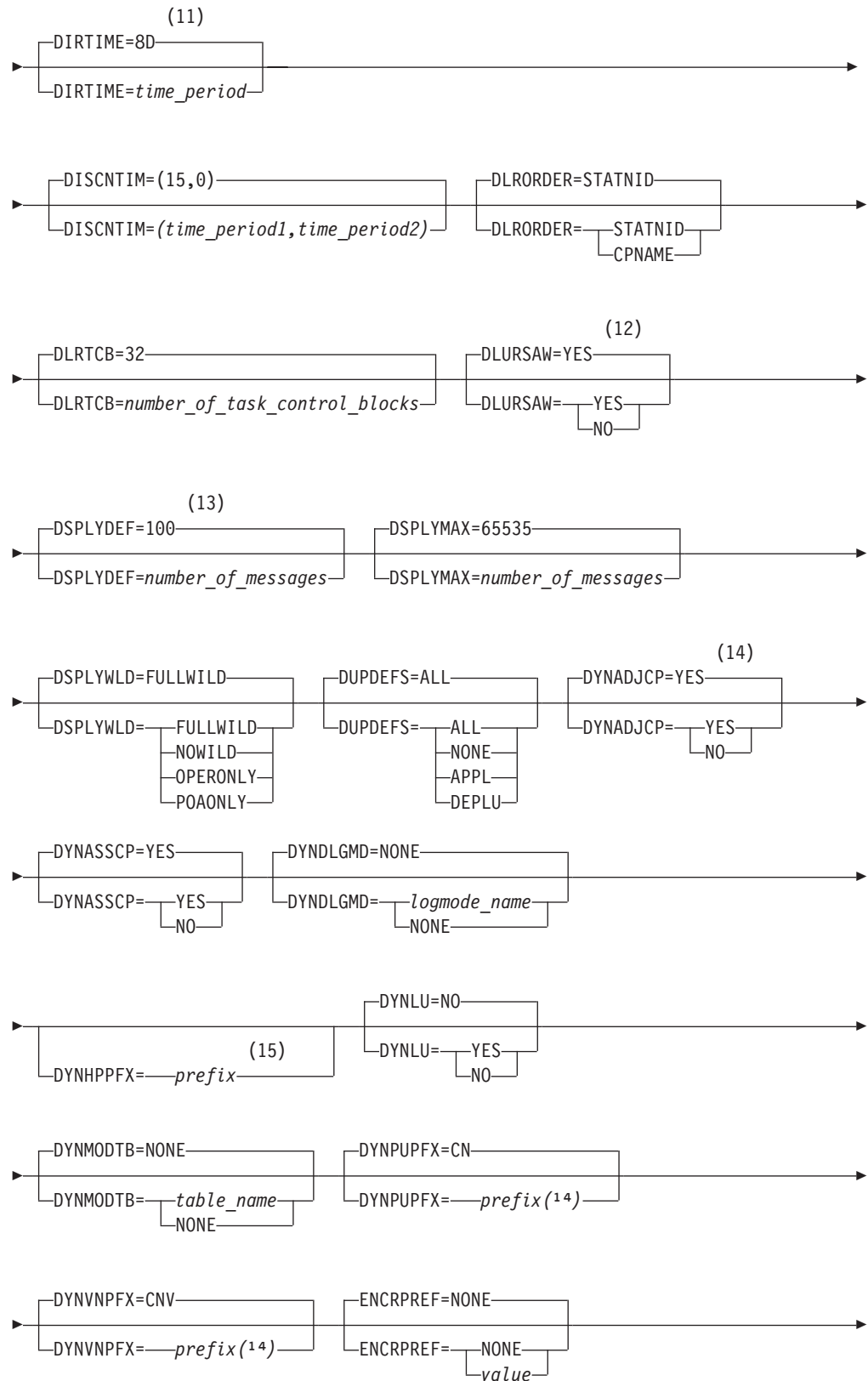
For more information on the START command, refer to *OS/390 IBM Communications Server: SNA Operation*.

### Options:

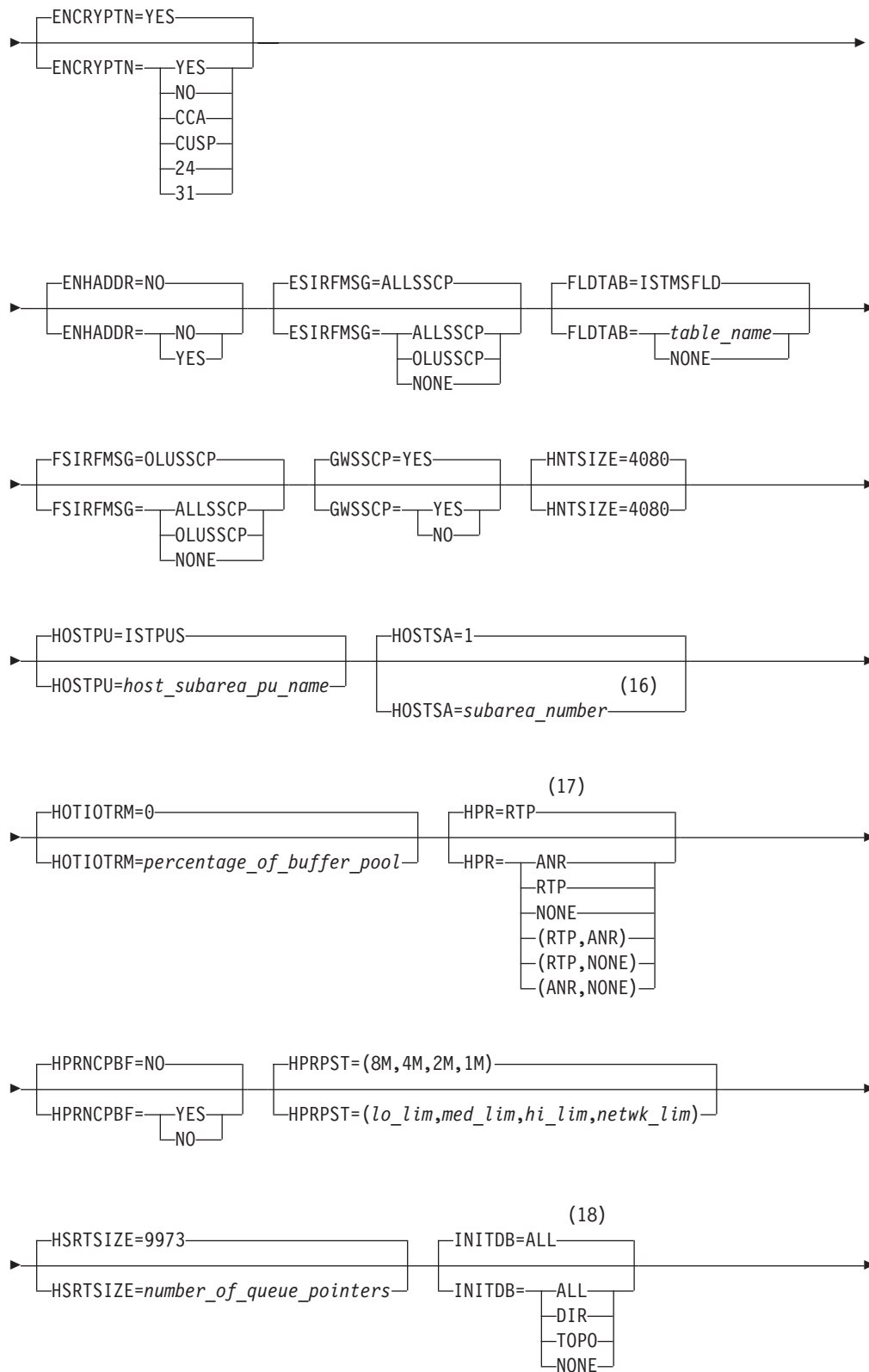


## Start Options

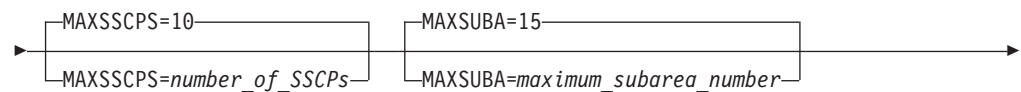
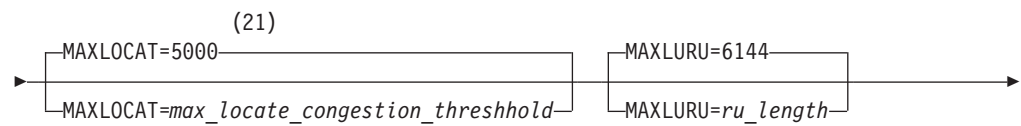
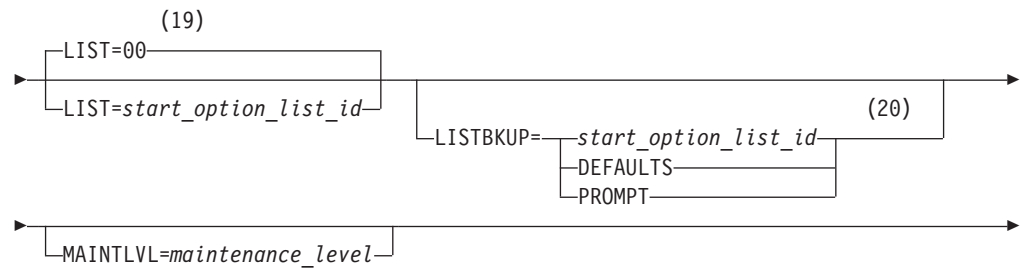
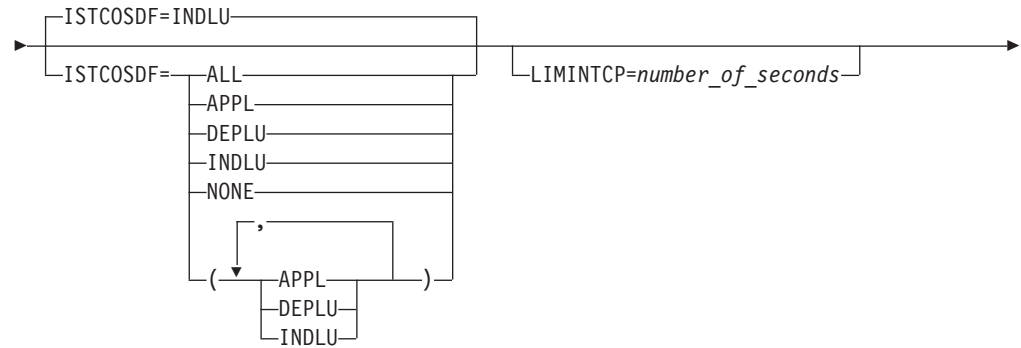
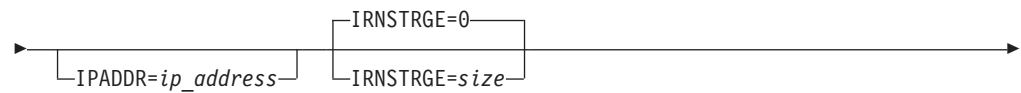
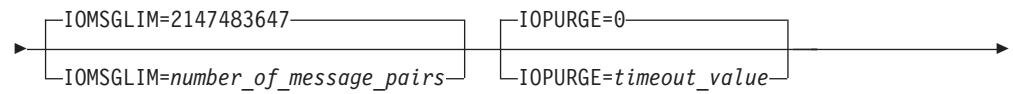
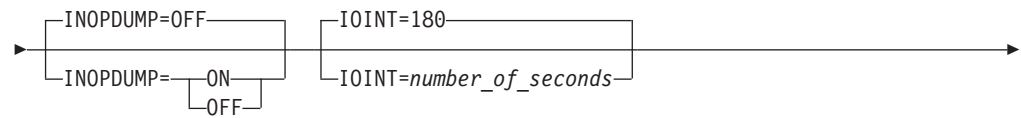




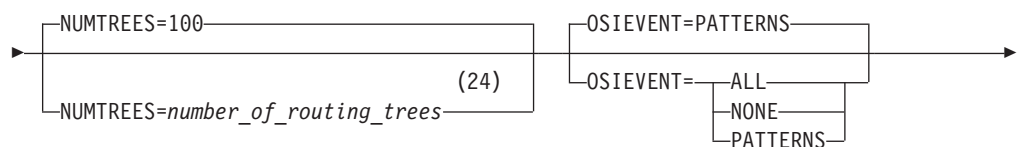
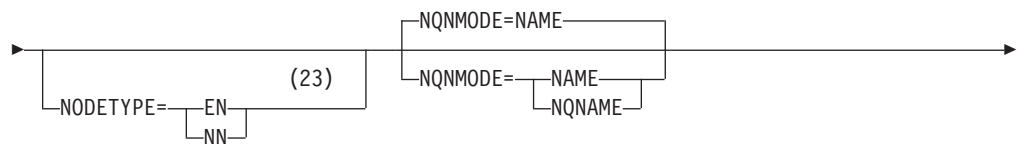
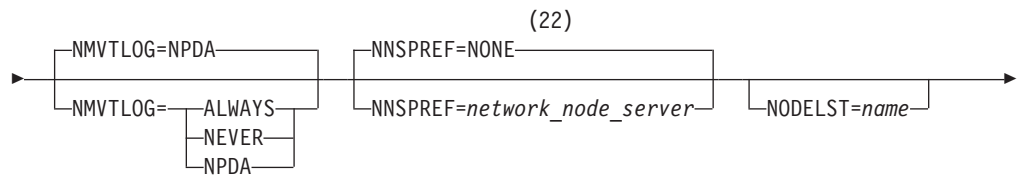
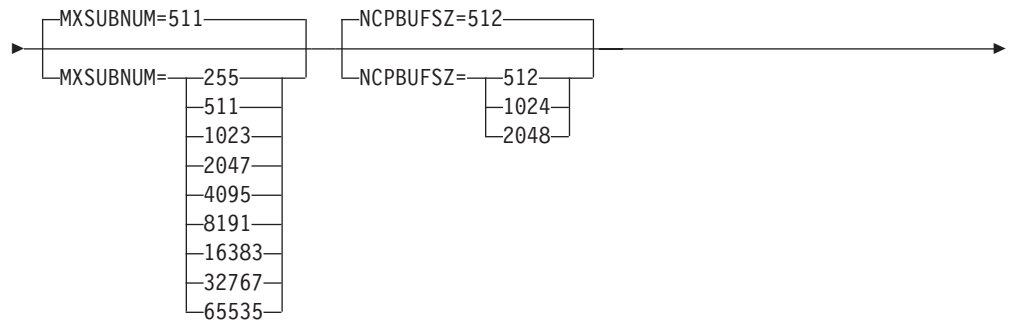
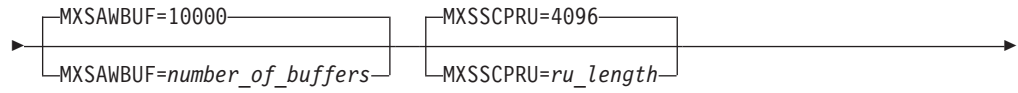
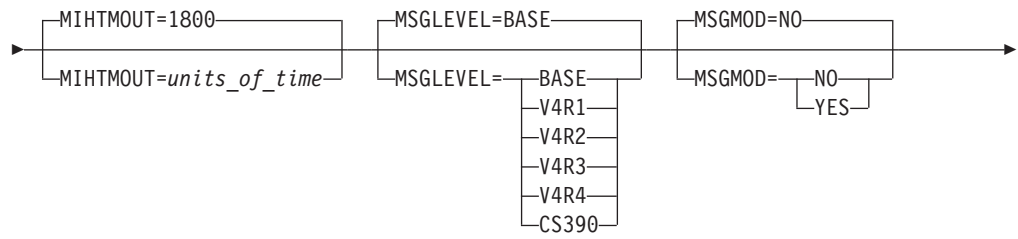
## Start Options



## Start Options

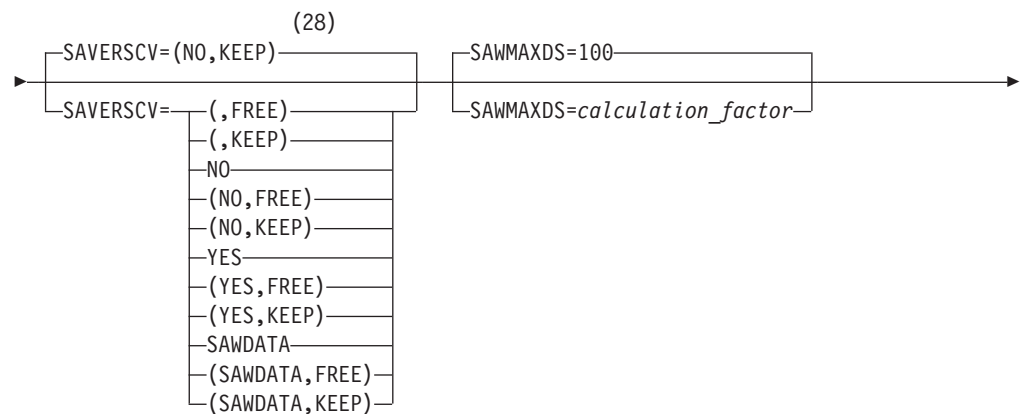
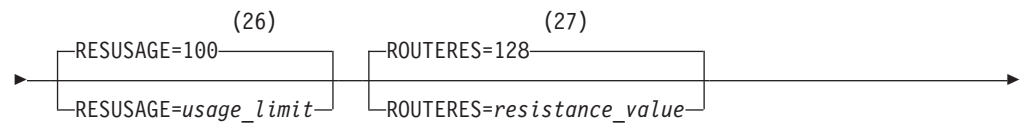
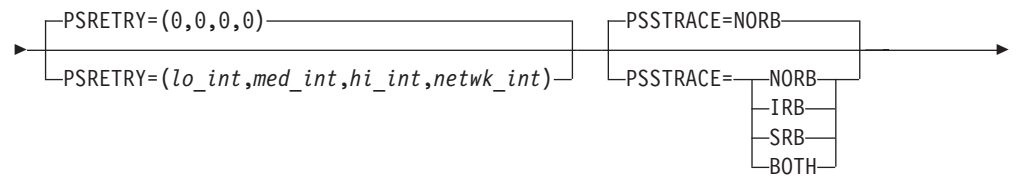
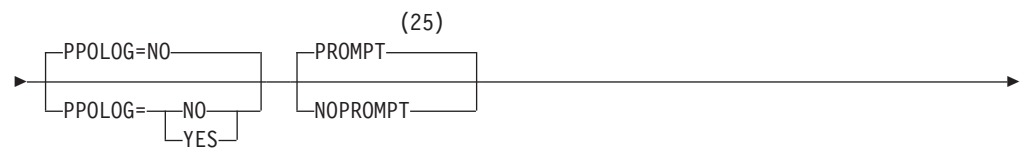
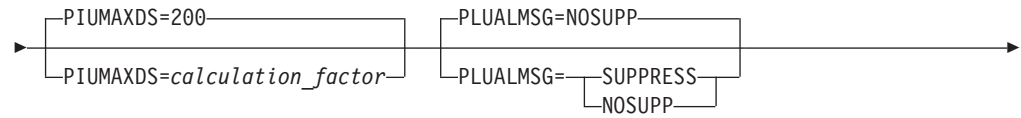
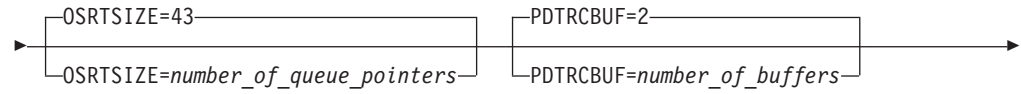
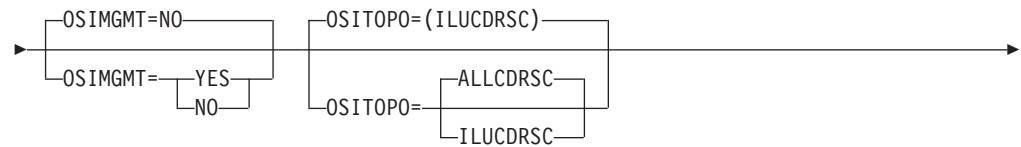


## Start Options

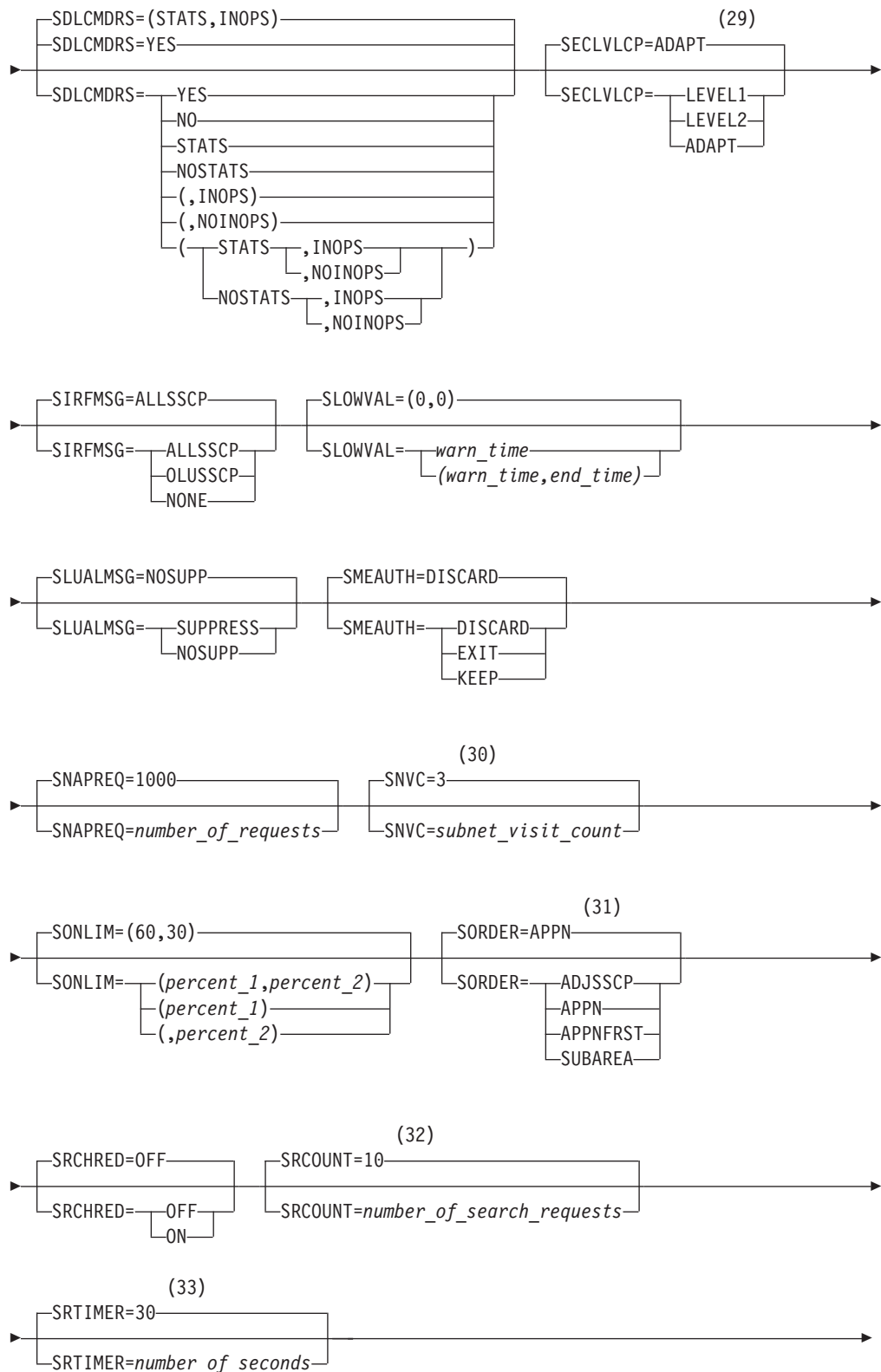


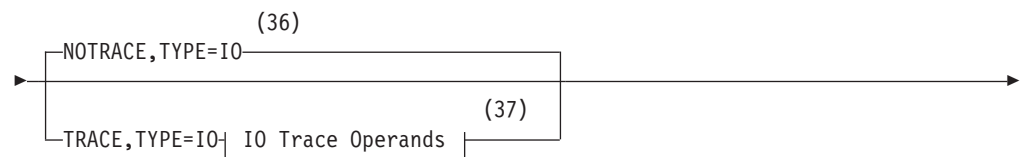
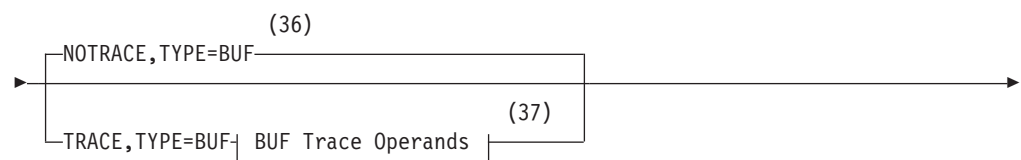
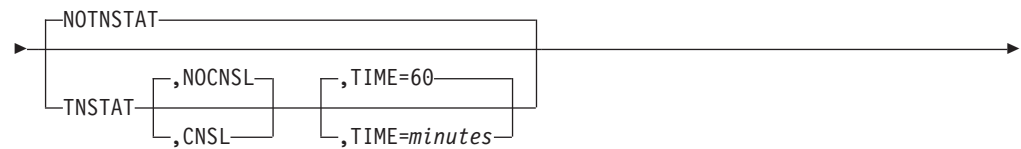
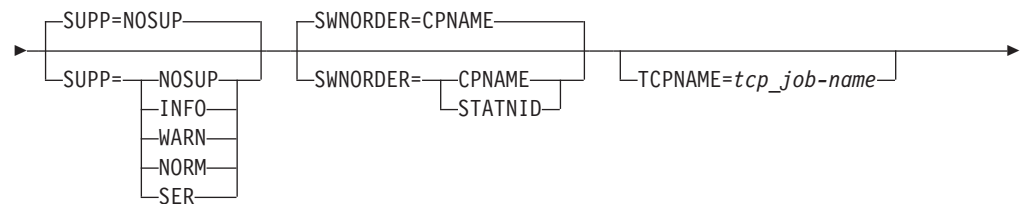
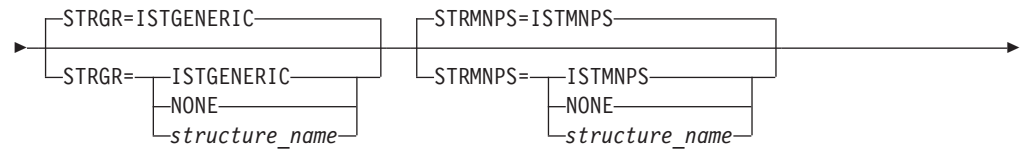
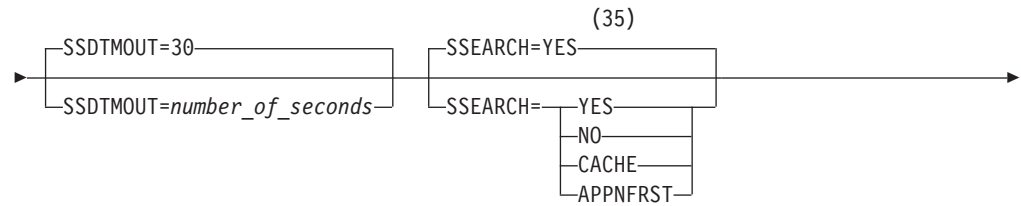
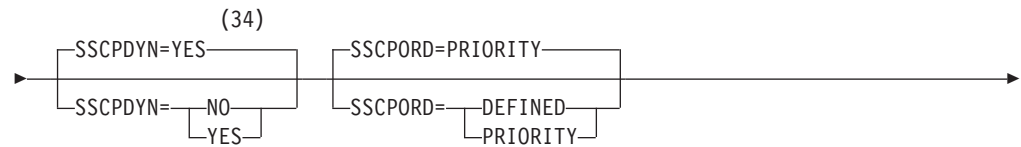


## Start Options

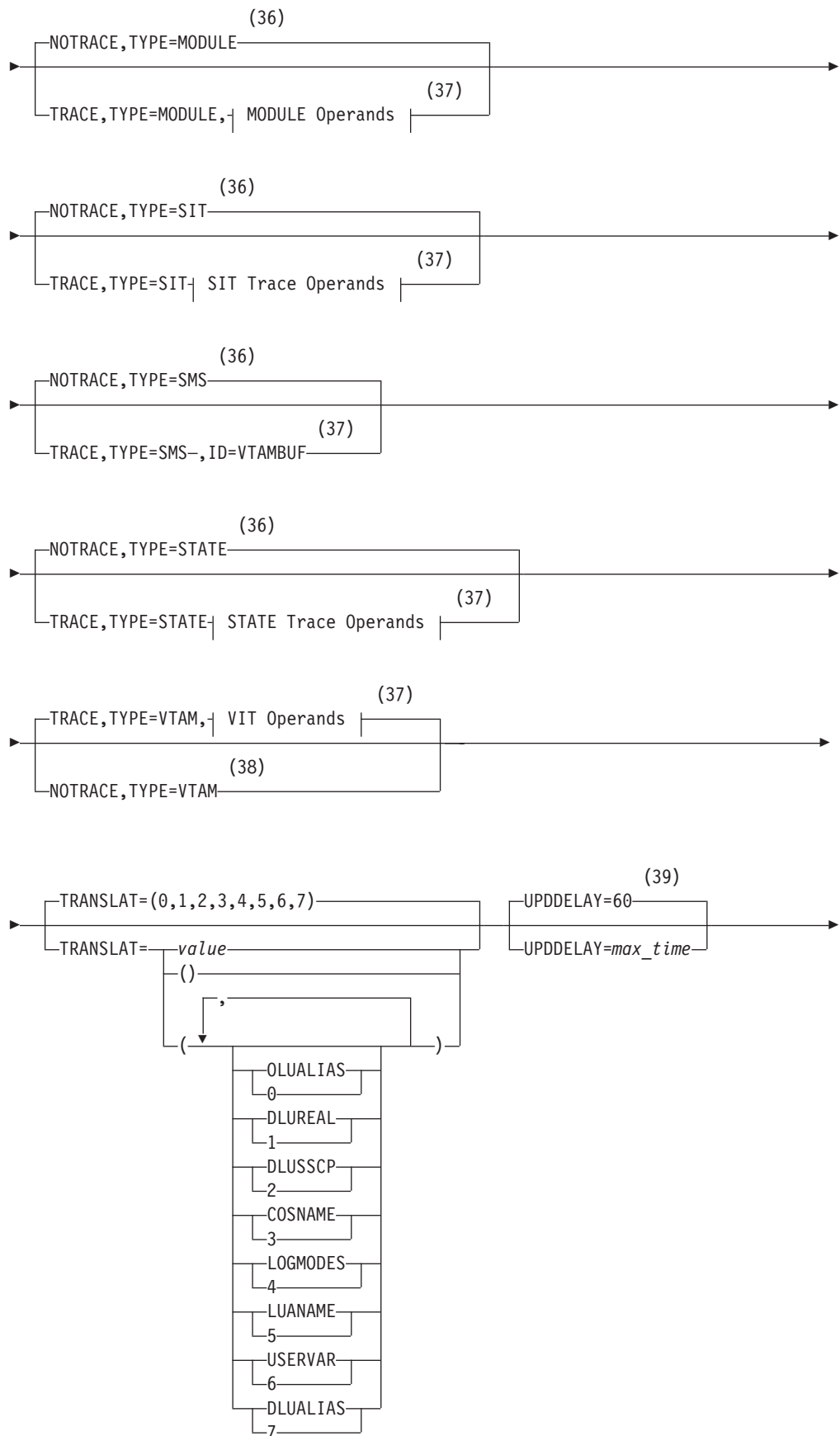


## Start Options

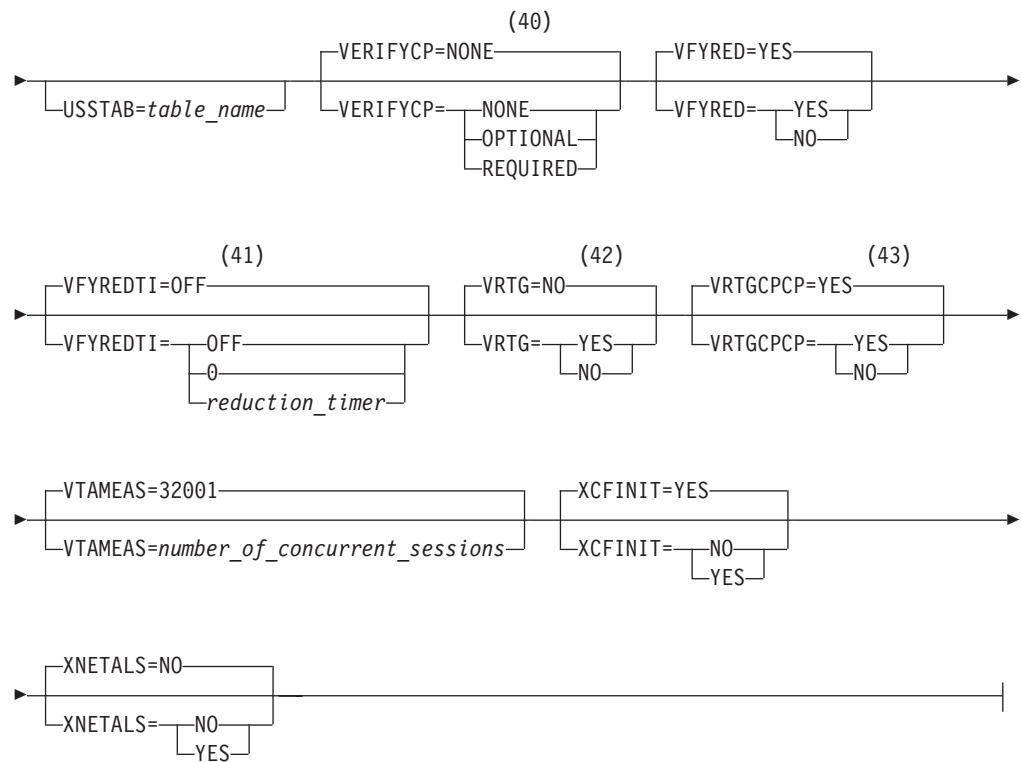




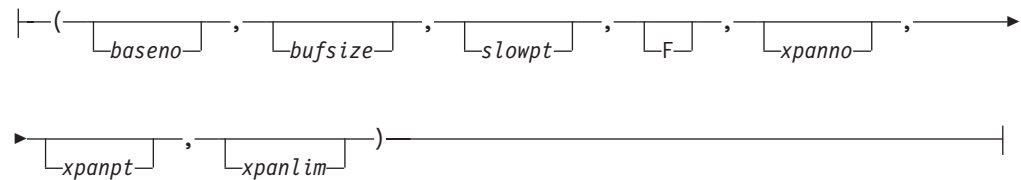
## Start Options



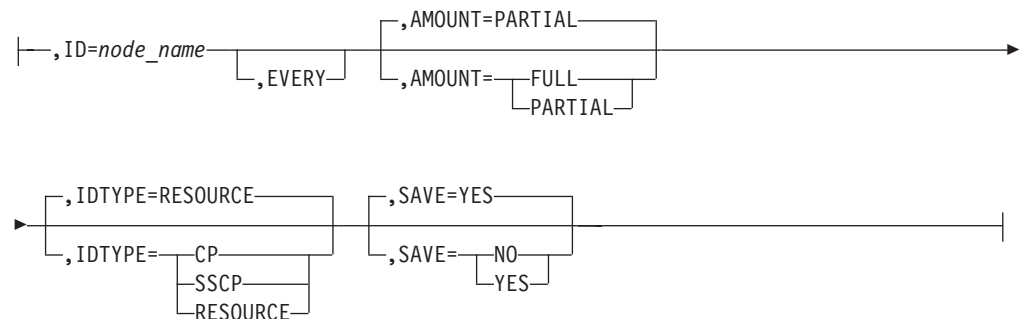
## Start Options



### Buffer Pool Values:

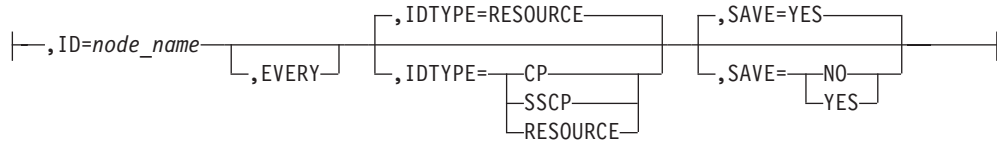


### BUF Trace Operands:

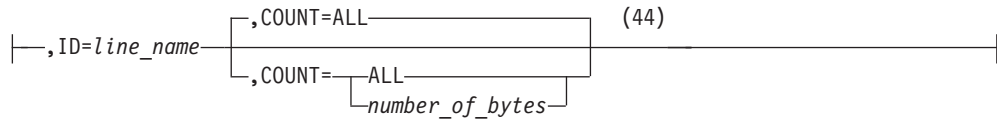


### IO Trace Operands:

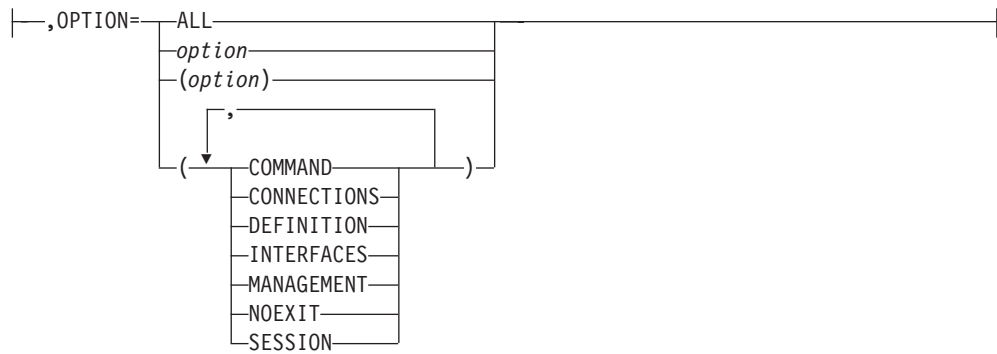
## Start Options



## LINE Trace Operands:



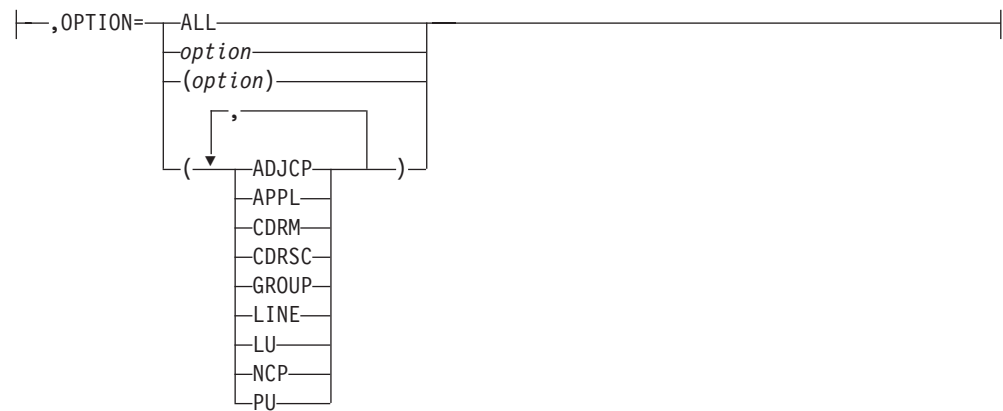
## MODULE Operands:



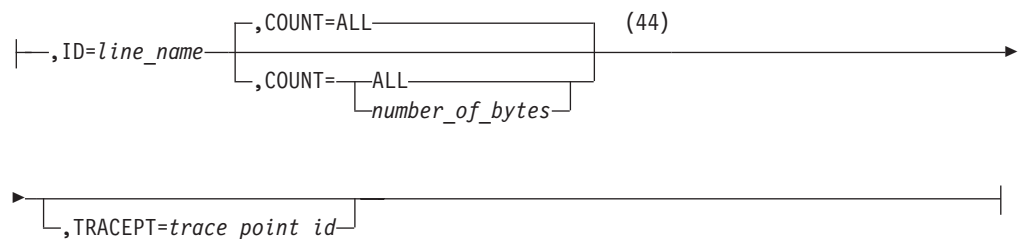
## Operands used with ID:



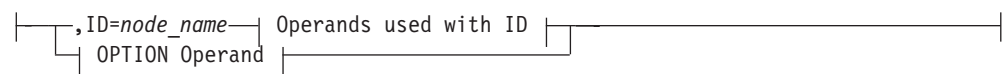
**OPTION Operand:**



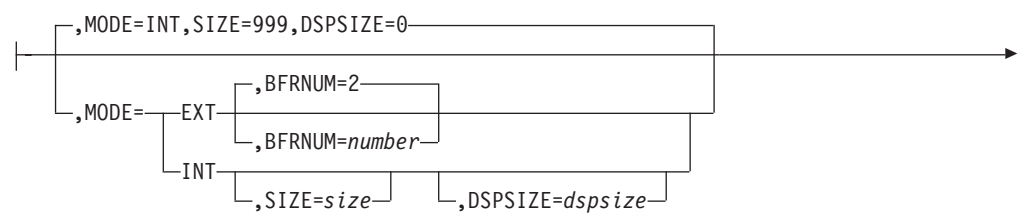
**SIT Trace Operands:**



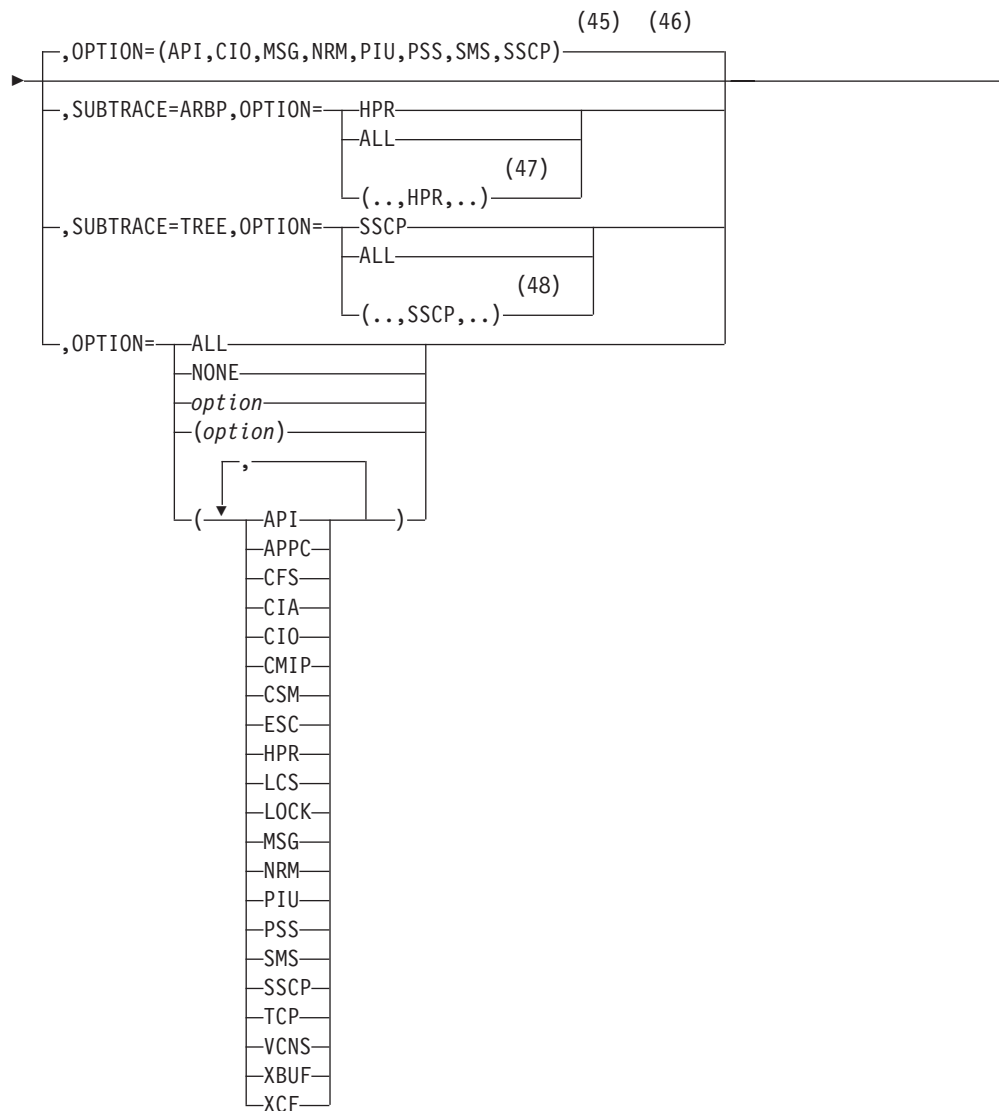
**STATE Trace Operands:**



**VIT Operands:**



## Start Options



### 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 DIRSIZE is meaningful only if the NODETYPE=NN start option is also used.



## Start Options

- 11 DIRTIME is meaningful only if the NODETYPE=NN start option is also used.
- 12 DLURSAW is meaningful only if the NODETYPE=NN start option is also used.
- 13 If the DSPLYMAX start option value is less than 100, that value is the default for DSPLYDEF.
- 14 DYNADJCP is meaningful only if the NODETYPE start option is also used.
- 15 Two character prefix.
- 16 HOSTSA specifies the subarea number of this VTAM. If HOSTSA is not coded, then a default subarea number of 1 is used.
- 17 HPR is meaningful only if NODETYPE is also used.
- 18 INITDB is meaningful only if the NODETYPE=NN start option is also used.
- 19 LIST can be entered by a VTAM operator only. If LIST is coded in an ATCSTRxx file, it is considered to be an error and is ignored.
- 20 LISTBKUP can only be coded in a start option file. If you enter it on the START command or at an operator prompt, VTAM will ignore it.
- 21 MAXLOCAT is meaningful only if NODETYPE is specified.
- 22 NNSPREF can be specified only if NODETYPE=EN is specified during VTAM START processing.
- 23 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).
- 24 NUMTREES is meaningful only if the NODETYPE=NN start option is also used.
- 25 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.
- 26 RESUSAGE is meaningful only if the NODETYPE=NN start option is also used.
- 27 ROUTERES is meaningful only if the NODETYPE=NN start option is also used.
- 28 SAVERSCV is meaningful only if NODETYPE is also used.
- 29 The SECLVLCV start option is meaningful only if the NODETYPE and VERIFYCP start options are also used.
- 30 SNVC is meaningful only if the BN=YES start option is also used.
- 31 SORDER is meaningful only in an interchange node or a migration data host.
- 32 SRCOUNT is meaningful only if the SRCHRED=ON start option is also used.
- 33 SRTIMER is meaningful only if the SRCHRED=ON start option is also used.
- 34 The SSCPDYN start option applies only for interconnected networks (that is, GWSSCP=YES is used).
- 35 SSEARCH is meaningful only if the NODETYPE=NN start option is also used.
- 36 Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list.

## Start Options

- 37 Code TRACE and its qualifiers on one line. Code the TYPE qualifier immediately following TRACE.
- 38 NOTRACE,TYPE=VTAM is accepted but ignored. Tracing is started with the default trace table size and the default options.
- 39 UPDDELAY is meaningful only if the OSIMGMT=YES start option is also used.
- 40 The VERIFYCP start option is meaningful only if the NODETYPE start option is also used.
- 41 VFYREDTI is meaningful only if the NODETYPE=NN start option is also used.
- 42 VRTG is meaningful only if the NODETYPE and HOSTSA start options are also used.
- 43 VRTGCPCP is meaningful only if the NODETYPE and HOSTSA start options are also used.
- 44 COUNT applies only to the IBM 3720 and 3745 Communication Controllers.
- 45 The default options apply only to MODE=INT.
- 46 PSS and SMS can be turned off.
- 47 If multiple trace options are coded in parentheses, HPR must be one of the options coded inside the parentheses when SUBTRACE=ARBP is coded.
- 48 If multiple trace options are coded in parentheses, SSCP must be one of the options coded inside the parentheses when SUBTRACE=TREE is coded.

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## Chapter 13. Status Codes

This section contains resource and session status information. For additional information refer to *OS/390 IBM Communications Server: IP and SNA Codes*.

In this section you will find:

- “Resource Status Codes and Modifiers”
  - “Resource State Code Categories”
  - “Resource State Code Values” on page 188
  - “Resource Status Modifiers” on page 191
  - “Resource Status Field Information” on page 191
- “Session States and Modifiers” on page 192
  - “Session Status Modifiers and Session State Suffixes” on page 192
  - “Session Initiation States” on page 193
  - “Session Termination States” on page 197
  - “Session Status Modifiers” on page 197

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### Resource Status Codes and Modifiers

VTAM provides detailed information on the status of a resource. This status is defined by a state code that contains up to 10 characters.

**Note:** The status code abbreviation might be truncated if optional status information is displayed in positions 4-10. For example, **ACTIV** is displayed if an LU is in an active state. If a session is queued, pending active, or active for this LU, the resource status modifier **/S** appears in positions 4 and 5, and **ACTIV** is truncated (**ACT/S**).

See “Resource Status Modifiers” on page 191 and “Resource Status Field Information” on page 191 for additional information.

The status code abbreviation appears in some VTAM messages in response to a DISPLAY ID command. Refer to *OS/390 IBM Communications Server: SNA Operation* for more information about the DISPLAY ID command and the messages issued by VTAM in response to this command.

### Resource State Code Categories

Resource states are classified into the following major categories to aid in deciding if a problem exists. If problem determination is needed, refer to *OS/390 IBM Communications Server: SNA Diagnosis V1 Techniques and Procedures*.

**Final** VTAM has no further processing to do for the node.

**Short Transient (Short)**

The node is awaiting completion of an operation (such as I/O) that will take a relatively short time. If the node remains in this state for a long period of time, there is probably a hardware or software error.

**Long Transient (Long)**

The node is awaiting completion of an operation that will take a relatively long time. If the node remains in this state for an unreasonable length of time, there is probably a hardware or software error.

**Suspended (Susp)**

This node is awaiting processing of another node. When the awaited

## RESOURCE STATUS CODES

processing is completed, the status of this node should change. If the awaited processing is completed and this node remains in this state, there is probably a software problem.

### Internal (Int)

This state is used within VTAM to direct processing. It should never be displayed. If it is, there is probably a software problem.

## Resource State Code Values

The first byte represents the resource-status categories, as shown in Table 1.

Table 1. Resource-Status Categories

Value (hex)	Current State Category	Desired State Category
00	Inactive	Inactive
01	Pending inactive	Not used
02	Connectable	Connectable
03	Reactivate	Reactivate
04	Pending active	Not used
05	Active	Active
06	Routable	Routable

The second byte of RPRCURST and RPRDESST gives the specific resource status. Table 2 shows the 2 bytes in combination (for example, value hexadecimal 0001 indicates a category of 00 and a specific code of 01).

### Notes:

1. The state abbreviations are listed in alphabetical sequence.
2. An asterisk (\*) is used to denote state values that may appear in a 1-byte field containing a load status. These values describe the progress of a load requested by the physical unit on an ACTPU response.
3. A double asterisk (\*\*) is used to denote state values that may appear in a 1-byte field containing the line trace, GPT trace, or SIT trace status.

Table 2. Resource Status

Abbreviation	Value (hex)	Category	Resource Status
ACTIV	0505	Final	Resource in active state
APEER	0501	Final	Attach PU type 4 or 5 (peer)
CONCT	0200	Final	Connectable
CTDER	041D	Susp	Contacted error
CTD1	043D	Susp	Contacted
CTRQI	043A	Susp	Contacted request IPL
CT1NS	040F	Susp	Contact not sent
DALUC	011E	Susp	DACTLU complete
DAPUC	011F	Int	DACTPU complete
DEFND	0001	Short	Defined
* DLLDD	05	Final	Loaded
* DLPAB	04	Short	Pending load abort
* DLPLD	03	Long	Pending load
* DLPRP	02	Short	Pending ACTPU response
* DLRST	01	Final	Reset
DUMPC	011B	Susp	Dump complete
FDSCC	0445	Int	Force Disconnect completed
HLACF	0409	Int	Higher-level activate failed
HLACT	042D	Int	Higher-level activate complete

## RESOURCE STATUS CODES

Table 2. Resource Status (continued)

Abbreviation	Value (hex)	Category	Resource Status
IINOP	0005	Final	Inactive (Inoperative)
INACS	0006	Final	Inactive with sessions
INACT	0003	Final	Inactive
INACX	0007	Final	Inactive with address transforms
INOP	0441	Susp	Inoperative
INVAP	0417	Int	Invalid Activate PU response
LLQED	043B	Susp	Lower-level queued
NACDR	042F	Int	Negative Activate CDRM response
NACTL	0410	Int	Negative Activate LU response
NACTP	0412	Int	Negative Activate PU response
NADLK	0423	Int	Negative Add Link response
NADST	0420	Int	Negative Add Link Station response
NALNK	0415	Int	Negative Activate Link response
NANNA	0431	Int	Negative allocate node network address
NASNA	0426	Int	Negative allocate subnode network addresses
NCONO	0400	Int	Negative Connect Out response
NCONT	041C	Int	Negative Contact response
NEVAC	0004	Final	Never activated
NFRSV	0407	Int	Negative Set FRS Control Vector
NLOAD	043C	Int	Negative load response
NNAUV	0403	Int	Negative Set NAU Control Vector
NSARV	041A	Int	Negative Set SAR Control Vector
NSDT	0428	Int	Negative SDT response
NSNCP	042E	Int	Negative Switch to NCP response
NSSSV	0405	Int	Negative Set SSS Control Vector
NSTD	042A	Int	Negative Set Time and Date response
NVYLM	0436	Int	Negative operator query (VFYLM) response
PABCN	010B	Short	Pending Abandon Connection response
PABCO	0116	Short	Pending Abandon Connection Out response
PACDR	0430	Long	Pending Activate CDRM response
PACTL	0411	Short	Pending Activate LU response
PADLK	0421	Short	Pending Add Link response
PADST	0419	Short	Pending Add Link Station response
PALNK	0416	Short	Pending Activate Link response
PALUC	0434	Short	Pending Activate LU Cleanup response
PANNA	0432	Short	Pending allocate node network address
PAPU1	0413	Short or Long	Pending Activate PU(1) response
PAPU2	0425	Short or Long	Pending Activate PU(2) response
PASNA	0427	Short	Pending allocate subnode network addresses
PBFSI	0448	Short	Pending BFSESSINFO
PCDLA	0121	Short	Pending Cleanup DACTLINK active
PCDLI	0122	Short	Pending Cleanup DACTLINK inactive
PCONO	0401	Short	Pending Connect Out response
PCON1	041E	Short	Pending Contact(1) response
PCON2	0422	Short	Pending Contact(2) response
PCTD1	041F	Long	Pending Contacted(1) request
PCTD2	0424	Long	Pending Contacted(2) request
PDACL	010F	Short	Pending DACTLU response
PDACP	0110	Short	Pending DACTPU response
PDANC	0442	Short	Pending DACTPU ANSC
PDANS	0104	Short	The Abandon Connect In request unit has been sent for a node such as a switched link.
PDELR	010E	Short	Pending Delete Network Resource response

## RESOURCE STATUS CODES

Table 2. Resource Status (continued)

Abbreviation	Value (hex)	Category	Resource Status
PDGBK	0123	Short	Pending DACTLINK giveback
PDISC	010D	Short	Pending Discontact response
PDLNK	0112	Short	Pending DACTLINK response
PDLUC	011D	Short	Pending Deactivate LU cleanup
PDMPC	0439	Long	Pending dump contention
PDPA1	0443	Short	Pending DACTPU (ACT1)
PDPA2	0444	Short	Pending DACTPU (ACT2)
PFDCP	0440	Short	Pending Force DACTPU response
PFDLU	0120	Short	Pending Force DACTLU response
PFDMP	0119	Short	Pending Dump response
PFDESC	042C	Short	Pending Force Discontact response
PFNNA	011C	Short	Pending free node network address
PFRSV	042F	Susp	Positive Set FRS Control Vector
PFSNA	010C	Short	Pending free subnode network addresses
PHLAC	040A	Susp	Pending higher-level activation
PHLIN	0102	Susp	Pending higher-level deactivation
PINAC	0100	Long	Pending inactive
PLOAD	040E	Long	Pending load
PLODC	043E	Long	Pending load contention
PLSTC	043F	Long	Pending load station conditional
PLSTU	040D	Long	Pending load station unconditional
PMALD	0446	Long	Pending migration ACTPU load/dump procedure
PMATM	0447	Long	Pending migration ACTPU timer
PNAUV	0404	Short	Pending Set NAU Control Vector response
PNFY1	0113	Long	Pending Notify(1)
PNFY2	0108	Long	Pending Notify(2)
PNFY3	0105	Long	Pending Notify(3)
POAS1	0437	Long	Pending operator query (AUTOSYN1) response
POAS2	0438	Long	Pending operator query (AUTOSYN2) response
PREQC	0402	Long	Pending Request Contact request
PRMPO	0103	Short	Pending RMPO response
PRSET	0101	Short	Pending reset
PSARV	041B	Short	Pending Set SAR Control Vector response
PSDT	0429	Short	Pending Start Data Traffic response
PSNCP	0414	Short	Pending Switch to NCP response
PSSSV	0406	Short	Pending Set SSS Control Vector response
PSTD	042B	Short	Pending Set Time and Date response
PSUBD	0502	Susp	Pending subnode definition
PSUBR	0504	Susp	Pending subnode release
PSUB1	0115	Susp	Pending subnode deactivate(1)
PSUB2	010A	Susp	Pending subnode deactivate(2)
PSUB3	0107	Susp	Pending subnode deactivate(3)
PSWEP	0111	Short	Pending Switch to EP response
PTRM1	0114	Short	Pending Terminate(1) response
PTRM2	0109	Short	Pending Terminate(2) response
PTRM3	0106	Short	Pending Terminate(3) response
PVYLM	0435	Long	Pending operator query (VFYLM) response
P095A	0118	Long	Pending operator query response
P284A	0408	Long	Pending operator query response
RACTH	0301		Reactivate at higher level
RACTN	0300		Reactivate at this level
RADDF	0433	Int	RDTADD failed
RDIAL	0201		Redial

Table 2. Resource Status (continued)

Abbreviation	Value (hex)	Category	Resource Status
RDRSP	0124	Long	Pending RTP_deallocation response
RELSD	0002	Final	Released
RESET	0000	Final	Reset
RINAC	0600	Long	Routable, Inactive
RRLSD	0601	Long	Routable, Released
** TRACT	03	Final	Active
** TRPAR	02	Short	Pending ACT TRACE
** TRPDR	01	Short	Pending DACTTRACE
** TRRES	00	Final	Reset
183AF	0418	Int	Operator query (AUTOSYNCH) failed
284AF	0407	Int	Operator query failed

### Resource Status Modifiers

The following status modifiers can appear in positions 4 and 5 of the state field. Only one modifier will be present at a time.

Table 3. Resource Status Modifiers

Modifier	Meaning
/I	Persistent session recovery is in progress. This status modifier is used only for application resources.
/R	Persistent session recovery is pending. This status modifier is used only for application resources.
/S	A session is queued, pending active, or active for this logical unit, terminal, or application. See "Session States and Modifiers" on page 192 for a description of these session initiation states.

**Note:** Because the abbreviation of the state code is truncated to 3 characters prior to adding the 2-character status modifier, the characters that make the state code unique (the fourth and fifth characters) might be lost. For example, if the /I modifier is appended to PNFY1, PNFY2, or PNFY3, the new state code is PNF/I. It is not possible to determine the original state code in this situation.

### Resource Status Field Information

The following resource status information can appear in character positions 6–10 in the resource status field in VTAM messages.

If a character position is not used a hyphen (-) is displayed. For example, **ACTIV--S--** is displayed if the logical unit or cross-domain resource (CDRSC) is in an active state and defined as a shadow resource.

Table 4. Resource Status Field Information

Res. Stat. Code	Char. Pos.	Meaning
B	10	The link station is functioning as a backup for another link station (in certain migration situations).
D	10	The resource has been added or moved using dynamic reconfiguration.
E	10	The link station or cross-subarea link has been explicitly activated.
F	10	The link station was implicitly activated as a backup.

## RESOURCE STATUS CODES

Table 4. Resource Status Field Information (continued)

Res. Stat. Code	Char. Pos.	Meaning
G	10	The resource is a logical line.
I	10	The link station or cross-subarea link has been implicitly (or automatically) activated, as a result of activating a resource to which this link or link station is subordinate or adjacent. Refer to <i>OS/390 IBM Communications Server: SNA Operation</i> for an explanation of using the RNAME operand or the U operand to automatically activate link stations.
L	8	An independent LU is using this PU as an adjacent link station.
M	6	Takeover is in progress for the PU.
N	7	The resource was not originally owned by the host processing the DISPLAY command.
R	9	A test-resolve retry condition exists for a local area network active leased line. This condition indicates that VTAM LAN support is sending test LPDUs to a station to resolve a route and will continue to do so until either the station is active or the operator deactivates the line.
S	8	The logical unit or cross-domain resource (CDRSC) is defined as a shadow resource.
T	10	The resource (link, physical unit, or logical unit) is attached through the programmed resource capability (NTO) of the NCP.
X	9	The resource was dynamically created from a model definition.
Y	10	The cross-domain resource (CDRSC) was created dynamically.

---

## Session States and Modifiers

This section lists all session states and session status modifiers issued in DISPLAY SESSIONS and DISPLAY ID commands.

### Session Status Modifiers and Session State Suffixes

Session states can be followed by one or more session status modifiers, or by a session state suffix of -P or -S.

#### Session status modifiers

Session status modifiers appear in positions 6-8 of the session state.

**Note:** Part of the session state might be truncated if a modifier is present. For example, if code PDSRLST is issued with status modifier /C, VTAM displays **PDSRL/C**. Because the first 5 characters of session states are unique, it is still possible to identify the original session state.

See "Session Status Modifiers" on page 197 for a listing of possible session status modifiers.

#### Session state suffixes (-P and -S)

If the session state is displayed with a suffix of -P, for example ACTIV-P, the resource is the primary LU.

If the session state is displayed with a suffix of -S, for example ACTIV-S, the resource is the secondary LU.



## Session Initiation States

A session state can be classified into one of the following three groups:

### Q (Queued)

- If the session state is preceded by **A-**, the session is traversing the APPN portion of the network. The session is considered *queued* when the session request has been received at a node performing only APPN functions for this session.

**Note:** The VARY TERM command cannot be used to terminate sessions in any state that is preceded by **A-**.

- For all other states, the session is considered *queued* under the following circumstances:
  - A session request has been received, but session establishment has not located the resources required for the session.
  - The resources required for the session have been located; however, the resources are temporarily unavailable for sessions. Further session establishment procedures have been suspended until the resource is available. The session is in a reallocation pending state.

### P/A (Pending Active)

A session is considered *pending active* when both resources required for session setup have been successfully located and are available for sessions. Session establishment proceeds.

### ACT (Active)

A session is considered *active* (ACT) when all session start signals have been received, and a session has been successfully established.

Table 5 lists the possible session states.

**Note:** If the session state is preceded by **A-**, the session is traversing the APPN portion of the network. See “Session Initiation States” for more information about these queued session states.

Table 5. Session States

Session State	Status	Meaning
A-PCOS	Q	Pending COS reply.
A-PCRYPT	Q	Pending cryptographic keys.
A-PDS	Q	Pending directory services.
A-PNCOSM	Q	Pending entry COS mapping.
A-PRSCV	Q	Pending RSCV reply.
A-PSACF	Q	Pending subarea chain flow.
A-PSAR	Q	Pending subarea reply.
A-PTGVS	Q	Pending TG reply.
A-PXCOSM	Q	Pending exit COS mapping.
A-QUEUE	Q	This LU-LU session is queued.
A-RESET	Q	This session is reset.
A-TERM	P/A	The session is pending termination.
ACTIV	ACT	The session is active. A session has been successfully established.
ADIALIP	P/A	Dial in progress for APPN LU.
CDPRIP	Q	CDINIT pending cross-domain routing completion. Another request is pending for the specified LU, and this session will wait for routing to complete.
DDIALIP	Q	Dial in progress for DLU.
DLUCOMP	Q	DLU direction processing complete.
DLUPROR	Q	DLU direction processing required.

## Session States

Table 5. Session States (continued)

Session State	Status	Meaning
DLURNAA	Q	DLU direction RNAA processing needed.
DNOTFYNN	Q	Destination notification not necessary.
DRNASUS	Q	DLU direction RNAA processing suspended pending termination using same PLU network address.
DSSPD	Q	DSRLST pending cross-domain routing in progress.
INITC	Q	The SIB has been initialized.
INITSENT	Q	INIT or CDINIT response has been sent.
NULL	Q	Initial state of session.
ODIALIP	Q	Dial in progress for the OLU.
OLUCOMP	Q	OLU direction processing complete.
OLUEC	Q	OLU endpoint processing complete.
OLUEN	Q	OLU endpoint domain processing needed.
OLUPROR	Q	OLU direction processing required.
OLURNAA	Q	OLU direction RNAA processing needed.
ORNASUS	Q	OLU direction RNAA processing suspended pending termination of a session using same PLU network address.
PADIAL	P/A	Pending dial response for APPN LU.
PARAMRU	P/A	Pending APPN LU address assignment.
PARSCV	P/A	Pending APPN RSCV calculation for SLU initiated sessions.
PBFCINIT	P/A	Pending BFCINIT response.
PBIPLUBF	P/A	Pending receipt of the BFINIT from the boundary function of the APPN PLU.
PBISLUBF	P/A	Pending receipt of the BFINIT from the boundary function of the APPN SLU.
PCDCQ	Q	Pending CDCINIT request.
PCDCS	P/A	Pending CDCINIT response.
PCDDQ	Q	Pending CDINITDQ response. This state is set when the session was reallocated and a CDCINIT DQ request was sent.
PCDINIT	Q	Pending CDINIT response.
PCFRES	Q	Pending generic resource resolution for destination LU (DLU).
PCFUPD	Q	Pending coupling facility update for origination LU (OLU).
PCINIT	P/A	Pending CINIT or BFCINIT response.
PCIST	P/A	Pending CINIT or BFCINIT response and session start has already been received.
PCRCQ	Q	Pending session cryptographic key for CINIT request.
PCRCS	Q	Pending session cryptographic key for CINIT request.
PCRDQ	Q	Pending session cryptographic key for DEQUEUE request.
PCRDS	Q	Pending session cryptographic key for DEQUEUE request.
PCRYPK	Q	Pending cryptographic keys.
PDDIAL	Q	Pending dial response for the DLU.
PDLUIO	Q	Pending USS message response in DLU direction. The DLU device must respond to the USS message or no sessions will be initialized.

Table 5. Session States (continued)

Session State	Status	Meaning
PDNETDET	Q	Pending DSRLST response for determination of the network identifier of the destination LU. A DSRLST has been sent for another session.
PDRAMRU	Q	DLU pending response from address manager for a request.
PDRDS	Q	Pending resource discovery search (RDS) completion.
PDRNAAD	Q	DLU RNAA response pending from the gateway NCP in the OLU direction.
PDSRLST	Q	Pending direct search list type 01 and 02 response.
PNOTIFYV	P/A	Pending NOTIFY(A) for VRTG.
PODIAL	Q	Pending dial response for OLU.
POLUIO	Q	Pending USS message response in OLU direction. The OLU device must respond to the USS message or no sessions will be initialized.
PORAMRU	Q	OLU pending response from address manager for a request.
PORNAAO	Q	An RNAA response is pending from gateway NCP in the OLU direction.
POSACOM	Q	Pending Override Session Address (OSA) completion. This state is set when a session is initiated to a non-SNA SLU, and a previous session with the SLU is terminated.
PPCQRPY	Q	Pending PCID_QUERY_REPLY IPS from the APPN side of the node.
PRAV1	Q	Pending resource available. A resource was found during OLU processing that was unavailable. Session setup will continue when the LU becomes available.
PRAV2	Q	Pending resource available. A resource was found during DLU processing that was unavailable. Session setup will continue when the LU becomes available.
PRAV3	P/A	Status checking found an APPN logical unit's PU temporarily unavailable. Session setup will wait on the PU to become available.
PREALC	Q	Pending reallocation. A session has been queued.
PRECOVRY	P/A	Pending completion of multinode persistent session recovery processing.
PRMRC	Q	Pending request multiple routes inter-process signal (IPS) for CDINIT.
PRMRD	Q	Pending request multiple routes inter-process signal (IPS) for DSRLST.
PRSCDPRE	Q	Pending RSCV precalculation for the DLU.
PRSCOPRE	Q	Pending RSCV precalculation for the OLU.
PRSCVD	Q	Pending RSCV in the DLU direction.
PRTPSTR	P/A	Pending RTP start.
PSCRYP	Q	Pending send of the cryptographic control vector by the primary XRF session.

## Session States

Table 5. Session States (continued)

Session State	Status	Meaning
PSEST	P/A	Pending SESSST or BFSESSST request. The session can be expecting any of several signals. Use D NET,SESSIONS,SID= command to see specific signals needed. <b>Note:</b> In storage situations, if you do not receive the started signal, it might be because the session is already active.
PSETCVR	Q	Pending SETCV response.
PSHRP	Q	Pending request single hop route reply.
PSLUIO	Q	Pending USS message response in SLU direction. The SLU device must respond to the USS message or no sessions will be initialized.
PSSADR	Q	Pending Set Session Address (SSA) response. SSA is sent as part of initiation when the SLU is a non-SNA LU and not in the same domain.
PSWAP	P/A	Pending swap from hidden CDRSC to real CDRSC.
PTAKOVER	Q	Pending SSCP takeover is complete.
PTCRXCRS	Q	Pending translation of cryptographic keys for the CDINIT response for an XRF backup session.
PTCRYP	Q	Pending translation of cryptographic keys for the backup XRF session.
PXASL	Q	Pending associated LU name translation.
PXDA1CDI	Q	Pending DLU alias to real translation. This SSCP located a USERVAR for the DLU and is attempting to translate the DLU real name into an alias name.
PXDA2CDT	Q	Pending DLU alias to real translation. Another SSCP located a USERVAR for the DLU and returned the value as a real name to this SSCP. VTAM is attempting to translate this real name into an alias name.
PXDA3DSL	Q	Pending DLU alias to real translation. During DSRLST response processing, VTAM is attempting to translate the DLU real name into an alias name.
PXDGC	Q	Pending DLU direction COS translation.
PXDLO	Q	Pending DLU logon mode translation.
PXDRD	Q	Pending DLU real name translation.
PXOGC	Q	Pending OLU direction COS translation.
REALCOM	Q	Re-allocation complete.
REALIP	Q	Re-allocation in progress. The session is currently being re-allocated.
SEIPRT	Q	SESSEND in progress during routing. Routing will continue when the previous session completes termination.
SEOIP	Q	SESSEND processing in progress in OLU domain. A duplicate session exists, and this session will be suspended until termination processing has completed for the duplicate session.
SETCVCOM	Q	SETCV complete.
UNKNOWN	Q	The session state could not be determined.

## Session Termination States

Termination states that follow are set during termination processing of a session:

**NULL** The initial state. Termination is not in progress.

**OSARECV**

OSA response received.

**PBFCLN**

Pending BFCLEANUP response.

**PCDTM**

Pending CDTERM response. This is CDTERM sent for termination.

**PCLNP**

Pending CLEANUP response.

**PCTMR**

Pending CTERM response.

**PINITO**

Pending initiation I/O completion.

**PLUCIO**

USSMSG response from the SLU has been received and the session termination is continuing.

**PLUIO**

Pending USSMSG response from the SLU. A USSMSG was sent to the SLU and VTAM is waiting for a response. The termination of this session will complete when the device responds.

**PMRCVTRM**

Pending multinode persistent session recovery termination signal.

**POSAR**

Pending Override Session Address (OSA) response.

**PSESEND**

Pending SESSEND or BFSESEND.

**PSESF**

Pending CDSESSSF response.

**PSETF**

Pending CDSESSTF response.

**UNKNOWN**

The session state could not be determined.

## Session Status Modifiers

The following session status modifiers can appear in positions 6–8 of the session state. These can occur in any order.

**/B** A session establishment request is pending.

**/C** One of the session partners is a controlling LU. /C is displayed only by the SLU (that is, the host which entered the VARY LOGON).

**/DL** The session is a CP-SVR session.

**/I** Persistent session recovery is in progress.

**/M** The session is capable of being recovered through multinode persistent session support.

## Session Status Modifiers

- /P** The session is a primary XRF session.
- /R** Persistent session recovery is pending.
- /U** A session termination request is pending.
- /X** The session is a backup XRF session.
- /CI** One of the session partners is a controlling LU and persistent session recovery is in progress. /CI is displayed only by the SLU (the host that issued the VARY LOGON).
- /CP** The session is a CP-CP session.
- /CR** One of the session partners is a controlling LU and persistent session recovery is pending. /CR is displayed only by the SLU (the host that issued the VARY LOGON).
- /MI** Multinode persistent session recovery is in progress.
- /MR** Multinode persistent session recovery is pending.
- /PB** The session is a primary XRF session, and a session establishment request is pending.
- /PC** The session is primary XRF session, and one of the session partners is a controlling LU.
- /PI** The session is a primary XRF session, and persistent session recovery is in progress.
- /PR** The session is a primary XRF session, and persistent session recovery is pending.
- /PU** The session is a primary XRF session, and a session termination request is pending.
- /SV** The session is a SNA Service Manager session.
- /XB** The session is a backup XRF session, and a session establishment request is pending.
- /XC** The session is a backup XRF session, and one of the session partners is a controlling LU.
- /XI** The session is a backup XRF session, and persistent session recovery is in progress.
- /XR** The session is a backup XRF session, and persistent session recovery is pending.
- /XU** The session is a backup XRF session, and a session termination request is pending.

---

## Chapter 14. Dump Analysis Tool Commands

The commands in this section should be in single quotes and begin with VERBEXIT VTAMMAP. For additional information refer to *OS/390 IBM Communications Server: SNA Diagnosis V1 Techniques and Procedures*.

▶▶—VERBEXIT VTAMMAP 'subcommand options'—▶▶

---

### ALL

Invoke VTBASIC, RDTFULL, VTAM, STORAGE, ROUTES, and SES:

▶▶—ALL—

FORMAT
NOFORMAT

—▶▶

---

### APPLCONV

Display all conversations for an APPC application:

▶▶—APPLCONV— APPLNAME(*APPC\_application\_name*)—▶▶

---

### APPLMODE

Display all logon modes in the logon mode table for conversations between an application program and a particular partner LU:

▶▶—APPLMODE— APPLNAME(*APPC\_application\_name*)— LU(*partner\_LU\_name*)—▶▶

▶▶—

NETID( <i>partner_LU_netid</i> )
----------------------------------

—▶▶

---

### APPMODAL

Display all information about a particular logon mode for a conversation between an application and a partner LU:

▶▶—APPMODAL— APPLNAME(*APPC\_application\_name*)— LU(*partner\_LU\_name*)—▶▶

▶▶—

NETID( <i>partner_LU_netid</i> )
----------------------------------

 LOGMODE(*logon\_mode\_name*)—▶▶

## Dump Analysis Tool Commands

---

### APPNBASE

Format the global APPN control blocks:

▶▶ APPNBASE ◀◀

---

### ATMDATA

Format control blocks associated with ATM support:

▶▶ ATMDATA ◀◀  
└─ LINEN(*line\_name*) ─┘ └─ MAJORN(*major\_node\_name*) ─┘

▶▶ └─ PORTN(*port\_name*) ─┘ ◀◀

---

### CSMALL

Display the major control block, a summary of all CSM pools, and each pool control block and its associated extent control blocks:

▶▶ CSMALL ◀◀

---

### CSMBUF

Display the following information about a CSM buffer with a specified token:

▶▶ CSMBUF CSMTOKEN(*buffer\_token*) ◀◀

---

### CSMOWNER

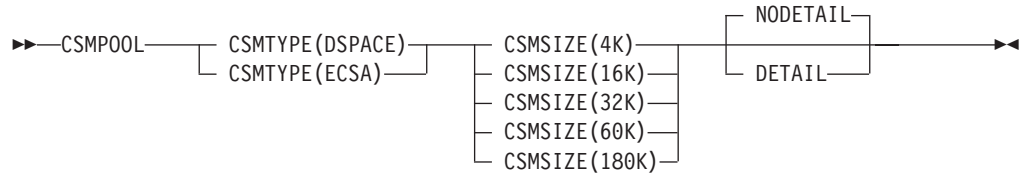
Display the addresses of all CSM buffers owned by a specific user:

▶▶ CSMOWNER CSMOWNID(*owner\_identifier*) ◀◀



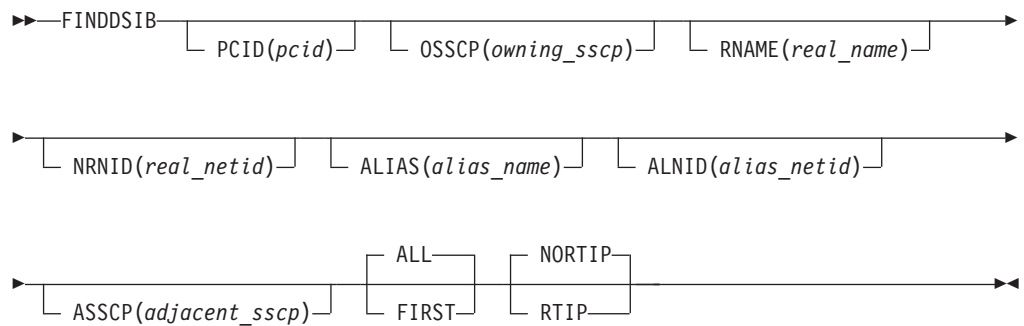
## CSMPOOL

Display the CSM control blocks for a specific size and type of CSM storage pool:



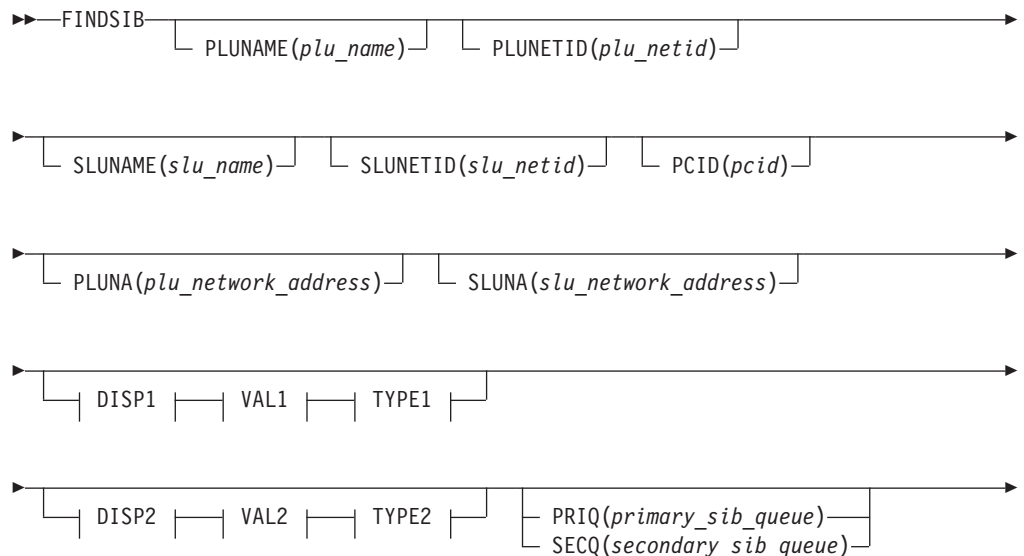
## FINDDSIB

Scan the ATCVT DSSIB queue for DSSIBs that meet specified selection criteria:



## FINDSIB

Scan a queue of SIBs for those that meet specified selection criteria:



## Dump Analysis Tool Commands



### DISP1



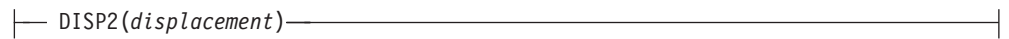
### VAL1



### TYPE1



### DISP2



### VAL2



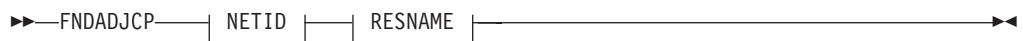
### TYPE2



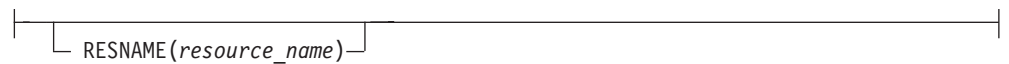
---

## FNDADJCP

Scan all of the partner nodes that have CP-CP sessions with this host for the given resource:



### RESNAME



**NETID**




---

**FNDANDCB**

Format control blocks associated with CP-CP sessions:



**RESNAME**



**NETID**




---

**FNDCOS**

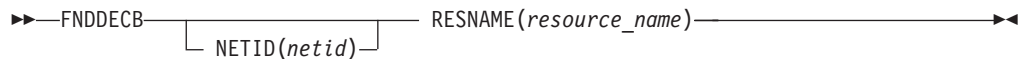
Format mode tables, mode table entries, and class-of-service entries:




---

**FNDDECB**

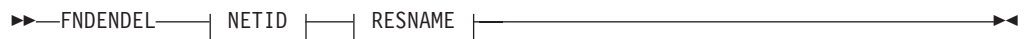
Format a directory entry and its parent directory entries:




---

**FNDENDEL**

Format control blocks associated with adjacent end nodes:

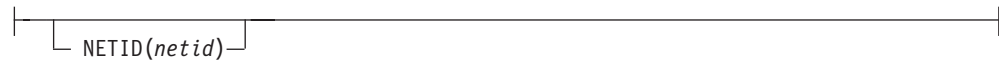


## Dump Analysis Tool Commands

### RESNAME



### NETID



---

## FNDLCB

Format control blocks associated with directory search requests:



### PCID



---

## FNDNDREC

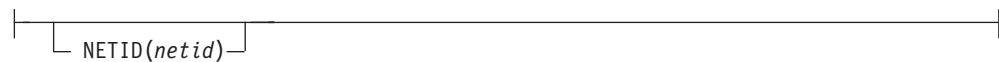
Scan the topology and route selection database for node records matching the given resource and formats the NDREC control block:



### RESNAME



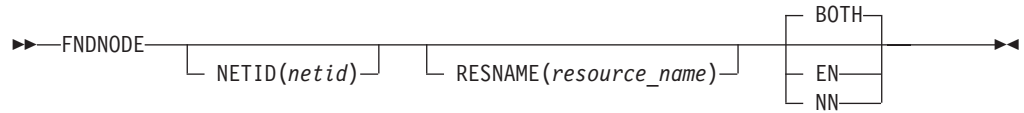
### NETID



---

## FNDNODE

Format one or more APPN adjacent end nodes and/or adjacent network nodes:



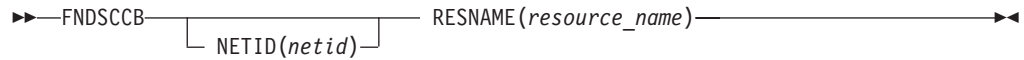
## FNDREREC

Format one or more routing node entries including siblings and children:



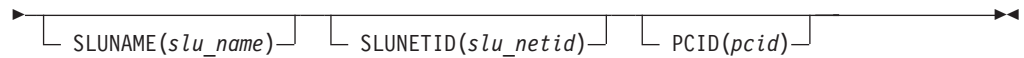
## FNDSCCB

Format all ISTLCBs for a specific search concentration control block:



## FNDSITCB

Format SITCB control block associated with session services for LU-LU sessions:

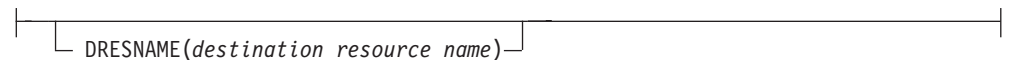


## FNDTGREC

Format control blocks associated with topology and routing:



### DRESNAME





**ISTVMAP**

Determine the starting and ending addresses and area size of MVS/ESA™ storage areas in a dump:

▶▶—ISTVMAP—▶▶

**ISTVSAVE**

Follow a VTAM save-area (VWA) chain forward and backward, starting from the specified save-area address:

▶▶—ISTVSAVE—  
                   └─ address ─┘  
                   └─ symbol ─┘   └─ ALL ─┘

**ISTVSLIP**

Display the registers and PSW that were current at the time of an SLIP dump:

▶▶—ISTVSLIP—▶▶

**MNPSC**

Compare the MNPS-related control blocks from a dump created by MNPSD with a dump created after the recovery has completed:

▶▶—MNPSC DDNAME(*ddname*)—  
                                   └─ RESOURCE(*resource*) ─┘  
   └─ NETID(*netid*) ─┘  
                                   └─ PCID(*pcid*) ─┘

**MNPSD**

Create a dump of the MNPS-related control blocks from a dump created at the time of a VTAM failure:

▶▶—MNPSD— DDN(*DD\_name*)—▶▶

**MNPSF**

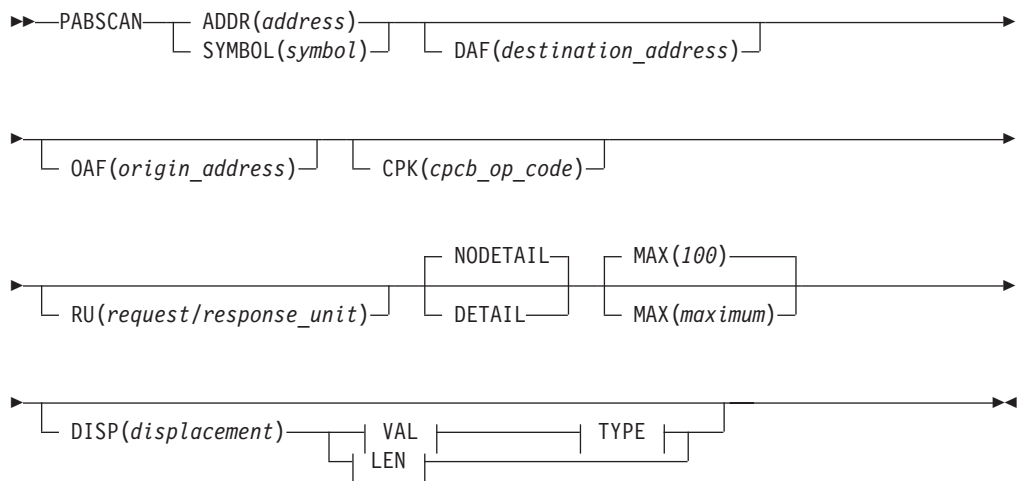
Format the MNPS-related session control blocks:

▶▶—MNPSF—  
                   └─ RESOURCE(*resource*) ─┘  
                                   └─ NETID(*netid*) ─┘  
                   └─ PCID(*pcid*) ─┘

## Dump Analysis Tool Commands

### PABSCAN

Scan a chain of RUPes queued to a PAB and obtain a summary of the RUPes by RU type:



#### LEN

LEN(*length*)

#### VAL

VAL(*data\_value*)

#### TYPE

TYPE(*data\_type*)

### PARTNRLU

Display all partner LUs for an APPC application:

PARTNRLU APPLNAME(*APPC\_application\_name*)



---

**RDTCHECK**

Display the RDTE name, RDTE address, RDTE entry type, RDTE header type, network address, and the current and desired state of an RDTE:

```

>>—RDTCHECK—┌ ADDR(address)—┐
                └ SYMBOL(symbol)—┘

```

---

**RDTFULL**

Display all resource definition table entries (RDTEs) and node control blocks (NCBs) or a selected RDTE:

```

>>—RDTFULL—┌ RDTE(name)—┘

```

---

**RDTHIER**

Display the specified RDTE and all RDTEs below it in the RDTE hierarchy:

```

>>—RDTHIER—┌ RDTE(name)—┘

```

---

**RDTSUM**

Display a summary for all RDTEs or for a selected RDTE:

```

>>—RDTSUM—┌ RDTE(name)—┘

```

---

**ROUTES**

Display explicit route table entries (ERTEs) and virtual route blocks (VRBLKs):

```

>>—ROUTES—┐

```

---

**SES**

Format control blocks associated with LU-LU sessions:

```

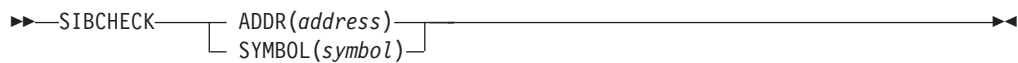
>>—SES—┌ RDTE(name)—┘

```

## Dump Analysis Tool Commands

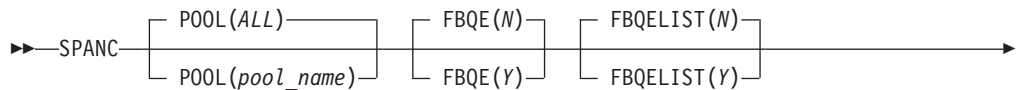
### SIBCHECK

Analyze important fields and relevant status flags in an SIB and related control blocks:



### SPANC

Analyze any or all of the VTAM storage pool anchors (SPANCS):



#### EXIT



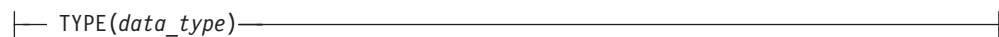
#### DISP



#### VAL

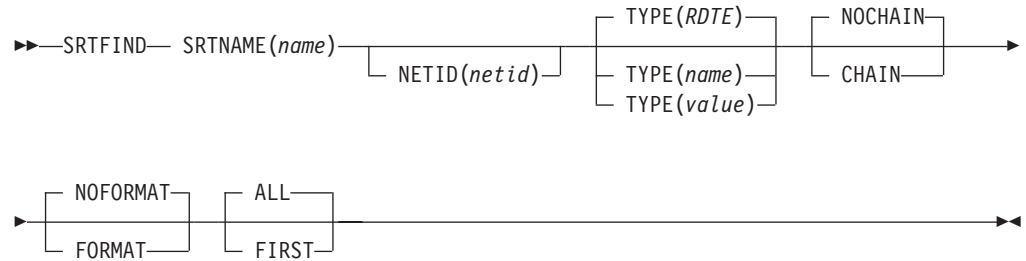


#### TYPE



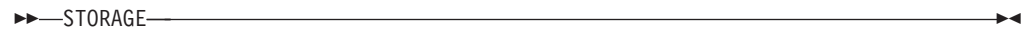
## SRTFIND

Locate a symbol resolution table entry (SRTE) in a dump:



## STORAGE

Format BPCBs, BPDTYs, PXBs, SPANCs, and SPTAEs:



## VITAL

Extract an internal VIT from a dump for use with the VIT analysis tool:



## VTAM

Format control blocks associated with VTAM:



## VTBASIC

Display the ATCVT, the configuration table (CONFT), the component recovery areas (CRAs), and the VTAM internal trace (VIT):



## Dump Analysis Tool Commands

---

### VTBUF

Analyze buffer pool control blocks (BPCBs) and obtain a status summary for all buffer pools or a specific buffer pool:

▶▶—VTBUF— [ BUFFER(*ALL*) ]  
                  [ BUFFER(*name*) ] —————▶▶

---

### VTCVTPAB

Obtain a list of the PABs and DYPABs in the ATCVT:

▶▶—APPNBASE—▶▶

---

### VTFNDMOD

Determine the VTAM module name and displacement for a given address:

▶▶—VTFNDMOD— [ ADDR(*address*) ]  
                  [ SYMBOL(*symbol*) ] —————▶▶

---

### VTMODS

Find the entry point of the VTAM modules that reside in the VTAM private region:

▶▶—VTMODS— [ LIST(*M*) ]  
                  [ LIST(*Y*) ] —————▶▶

---

### VTNODE

Determine if a SIB exists on the secondary chain where the RDTE is the SLU or if an RDTE application exists, and if the ACDEB, LUCB, FMCB, and FMCB extension associated with the session exist:

▶▶—VTNODE— RDTE(*name*) [ NETID(*netid*) ] —————▶▶

---

### VTREADYQ

Analyze some of the major control blocks associated with an application:

▶▶—VTREADYQ—▶▶

## VTRPH

Analyze the entire LP buffer pool of request parameter headers (RPHs) and display those that are waiting, running, holding locks, or are in error:

▶▶ VTRPH

## VTVIT

Determine which VIT options were in effect at the time of a dump, and whether the trace was running internally (MODE=INT), externally (MODE=EXT), or internally and externally:

▶▶ VTVIT [SCAN(search\_argument)] [LIST(N)] [LIST(Y)]

## VTVRBLK

Look at VRs for all subareas and displays information:

▶▶ VTVRBLK [SUBAREA(number)] [SCAN] [DETAIL]

## VTWRE

Count or help analyze waiting request elements (WREs):

▶▶ VTWRE [EID(event\_id)] [EIDCODE(event\_id\_code)]

▶ [LQAB(ALL)] [LQAB(lqab\_name)] [SUBAREA(number)] [MASK(mask)]

▶ [MAX(100)] [MAX(maximum)] [CPK(cpcb\_op\_code)] [URC(user\_request\_correlator)]

▶ [NOFORMAT] [FORMAT] [SCAN] [DETAIL]



---

## Part 3. Appendixes





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