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VTAM™

LY43-0047-1

Reference Summary

Version 3 Release 3 for MVS, VM, and VSE/ESA

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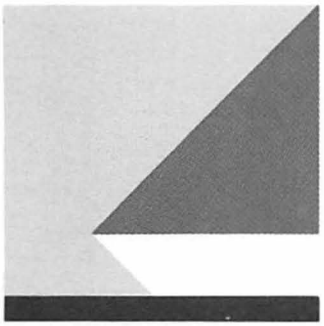
VTAM™

LY43-0047-1

Reference Summary

Version 3 Release 3 for MVS, VM, and VSE/ESA



File Number
S370/4300/30XX-50

Program Numbers
5685-085 (MVS/ESA)
5684-052 (VM/9370 for VM/SP)
5665-289 (MVS/XA)
5664-280 (VM/SP)
5666-363 (VSE/ESA)
5684-095 (VM/ESA)

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Second Edition (September 1990)

This licensed document applies to the following releases of the Advanced Communications Function for VTAM (ACF VTAM), an IBM licensed program:

ACF/VTAM Version 3 Release 3 for MVS/ESA (program number 5685-085)
ACF/VTAM Version 3 Release 3 for MVS/XA (program number 5665-289)
ACF/VTAM Version 3 Release 3 for VM/SP (program number 5664-280)
ACF/VTAM Version 3 Release 3 for VM/9370 (program number 5684-052)
ACF/VTAM Version 3 Release 3 for VM/ESA (program number 5684-095)
ACF/VTAM Version 3 Release 3 for VSE/ESA (program number 5666-363).

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This book is intended to help you reference essential VTAM information quickly. It contains information extracted from other publication in the VTAM library. This book does not document any programming interfaces. The documents providing the information contained in this book should be consulted for programming interface definitions. The contributing documents are listed in "About This Book" on page vii.

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9371	VTAM	MVS/XA
MVS/ESA		

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About This Book

VTAM Reference Summary information is extracted directly from the following publications in the VTAM* library:

- *VTAM Resource Definition Reference*
- *VTAM Operation*
- *VTAM Messages and Codes*
- *VTAM Programming*
- *VTAM Programming for LU 6.2*
- *VTAM Diagnosis.*

VTAM Reference Summary provides essential information on VTAM and VSCS commands, VTAM definition statements, VTAM start options, VTAM and VTAM APPCCMD macroinstructions, and VTAM and VSCS trace formats.

Who Should Use This Book

Note: Before attempting to use this reference, you should be familiar with information presented in the respective VTAM source manuals (Table 0-1 on page x outlines the current VTAM library).

VTAM Reference Summary is useful for system programmers, application programmers, and network programmers responsible for any or all of the following tasks:

- Installing and customizing VTAM
- Writing programs that use VTAM macroinstructions
- Providing operators with a summary of the information needed to operate the VTAM Version 3 licensed program.

How to Use This Book

VTAM Reference Summary is divided into the following task-oriented chapters:

- Resource Definition
- Operation
- Programming
- Programming for LU 6.2
- Diagnosis.

Chapter 1, "Resource Definition," summarizes the VTAM definition statements, start options, the DTIGEN macroinstruction, and user-defined tables contained in *VTAM Resource Definition Reference*.

Chapter 2, "Operation," summarizes the VTAM operator commands contained in *VTAM Operation*, **and** the resource status codes contained in *VTAM Messages and Codes*.

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Chapter 3, "Programming," summarizes the VTAM macroinstructions contained in *VTAM Programming*.

Chapter 4, "Programming for LU 6.2," summarizes the VTAM APPCCMD macroinstructions contained in *VTAM Programming for LU 6.2*.

Chapter 5, "Diagnosis," summarizes the trace record formats contained in *VTAM Diagnosis*.

"Glossary" on page X-3 contains definitions of technical terms.

Symbols Used in This Book

The following operating system symbols, when used in the *VTAM Reference Summary*, precede information specific to that operating system.

Note: **No** symbols are used when information applies to all operating systems.

MVS	Indicates information that applies to MVS/XA* and MVS/ESA*.
MVS/XA	Indicates information that applies to MVS/XA only.
MVS/ESA	Indicates information that applies to MVS/ESA only.
VM	Indicates information that applies to VM only.
VM/ESA	Indicates information that applies to VM/ESA only.
VSE	Indicates information that applies to VSE only. **Note:** Because VSE/ESA is one of the licensed programs in VSE/System Package, no distinction is made between the two.
ES/9370	Indicates information that applies only to the telecommunications subsystem controller, the token-ring subsystem controller, or the workstation subsystem controller on the Enterprise System/9370* processor supported by the VM or VSE operating system.
ES/9371	Indicates information that applies only to the telecommunications subsystem controller, the token-ring subsystem controller, or the workstation subsystem controller on the 9371 processor supported by the VM and VSE operating systems.
4361	Indicates information that applies only to the communication adapter on the 4361 processor supported by the VM or VSE operating system.

You will come across two or more operating system symbols appearing together (and on the same line), with accompanying information, as in the following example:

MVS VM *Authorized path is intended to improve the performance of VTAM applications.*

The example information applies to MVS/XA, MVS/ESA, and VM, but **does not** apply to VSE.

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Symbols Used in the Tables

When, in *VTAM Reference Summary* tables, operating system symbols appear in the operands column, they apply **only** to the immediately preceding operand, as in the following example:

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = SWNET [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE [,MAXGRP = n] [,MAXNO = n]

In the above example table, MVS and VSE apply **only** to the operands [,CONFGDS = name] and [,CONFGPW = password].

When operating system symbols follow the "Operands" column-heading, they apply to the **entire** command, as in this example:

VM Prefix	Operation	Operands MVS
vtam	{DISPLAY|D}	NET,TABLE ,ID = tablename [,SCOPE = {**ONLY**|ALL}][1]

Note:

1. In some of the operands columns, you will see a superscript number following an operand. Read the corresponding "Note" information at the end of the table. (This superscript has been added for purposes of example.)

   Note that **ONLY**, because it is the default operand, is underlined and appears in bold type.

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Where to Find More Information

Table 0-1 shows the books in the VTAM V3R3 library, arranged according to related tasks. For descriptions of these manuals, see "Bibliography" on page X-29. The bibliography also lists the title and order number of any manual related to this manual or cited by name in this manual.

Table 0-1. The VTAM V3R3 Library

Planning	
SC31-6092	*Planning and Reference for NetView, NCP, and VTAM*
GC31-6429	*VTAM Directory of Migration Information*
SK2T-2010	*VTAM Storage Estimates* (diskette only)
Installation and Resource Definition	
SC31-6404	*VTAM Network Implementation Guide*
SC31-6412	*VTAM Resource Definition Reference*
Customization	
LY43-0046	*VTAM Customization*
Operation	
SC31-6408	*VTAM Operation*
SC31-6405	*VTAM Messages and Codes*
Writing Application Programs	
SC31-6409	*VTAM Programming*
SC31-6410	*VTAM Programming for LU 6.2*
Diagnosis	
LY43-0042	*VTAM Diagnosis*
LY43-0053 (V3R3)	*VTAM Data Areas for VSE*
LY43-0043 (V3R3)	*VTAM Data Areas for MVS*
LY43-0045 (V3R3)	*VTAM Data Areas for VM*
Reference	
LY43-0047	*VTAM Reference Summary*
GC31-6430	*Bibliography and Master Index for NetView, NCP, and VTAM*

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Chapter 1. Resource Definition

Defining an Application Program Major Node

Note: When, in the following tables, one or more operating system symbols appear in the operands column, they apply **only** to the immediately preceding operand. For further information on the placement of symbols in this book, refer to "Symbols Used in This Book" on page viii and "Symbols Used in the Tables" on page ix.

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = APPL

APPL Statement

Name	Definition Statement	Operands
name	APPL	[ACBNAME = acb name] [,APPC = YES|**NO**] [,ASLENT = associated LU table entry name] [,ASLTAB = associated LU table name] [,ATNLOSS = **LAST**|ALL][1] [,AUTH = ([ACQ|**NOACQ**] [,CNM|**NOCNM**] [,PASS|**NOPASS**] [,PPO|SPO|**NOPO**] [,TSO|**NOTSO**] MVS [,**VPACE**|NVPACE])] [,AUTHEXIT = YES|**NO**] VM [,AUTOSES = n|**0**][1] [,DDRAINL = ALLOW|**NALLOW**][1] [,DLOGMOD = default logmode entry name] [,DMINWNL = n|**1**][1] [,DMINWNR = n|**1**][1] [,DRESPL = ALLOW|**NALLOW**][1] [,DSESLIM = n|**2**][1] [,EAS = n|**509**] [,ENCR = SEL|REQD|COND|OPT|**NONE**] MVS [,HAVAIL = YES|**NO**] MVS [,LMDENT = n|**19**][1] [,MAXPVT = **0**|n|nK|nM] MVS VM [,MDLENT = model name table entry name] [,MDLTAB = model name table name] [,MODETAB = logon mode table name]

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Name	Definition Statement	Operands
		[,PARSESS = YES|NO]
		[,POAQLIM = n]
		[,PRTCT = password]
		[,SECACPT = **NONE**|CONV|ALREADYV][1]
		[,SONSCIP = YES|**NO**]
		[,SPAN = span name]
		[,SRBEXIT = YES|**NO**] MVS
		[,SSCPFM = USSNOP|**USSPOI**]
		[,SYNCLVL = **CONFIRM**|SYNCPT|NONE][1]
		[,USSTAB = USS table name]
		[,VCNS = YES|**NO**] VM
		[,VERIFY = **NONE**|OPTIONAL|REQUIRED][1] MVS VM
		[,VPACING = n|**0**]
		[,VTAMFRR = YES|**NO**] MVS

Note:

1. The following operands are valid only when APPC = YES:

   ATNLOSS, AUTOSES, DDRAINL, DMINWNL, DMINWNR, DRESPL, DSESLIM, LMDENT, SECACPT, SYNCLVL, and VERIFY.

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Defining a Local Non-SNA Major Node

LBUILD Statement

Name	Definition Statement	Operands
[name]	LBUILD	[CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE

LOCAL Definition Statement

Name	Definition Statement	Operands
name	LOCAL	CUADDR = channel device address ,TERM = 3277|3284|3286 [,ASLENT = associated LU table entry name] [,ASLTAB = associated LU table name] [,DLOGMOD = default logon mode entry name] [,FEATUR2 = ([EDATS|**NOEDATS**] [,LOWERCSE|**DUALCSE**] VM [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])] [,ISTATUS = **ACTIVE**|INACTIVE] [,LOGAPPL = controlling primary LU] [,LOGTAB = interpret table name] [,MDLENT = model name table entry name] [,MDLTAB = model name table name] [,MODETAB = logon mode table name] [,SPAN = span name] [,SSCPFM = **USS3270**|USS3275] [,USSTAB = USS table name]

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Defining a Local SNA Major Node

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = LOCAL [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE

PU Definition Statement

Name	Definition Statement	Operands
name	PU	[ASLENT = associated LU table entry name]' [,ASLTAB = associated LU table name]' [,CUADDR = channel device address] [,DELAY = t|**.200**] [,DISCNT = ([YES|**NO**][,**F**|NF])] [,DLOGMOD = default logmode entry name]' [,ENCR = REQD|SEL|OPT|**NONE**]' MVS [,ISTATUS = **ACTIVE**|INACTIVE]' [,LOGAPPL = controlling primary LU]' [,LOGTAB = interpret table name]' [,MAXBFRU = n|**1**] [,MDLENT = model name table entry name]' [,MDLTAB = model name table name]' [,MODETAB = logon mode table name]' [,NETID = network id] [,PACING = n|0|**1**]' [,PUTYPE = **2**] [,SECNET = YES|**NO**] [,SPAN = span name] [,SSCPFM = **FSS**|USSSCS]' [,USSTAB = USS table name]' [,VPACING = n|0|**1**]' [,XID = YES|**NO**]

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Note:

1. The following table shows the operands that can be coded in the PU statement to take advantage of the sift-down effect.

Operand	PU	LU
ASLENT	S	M
ASLTAB	S	M
DLOGMOD	S	M
ENCR	S	M
ISTATUS	M	M
LOGAPPL	S	M
LOGTAB	S	M
MDLENT	S	M
MDLTAB	S	M
MODETAB	S	M
PACING	S	M
SSCPFM	S	M
USSTAB	S	M
VPACING	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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LU Definition Statement

Name	Definition Statement	Operands
name	LU	LOCADDR = n [,ASLENT = associated LU table entry name][1] [,ASLTAB = associated LU table name][1] [,DLOGMOD = default logmode entry name][1] [,EAS = n|**256**][1] [,ENCR = REQD|SEL|OPT|**NONE**][1] MVS [,ISTATUS = **ACTIVE**|INACTIVE][1] [,LOGAPPL = controlling primary LU][1] [,LOGTAB = interpret table name][1] [,MDLENT = model name table entry name][1] [,MDLTAB = model name table name][1] [,MODETAB = logon mode table name][1] [,PACING = n|0|**1**][1] [,SPAN = span name] [,SSCPFM = **FSS**|USSSCS][1] [,USSTAB = USS table name][1] [,VPACING = n|0|**1**][1]

Note:

1. The following table shows the operands that can be coded on the LU statement or on higher statements to take advantage of the sift-down effect.

Operand	PU	LU
ASLENT	S	M
ASLTAB	S	M
DLOGMOD	S	M
ENCR	S	M
ISTATUS	M	M
LOGAPPL	S	M
LOGTAB	S	M
MDLENT	S	M
MDLTAB	S	M
MODETAB	S	M
PACING	S	M
SSCPFM	S	M
USSTAB	S	M
VPACING	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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Defining a Network Control Program (NCP) Major Node

PCCU Statement

Name	Definition Statement	Operands
[name]	PCCU	NCPLUB = lub name VSE [,AUTODMP = YES|**NO**] [,AUTOIPL = YES|**NO**] [,AUTOSYN = **YES**|NO] [,BACKUP = YES|**NO**] [,CDUMPDS = dump name] [,CHANCON = **COND**|UNCOND][1] [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE [,CUADDR = channel device address][1] [,DELAY = t|**.200**][1] [,DUMPDS = dump name] [,DUMPLD = YES|**NO**] [,DUMPSTA = link station name] [,GWCTL = ONLY|**SHR**][2] [,INITEST = YES|**NO**][3] [,LOADFROM = {**HOST**|EXTERNAL}] [,LOADSTA = link station name] [,MAXDATA = size|**65535**][1] [,MDUMPDS = dump name] [,NETID = host network id][2] [,NEWPATH = name|(name1,...,name3)] [,OWNER = owner name] [,RNAME = link station name|(name,...,name)] [,SAVEMOD = YES|**NO**] [,SUBAREA = n] [,TGN = n|**1**|ANY] [,VFYC = YES|**NO**|IGNORE] MVS VM [,VFYLM = YES|**NO**]

Notes:

1. These operands are not used for data hosts defined in a channel-attachment major node. See the description of each operand in this section for information on which definition statements the replacement operands are coded in.
2. SNA network interconnection only.
3. For 3705 only.

NCP Definition Statements for Resources Controlled by the NCP

Table 1-1 (Page 1 of 2). NCP Generation Operands Used by VTAM

Operand	GROUP	LINE	PU	LU	CLUSTER	TERMINAL
ADDR			P			P
ADDRESS		P				
ANS	R	R	R			
ANSWER	V	V				
ASLENT	V	V	V	V	V	V
ASLTAB	V	V	V	V	V	V
AUTO		R				
AUTODL	R	R				
BATCH (pre-NCP V4R3)	P	P	P	P		
BHSET	R	R			R	R
BNNSUP	P	P	P			
CALL	R	R				
CHANLNK	P					
CONV	P	P				P
CUTYPE	P	P			P	
DATMODE	R	R	R			
DIAL	R					
DIRECTN	P	P				P
DISCNT	V	V	V		V	
DLOGMOD	V	V	V	V	V	V
ENCR	V	V	V	V		
FEATUR2	V	V	N	N	V	V
GPOLL					R	
INNPORT			V			
IRETRY	P	P	P			
ISTATUS	V	V	V	V	V	V
LINEADD	P					
LINEAUT	R	R				
LNCTL	R					
LOCADDR				R		
LOGAPPL	V	V	V	V	V	V
LOGTAB	V	V	V	V	V	V
LPDA			R			
MAXDATA	P	P	P			
MAXLU	P	P	P			
MAXOUT	P	P	P			
MDLENT	V	V	V	V	V	V
MDLTAB	V	V	V	V	V	V
MODETAB	V	V	V	V	V	V
NETID			R			
NPARSC	P					

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Table 1-1 (Page 2 of 2). NCP Generation Operands Used by VTAM

Operand	GROUP	LINE	PU	LU	CLUSTER	TERMINAL
OWNER	V	V	V			
PACING	R	R	R	R	R	
PASSLIM	P	P	P		P	
PAUSE	P	P				
POLIMIT	R	R				
POLLED	P	P				
PU	V	V				
PUTYPE	R	R	R			
RESSCB				R		
SECNET		V	V			
SESSION	P	P				
SHM	V					
SSCPFM	V	V	V	V	V	V
TERM	R	R	N	N	R	R
TGN			R			
TYPE	P	P				
USE	R	R				
USSTAB	V	V	V	V	V	V
VIRTUAL	P					
VPACING	V	V	V	V	V	
XID	R	R	R			
X21SW	R					

Legend:

V	VTAM-only operand.
N	VTAM-only operand. Refer to *Network Terminal Option Installation* for more information.
R	Not a VTAM-only operand; described in *NCP Resource Definition Reference*.
P	Not a VTAM-only operand; described in *NCP Resource Definition Reference*.

Defining a Channel-Attachment Major Node

VBUILD Definition Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = CA [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE

Defining Channel-to-Channel Support

GROUP Definition Statement

Name	Definition Statement	Operands
name	GROUP	LNCTL = CTCA [,DELAY = t|**.100**]¹ [,ISTATUS = **ACTIVE**|INACTIVE]¹ [,MAXBFRU = npage|**1**]¹ [,MIH = YES|**NO**]¹ [,PUTYPE = **4**]¹ [,REPLYTO = t|**3.0**] [,SPAN = span name]

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
DELAY	S	S	M
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
MIH	S	M	n/a
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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LINE Definition Statement

Name	Definition Statement	Operands
name	LINE	[ADDRESS=channel unit address] [,DELAY=t|**.100**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,MAXBFRU=npage|**1**][1] [,MIH=YES|**NO**][1] [,PUTYPE=**4**][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the LINE statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
DELAY	S	S	M
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
MIH	S	M	n/a
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

PU Definition Statement

Name	Definition Statement	Operands
name	PU	[,DELAY=t|**.100**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,PUTYPE=**4**][1] [,SPAN=span name] [,TGN=n|**1**|ANY]

Note:

1. The following table shows the operands that can be coded in the PU statement or on other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
DELAY	S	S	M
ISTATUS	S	M	M
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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Defining Channel-Attached NCP Support

GROUP Definition Statement

Name	Definition Statement	Operands
name	GROUP	LNCTL=NCP [,CHANCON=**COND**|UNCOND][1] [,DELAY=t|**.200**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,MAXBFRU=n][1] [,MAXDATA=size|**65535**][1] [,PUTYPE=**4**][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
CHANCON	S	S	M
DELAY	S	S	M
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
MAXDATA	S	S	M
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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LINE Definition Statement

Name	Definition Statement	Operands
name	LINE	MAXBFRU=n[1] [,ADDRESS=channel unit address] [,CHANCON=**COND**|UNCOND][1] [,DELAY=t|**.200**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,MAXDATA=n|**65535**][1] [,PUTYPE=**4**][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the LINE statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
CHANCON	S	S	M
DELAY	S	S	M
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
MAXDATA	S	S	M
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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PU Definition Statement

Name	Definition Statement	Operands
name	PU	[CHANCON=**COND**|UNCOND]¹ [,DELAY=t|**.200**]¹ [,ISTATUS=**ACTIVE**|INACTIVE]¹ [,MAXDATA=n|**65535**]¹ [,PUTYPE=**4**]¹ [,SPAN=span name] [,TGN=n|**1**|ANY]

Note:

1. The following table shows the operands that can be coded in the PU statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
CHANCON	S	S	M
DELAY	S	S	M
ISTATUS	S	M	M
MAXDATA	S	S	M
PUTYPE	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE Defining Communication Adapter Line Support

VM VSE GROUP Statement for a Channel-Attached SDLC Nonswitched Line

Name	Definition Statement	Operands
name	GROUP	LNCTL=SDLC [,ACTIVTO=t]' [,ASLENT=associated LU table entry name]' [,ASLTAB=associated LU table name]' [,DIAL=NO] [,DISCNT=([YES|**NO**] [,**F**|NF])]' [,DLOGMOD=default logmode entry name]' [,EAS=n|**256**]' [,ISTATUS=**ACTIVE**|INACTIVE]' [,LOGAPPL=controlling primary LU]' [,LOGTAB=interpret table name]' [,LPDA=BLOCK|**ALLOW**]' ES/9371 [,LPDATS=LPDA2|**NO**]' ES/9371 [,MAXBFRU=([norm|**2**][,max|**8**])]' VM [,MAXBFRU=([norm|**1**|**2**] [,max|**2**|**8**])] VSE [,MAXDATA=size|**261**(PU type 1)|**265**(PU type 2)]' [,MAXOUT=n|**1**]' [,MDLENT=model name table entry name]' [,MDLTAB=model name table name]' [,MODE=**PRI**|SEC]' [,MODETAB=logon mode table name]' [,PACING=n|0|**1**]' [,PASSLIM=n|**maxout**]' [,PAUSE=t|**0.1**]' [,PUTYPE=1|**2**|4|5]' [,REPLYTO=t|**1.0**]' [,RETRIES=n|**7**]' [,SERVLIM=n|**4**]' [,SPAN=span name] [,SSCPFM=**FSS**|USSSCS]' [,STHRESH=([m|**32768**] [,n|**32768**] [,**YES**|NO])]' ES/9371 [,USSTAB=USS table name]' [,VPACING=n|0|**2**]' [,XID=YES|**NO**]'

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

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Operand	GROUP	LINE	PU	LU
ACTIVTO	S	M		n/a
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
LPDA	S	S	M	n/a
LPDATS	S	M	n/a	n/a
MAXBFRU	S	M	n/a	n/a
MAXDATA	S	S	M	n/a
MAXOUT	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODE	S	M	n/a	n/a
MODETAB	S	S	S	M
PACING	S	S	S	M
PASSLIM	S	S	M	n/a
PAUSE	S	M	n/a	n/a
PUTYPE	S	S	M	n/a
REPLYTO	S	M	n/a	n/a
RETRIES	S	S	M	n/a
SERVLIM	S	M	n/a	n/a
SSCPFM	S	S	S	M
STHRESH	S	S	M	n/a
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LINE Statement for a Channel-Attached SDLC Nonswitched Line

Name	Definition Statement	Operands
name	LINE	[ACTIVTO=t]' [,ADDRESS=channel unit address|**030**] [,ASLENT=associated LU table entry name]' [,ASLTAB=associated LU table name]' [,CORNUM=n|(n,m)] ES/9371 [,DISCNT=([YES|**NO**] [,**F**|NF])]' [,DLOGMOD=default logmode entry name]' [,EAS=n|**256**]' [,ISTATUS=**ACTIVE**|INACTIVE]' [,LOGAPPL=controlling primary LU]' [,LOGTAB=interpret table name]' [,LPDA=BLOCK|**ALLOW**]' ES/9371 [,LPDATS=LPDA2|**NO**]' ES/9371 [,MAXBFRU=([norm|**2**],[max|**8**])]' VM [,MAXBFRU=([norm|**1**|**2**] [,max|**2**|**8**])]' VSE [,MAXDATA=size|**261**(PU type 1)|**265**(PU type 2)]' [,MAXOUT=n|**1**]' [,MDLENT=model name table entry name]' [,MDLTAB=model name table name]' [,MODE=**PRI**|SEC]' [,MODETAB=logon mode table name]' [,PACING=n|0|**1**]' [,PASSLIM=n|**maxout**]' [,PAUSE=t|**0.1**]' [,PORT=A|B|C|D] ES/9371 [,PUTYPE=1|**2**|4|5]' [,REPLYTO=t|**1.0**]' [,RETRIES=n|**7**]' [,SECNET=YES|**NO**]' [,SEGMENT=**1**|2]' ES/9371 [,SERVLIM=n|**4**]' [,SPAN=span name] [,SSCPFM=**FSS**|USSSCS]' [,STHRESH=([m|**32768**] [,n|**32768**] [,**YES**|NO])]' ES/9371 [,USSTAB=USS table name]' [,VPACING=n|0|**2**]' [,XID=YES|**NO**]'

Note:

1. The following table shows the operands that can be coded in the LINE statement or in other definition statements to take advantage of the sift-down effect.

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Operand	GROUP	LINE	PU	LU
ACTIVTO	S	M	n/a	n/a
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
LPDA	S	S	M	n/a
LPDATS	S	M	n/a	n/a
MAXBFRU	S	M	n/a	n/a
MAXDATA	S	S	M	n/a
MAXOUT	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODE	S	M	n/a	n/a
MODETAB	S	S	S	M
PACING	S	S	S	M
PASSLIM	S	S	M	n/a
PAUSE	S	M	n/a	n/a
PUTYPE	S	S	M	n/a
REPLYTO	S	M	n/a	n/a
RETRIES	S	S	M	n/a
SECNET	n/a	S	M	n/a
SEGMENT	S	S	M	n/a
SERVLIM	S	M	n/a	n/a
SSCPFM	S	S	S	M
STHRESH	S	S	M	n/a
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

VM VSE PU Statement for a Channel-Attached SDLC Nonswitched Line

Name	Definition Statement	Operands
name	PU	ADDR = char[1,2] [,ASLENT = associated LU table entry name][2,5] [,ASLTAB = associated LU table name][2,5] [,DISCNT = ([YES|**NO**] [,**F**|NF])][2,5] [,DLOGMOD = default logmode entry name][2,5] [,EAS = n|**256**][2,5] [,ISTATUS = **ACTIVE**|INACTIVE][4,5] [,LMODADR = ([x1|**01**] [,y2|**02**])][4] ES/9371 [,LOGAPPL = controlling primary LU][2,5] [,LOGTAB = interpret table name][2,5] [,LPDA = BLOCK|**ALLOW**][4,5] ES/9371 [,MAXDATA = size|**261**(PU type 1)|**265**(PU type 2)][2,5] [,MAXOUT = n|**1**][4,5] [,MDLENT = model name table entry name][2,5] [,MDLTAB = model name table name][2,5] [,MODETAB = logon mode table name][2,5] [,NETID = network id][2] [,PACING = n|0|**1**][2,5] [,PASSLIM = n|**maxout**][4,5] [,PUTYPE = 1|**2**|4|5][4,5] [,RETRIES = n|**7**][4,5] [,SECNET = YES|**NO**][2,5] [,SEGMENT = **1**|2][4,5] ES/9371 [,SPAN = span name][4] [,SSCPFM = **FSS**|USSSCS][2,5] [,STHRESH = ([m|**32768**] [,n|**32768**] [,**YES**|NO])][4,5] ES/9371 [,SUBAREA = n][3] [,TADDR = chars|**C1**][3] [,TGN = n|**1**|ANY][3] [,USSTAB = USS table name][2,5] [,VPACING = n|0|**2**][2,5] [,XID = YES|**NO**][2]

Notes:

1. This operand is required for physical unit types 1 and 2. However, if you code physical unit types 4 or 5, you cannot code the ADDR operand. In this case, ADDR automatically defaults to C1.
2. This operand applies only to peripheral nodes (PUTYPE = 1 or 2).
3. This operand applies only to subarea nodes (PUTYPE = 4 or 5).
4. This operand applies to both peripheral and subarea nodes.
5. The following table shows the operands that can be coded in the PU statement or in other definition statements to take advantage of the sift-down effect.

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Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
LPDA	S	S	M	n/a
MAXDATA	S	S	M	n/a
MAXOUT	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
PASSLIM	S	S	M	n/a
PUTYPE	S	S	M	n/a
RETRIES	S	S	M	n/a
SECNET	S	S	M	n/a
SEGMENT	S	S	M	n/a
SSCPFM	S	S	S	M
STHRESH	S	S	M	n/a
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LU Statement for a Channel-Attached SDLC Nonswitched Line

Name	Definition Statement	Operands
name	LU	LOCADDR=n [,ASLENT=associated LU table entry name][1] [,ASLTAB=associated LU table name][1] [,DLOGMOD=default logmode entry name][1] [,EAS=n|**256**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,LOGAPPL=controlling primary LU][1] [,LOGTAB=interpret table name][1] [,MDLENT=model name table entry name][1] [,MDLTAB=model name table name][1] [,MODETAB=logon mode table name][1] [,PACING=n|0|**1**][1] [,SPAN=span name] [,SSCPFM=**FSS**|USSSCS][1] [,USSTAB=USS table name][1] [,VPACING=n|0|**2**][1]

Note:

1. The following table shows the operands that can be coded in the LU statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
SSCPFM	S	S	S	M
USSTAB	S	S	S	M
VPACING	S	S	S	M

Legend:

S — Code this operand on this definition statement to take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE GROUP Statement for an SDLC Switched Line

Name	Definition Statement	Operands
name	GROUP	LNCTL=SDLC ,DIAL=YES [,ACTIVTO=t][2] [,ANSWER=**ON**|OFF][2] [,AUTODL=**YES**|NO][2] VSE 4361 ES/9370 [,CALL=**IN**|OUT|INOUT][2] [,DIALNO=telephone number][1] VSE [,ISTATUS=**ACTIVE**|INACTIVE][2] [,MAXBFRU=([norm|**2**],max|**8**])][2] VM [,MAXBFRU=([norm|**1**|**2**] [,max|**2.**|**8**])][2] VSE [,PAUSE=t|**0.1**][2] [,REPLYTO=t|**1.0**][2] [,RETRIES=n|**7**][2] [,RETRYTO=t|**12**][2] VSE 4361 ES/9370 [,SERVLIM=n|**4**][2] [,SHOLD=**NO**|(free,npoll)][1] VSE [,SPAN=span name] [,SUBADIAL=YES|**NO**] [,X21SW=YES|**NO**] VSE 4361 ES/9370 [,XMITDLY=t|**2**][2]

Notes:

1. VSE For X.21 short-hold mode/multiple port sharing (SHM/MPS) feature.
2. The following table shows the operands that can be coded in the GROUP statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ACTIVTO	S	M	n/a
ANSWER	S	M	n/a
AUTODL	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
PAUSE	S	M	n/a
REPLYTO	S	M	n/a
RETRIES	S	M	n/a
RETRYTO	S	M	n/a
SERVLIM	S	M	n/a
XMITDLY	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

VM VSE LINE Statement for an SDLC Switched Line

Name	Definition Statement	Operands
name	LINE	[ACTIVTO=t]¹ [,ADDRESS=channel unit address|**030**] [,ANSWER=**ON**|OFF]¹ [,AUTO=address] [,AUTODL=**YES**|NO]¹ VSE 4361 ES/9370 [,CALL=**IN**|OUT|INOUT]¹ [,ISTATUS=**ACTIVE**|INACTIVE]¹ [,MAXBFRU=([norm|**2**],max|**8**])]¹ VM [,MAXBFRU=([norm|**1**|**2**] [,max|**2**|**8**])]¹ VSE [,PAUSE=t|**0.1**]¹ [,REPLYTO=t|**1.0**]¹ [,RETRIES=n|**7**]¹ [,RETRYTO=t|**12**]¹ VSE 4361 ES/9370 [,SERVLIM=n|**4**]¹ [,SPAN=span name] [,XMITDLY=t|**2**]¹

Notes:

1. The following table shows the operands that can be coded in the LINE statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ACTIVTO	S	M	n/a
ANSWER	S	M	n/a
AUTODL	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M
MAXBFRU	S	M	n/a
PAUSE	S	M	n/a
REPLYTO	S	M	n/a
RETRIES	S	M	n/a
RETRYTO	S	M	n/a
SERVLIM	S	M	n/a
XMITDLY	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE PU Statement for Physical Unit on SDLC Switched Line

Name	Definition Statement	Operands
name	PU	[ISTATUS=**ACTIVE**|INACTIVE][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the PU statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE GROUP Statement for BSC Line

Name	Definition Statement	Operands
name	GROUP	LNCTL = BSC [,ASLENT = associated LU table entry name][1] [,ASLTAB = associated LU table name][1] [,CUTYPE = **3271**|3275][1] [,DLOGMOD = default logmode entry name][1] [,FEATUR2 = ([LOWERCSE|**DUALCSE**] VM [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])][1] [,ISTATUS = **ACTIVE**|INACTIVE][1] [,LOGAPPL = controlling primary LU][1] [,LOGTAB = interpret table name][1] [,MDLENT = model name table entry name][1] [,MDLTAB = model name table name][1] [,MODETAB = logon mode table name][1] [,RETRIES = n|**7**][1] [,SERVLIM = n|**4**][1] [,SPAN = span name] [,TERM = 3275|3277|3284|3286][1] [,USSTAB = USS table name][1]

Note:

1. The following table shows the operands that can be coded in the GROUP statement or in other definition statements to take advantage of the sift-down effect.

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Operand	GROUP	LINE	CLUSTER	TERMINAL
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
CUTYPE	S	S	M	n/a
DLOGMOD	S	S	S	M
FEATUR2	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
RETRIES	S	M	n/a	n/a
SERVLIM	S	M	n/a	n/a
TERM	S	S	S	M
USSTAB	S	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

VM VSE LINE Statement for BSC Nonswitched Line

Name	Definition Statement	Operands
name	LINE	[ADDRESS=channel unit address|**030**] [,ASLENT=associated LU table entry name][1] [,ASLTAB=associated LU table name][1] [,CUTYPE=**3271**|3275][1] [,DLOGMOD=default logmode entry name][1] [,FEATUR2=([LOWERCSE|**DUALCSE**] VM [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,LOGAPPL=controlling primary LU][1] [,LOGTAB=interpret table name][1] [,MDLENT=model name table entry name][1] [,MDLTAB=model name table name][1] [,MODETAB=logon mode table name][1] [,RETRIES=n|**7**][1] [,SERVLIM=n|**4**][1] [,SPAN=span name] [,TERM=3275|3277|3284|3286][1] [,USSTAB=USS table name][1]

Notes:

1. The following table shows the operands that can be coded in the LINE statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	CLUSTER	TERMINAL
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
CUTYPE	S	S	M	n/a
DLOGMOD	S	S	S	M
FEATUR2	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
RETRIES	S	M	n/a	n/a
SERVLIM	S	M	n/a	n/a
TERM	S	S	S	M
USSTAB	S	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE CLUSTER Statement for BSC Cluster Controller

Name	Definition Statement	Operands
name	CLUSTER	GPOLL = char [,ASLENT = associated LU table entry name][1] [,ASLTAB = associated LU table name][1] [,CUTYPE = **3271**|3275][1] [,DLOGMOD = default logmode entry name][1] [,FEATUR2 = ([LOWERCSE|**DUALCSE**] VM [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])][1] [,ISTATUS = **ACTIVE**|INACTIVE][1] [,LOGAPPL = controlling primary LU][1] [,LOGTAB = interpret table name][1] [,MDLENT = model name table entry name][1] [,MDLTAB = model name table name][1] [,MODETAB = logon mode table name][1] [,SPAN = span name] [,SSCPFM = **USS3275**|USS3270][1] [,TERM = 3275|3277|3284|3286][1] [,USSTAB = USS table name][1]

Note:

1. The following table shows the operands that can be coded in the CLUSTER statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	CLUSTER	TERMINAL
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
CUTYPE	S	S	M	n/a
DLOGMOD	S	S	S	M
FEATUR2	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
SSCPFM	n/a	n/a	S	M
TERM	S	S	S	M
USSTAB	S	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE TERMINAL Statement for BSC Terminal

Name	Definition Statement	Operands
name	TERMINAL	ADDR = char ,TERM = 3275|3277|3284|3286[1] [,ASLENT = associated LU table entry name][1] [,ASLTAB = associated LU table name][1] [,DLOGMOD = default logmode entry name][1] [,FEATUR2 = ([LOWERCSE|**DUALCSE**] VM [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])][1] [,ISTATUS = **ACTIVE**|INACTIVE][1] [,LOGAPPL = controlling primary LU][1] [,LOGTAB = interpret table name][1] [,MDLENT = model name table entry name][1] [,MDLTAB = model name table name][1] [,MODETAB = logon mode table name][1] [,SPAN = span name] [,SSCPFM = **USS3275**|USS3270][1] [,USSTAB = USS table name][1]

Note:

1. The following table shows the operands that can be coded in the TERMINAL statement or in other definition statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	CLUSTER	TERMINAL
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DLOGMOD	S	S	S	M
FEATUR2	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
SSCPFM	n/a	n/a	S	M
TERM	S	S	S	M
USSTAB	S	S	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which this operand applies.
n/a	This operand does not apply to this definition statement.

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Defining a Switched Major Node

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = SWNET [,CONFGDS = name]MVS VSE [,CONFGPW = password]MVS VSE [,MAXGRP = n] [,MAXNO = n]

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PU Definition Statement

Name	Definition Statement	Operands
name	PU	ADDR = station address[2,5] {,IDBLK = identification block, IDNUM = identification number}[1,3] |{,CPNAME = cpname }[1,3] |{,IDNUM = identification number}[1,4] [,ANS = CONTINUE|**STOP**][2,5] [,ASLENT = associated LU table entry name][3,6] [,ASLTAB = associated LU table name][3,6] [,BATCH = YES|**NO**][2,3,6] [,DATMODE = **HALF**|FULL][5] [,DISCNT = (YES|**NO**][,**F**|NF])][5] [,DLOGMOD = default logmode entry name][3,6] [,EAS = n|**256**][3,6] [,ENCR = REQD|SEL|OPT|**NONE**][3,6] MVS [,FEATUR2 = LOWERCSE|**DUALCSE**][3,6] [,IRETRY = YES|**NO**][2,3] [,ISTATUS = **ACTIVE**|INACTIVE][5,6] [,LANACK = ([t2|**0**] [,n3|**0**])][3] VM VSE [,LANCON = ([ct1] [,cn2])][3] VM VSE [,LANINACT = t|**4.8**][3] VM VSE [,LANRESP = ([t1] [,n2])][3] VM VSE [,LANSDWDW = ([k|**2**] [,nw|**1**])][3] VM VSE [,LANSW = YES|NO][3] VM VSE [,LOGAPPL = controlling primary LU][3,6] [,LOGTAB = interpret table name][3,6] [,MACADDR = macaddr][3] VM VSE [,MAXDATA = size|**261**(PUTYPE = 1)|**265**(PUTYPE = 2)][5] [,MAXOUT = n|**1**][2,5] [,MAXPATH = n|**0**][5] [,MDLENT = model name table entry name][3,6] [,MDLTAB = model name table name][3,6] [,MODETAB = logon mode table name][3,6] [,NETID = network id][2,5] [,PACING = n|0|**1**][3,6] [,PASSLIM = n|**1**][2,5] [,PRTCT = password][4] [,PUTYPE = 1|**2**|4|5][5] [,SAPADDR = n|**4**][3] VM VSE [,SECNET = YES|**NO**][2,3] [,SPAN = span name][5] [,SSCPFM = **FSS**|USSSCS|USSNTO| USS3780|USS3270|USS3275][3,6] [,SUBAREA = n][2,4] [,TERM = terminal type][3,6] [,TGN = n|**1**|ANY][2,4] [,USSTAB = USS table name][3,6] [,VPACING = n|0|**2**][3,6]

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Notes:

1. Either CPNAME, IDNUM, or both IDBLK and IDNUM are required. You may code all three if you wish. See the description of these parameters in the following discussion for more detail.
2. You can code these operands on the PU statement, but they will have no meaning in a local area network connected to an ES/9370 processor through its Token-Ring Network.
3. This operand applies only to peripheral nodes (PUTYPE = 1 or 2).
4. This operand applies only to subarea nodes (PUTYPE = 4 or 5).
5. This operand applies to both peripheral and subarea nodes.
6. The following table shows the operands that can be coded in the PU statement to take advantage of the sift-down effect.

Operand	PU	LU
ASLENT	S	M
ASLTAB	S	M
BATCH	S	M
DLOGMOD	S	M
EAS	S	M
ENCR	S	M
FEATUR2	S	M
ISTATUS	M	M
LOGAPPL	S	M
LOGTAB	S	M
MDLENT	S	M
MDLTAB	S	M
MODETAB	S	M
PACING	S	M
SSCPFM	S	M
TERM	S	M
USSTAB	S	M
VPACING	S	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

PATH Definition Statement

Name	Definition Statement	Operands
[name]	PATH	{DIALNO = telephone number| LINENM = linename}[2] [,CALL = IN|OUT|**INOUT**] [,GID = n] [,GRPNM = groupname] [,PID = n] [,REDIAL = n|**3**][2] [,SHOLD = YES][1] VSE [,SHM = YES|**NO**][3] [,SHMTIM = t|**0.0**][3] [,USE = **YES**|NO] [,VERID = call identifier|(id,...,id)][4] [,VERIFY = IN|OUT|INOUT|**NONE**][4]

Notes:

1. VSE For X.21 short-hold mode/multiple port sharing (SHM/MPS).
2. You can code this operand on the PATH statement, but it will have no meaning in the local area network environment of an ES/9370 processor.
3. This operand only applies to subarea connections established through NPSI switched virtual circuits.
4. This operand applies only to X.21 and X.25 subarea connections. It does not support X.21 short hold mode/multiple port sharing.

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LU Definition Statement

Name	Definition Statement	Operands
name	LU	LOCADDR = 0|n [,ASLENT = associated LU table entry name][2] [,ASLTAB = associated LU table name][2] [,BATCH = YES|**NO**][1,2] [,DLOGMOD = default logon mode table entry name][2] [,EAS = n|**256**] [,ENCR = REQD|SEL|OPT|**NONE**][2] MVS [,FEATUR2 = ([EDATS|**NOEDATS**] [,LOWERCSE|**DUALCSE**] [,**MODEL1**|MODEL2] [,PRINTR|**NOPRINTR**] [,SELPEN|**NOSELPEN**])][1 2] [,ISTATUS = **ACTIVE**|INACTIVE][2] [,LOGAPPL = controlling primary LU][2] [,LOGTAB = interpret table name][2] [,MDLENT = model name table entry name][2] [,MDLTAB = model name table name][2] [,MODETAB = logon mode table name][2] [,PACING = n|0|**1**][2] [,RESSCB = **0**|n] [,SPAN = span name] [,SSCPFM = **FSS**|USSSCS|USSNTO|USS3780|USS3270|USS3275][2] [,TERM = terminal type][1,2] [,USSTAB = USS table name][2] [,VPACING = n|0|**2**][2]

Notes:

1. You can code this operand on the LU statement, but it will have no meaning in the local area network environment of an ES/9370 processor.
2. The following table shows the operands that can be coded in the LU statement or in other statements to take advantage of the sift-down effect.

Operand	PU	LU
ASLENT	S	M
ASLTAB	S	M
BATCH	S	M
DLOGMOD	S	M
EAS	S	M
ENCR	S	M
FEATUR2	S	M
ISTATUS	M	M
LOGAPPL	S	M
LOGTAB	S	M
MDLENT	S	M
MDLTAB	S	M
MODETAB	S	M
PACING	S	M
SSCPFM	S	M
TERM	S	M
USSTAB	S	M
VPACING	S	M

Legend:

S — Code this operand on this definition statement to take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE Defining a LAN Major Node

VM VSE Defining a LAN Major Node: Port

VM VSE VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = LAN [,CONFGDS = name] VSE [,CONFGPW = password] VSE

VM VSE PORT Statement

Name	Definition Statement	Operands
[name]	PORT	CUADDR = cua [,BUFFERS = (rcvpage|**4**,sndpage|**4**)] VM [,LANCON = ([ct1] [,cn2|**5**])] [,MACADDR = macaddr] [,MAXDATA = n|**0**] [,MAXSTN = n] [,SAPADDR = n|**4**]

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VM VSE Defining a LAN Major Node: Subarea Node With Token-Ring

VM VSE GROUP Statement

Name	Definition Statement	Operands
name	GROUP	[DIAL = **NO**] [,ISTATUS = **ACTIVE**|INACTIVE]' [,LANACK = ([t2|**0**] [,n3|**0**])]' [,LANCON = ([ct1] [,cn2])]' [,LANINACT = t|**4.8**]' [,LANRESP = ([t1] [,n2])]' [,LANSDWDW = ([k|**2**] [,nw|**1**])]' [,LNCTL = **SDLC**] [,PUTYPE = 4|**5**]' [,SPAN = span name]

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M
LANACK	S	S	M
LANCON	S	S	M
LANINACT	S	S	M
LANRESP	S	S	M
LANSDWDW	S	S	M
PUTYPE	S	S	M

Legend:

S — Code this operand on this definition statement to take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE LINE Statement

Name	Definition Statement	Operands
name	LINE	[ISTATUS=**ACTIVE**|INACTIVE]¹ [,LANACK=([t2|**0**] [,n3|**0**])]¹ [,LANCON=([ct1] [,cn2])]¹ [,LANINACT=t|**4.8**]¹ [,LANRESP=([t1] [,n2])]¹ [,LANSDWDW=([k|**2**] [,nw|**1**])]¹ [,PUTYPE=4|**5**]¹ [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the LINE statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M
LANACK	S	S	M
LANCON	S	S	M
LANINACT	S	S	M
LANRESP	S	S	M
LANSDWDW	S	S	M
PUTYPE	S	S	M

Legend:

S — Code this operand on this definition statement to take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE PU Statement

Name	Definition Statement	Operands
name	PU	MACADDR = macaddr [,ISTATUS = **ACTIVE**|INACTIVE]' [,LANACK = ([t2|**0**] [,n3|**0**])]' [,LANCON = ([ct1] [,cn2])]' [,LANINACT = t|**4.8**]' [,LANRESP = ([t1] [,n2])]' [,LANSDWDW = ([k|**2**] [,nw|**1**])]' [,PUTYPE = 4|**5**]' [,SAPADDR = n|**4**] [,SPAN = span name] [,SUBAREA = n] [,TGN = n|**1**|ANY]

Note:

1. The following table shows the operands that can be coded in the PU statement or in other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M
LANACK	S	S	M
LANCON	S	S	M
LANINACT	S	S	M
LANRESP	S	S	M
LANSDWDW	S	S	M
PUTYPE	S	S	M

Legend:

S — You can code this operand on this definition statement and take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE Defining a LAN Major Node: Peripheral Node

VM VSE GROUP Statement

Name	Definition Statement	Operands
name	GROUP	DIAL=YES [,ANSWER=**ON**|OFF]¹ [,CALL=**IN**|OUT|INOUT]¹ [,ISTATUS=**ACTIVE**|INACTIVE]¹ [,LNCTL=**SDLC**] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ANSWER	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LINE Statement

Name	Definition Statement	Operands
name	LINE	[ANSWER=**ON**|OFF][1] [,CALL=**IN**|OUT|INOUT][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the LINE statement or in other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ANSWER	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE PU Statement

Name	Definition Statement	Operands
name	PU	[ISTATUS=**ACTIVE**|INACTIVE][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the PU statement or in other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement and take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE Defining a Packet Major Node

VM VSE VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = PACKET [,CONFGDS = name] VSE [,CONFGPW = password] VSE

VM VSE PORT Statement

Name	Definition Statement	Operands
[name]	PORT	CUADDR = (cualo,cuahi) ,NETTYPE = n [,CHARGACC = YES|**NO**] [,CHARGE = YES|**NO**] [,DIALNO = DTE address] [,MAXOUT = n|**7**] [,NETLEVEL = **80**|84] [,PLENGTH = 16|32|64|**128**|256|512| 1024|2048|4096] [,PMOD = **8**|128] [,PWINDOW = n|**2**] [,REPLYTO = t|**3.0**] [,RETRIES = n|**7**] [,VCALLS = (lic,hic,ltc,htc,loc,hoc)]

VM VSE VCPARMS Statement

Name	Definition Statement	Operands
[name]	VCPARMS	LC = (lcn,hcn) [,PLENGTH = 16|32|64|**128**|256|512| 1024|2048|4096] [,PWINDOW = n|**2**]

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VM VSE Defining a Packet Major Node: Nonswitched Lines

VM VSE GROUP Statement for a Nonswitched Line

Name	Definition Statement	Operands
name	GROUP	DIAL=NO [,ASLENT=associated LU table entry name][1] [,ASLTAB=associated LU table name][1] [,DISCNT=([YES|**NO**] [,**F**|NF])][1] [,DLOGMOD=default logmode entry name][1] [,EAS=n|**256**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,LNCTL=**SDLC**] [,LOGAPPL=application program name][1] [,LOGTAB=interpret table name][1] [,MAXDATA=size|**261**(PUTYPE=1)| **265**(PUTYPE=2)][1] [,MDLENT=model name table entry name][1] [,MDLTAB=model name table name][1] [,MODETAB=logon mode table name][1] [,PACING=n|0|**1**][1] [,PUTYPE=1|**2**|4|5][1] [,SPAN=span name] [,SSCPFM=**FSS**|USSSCS][1] [,USSTAB=USS table name][1] [,VPACING=n|0|**2**][1] [,XID=YES|**NO**][1]

Note:

1. The following table shows the operands that can be coded in other definition statements or in the GROUP statement to take advantage of the sift-down effect.

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Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MAXDATA	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
PUTYPE	S	S	M	n/a
SSCPFM	S	S	S	M
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LINE Statement for a Nonswitched Line

Name	Definition Statement	Operands
name	LINE	[,ADDRESS = logical channel identifier|**001**] VM [,ADDRESS = logical channel identifier|**030**] VSE [,ASLENT = associated LU table entry name]' [,ASLTAB = associated LU table name]' [,DISCNT = ([YES|**NO**] [,**F**|NF])]' [,DLOGMOD = default logmode entry name]' [,EAS = n|**256**]' [,ISTATUS = **ACTIVE**|INACTIVE]' [,LOGAPPL = application program name]' [,LOGTAB = interpret table name]' [,MAXDATA = size|**261**(PUTYPE = 1)| **265**(PUTYPE = 2)]' [,MDLENT = model name table entry name]' [,MDLTAB = model name table name]' [,MODETAB = logon mode table name]' [,PACING = n|0|**1**]' [,PUTYPE = 1|**2**|4|5]' [,SPAN = span name] [,SSCPFM = **FSS**|USSSCS]' [,USER = **SNA**|VCNS] VM [,USSTAB = USS table name]' [,VPACING = n|0|**2**]' [,XID = YES|**NO**]'

Note:

1. The following table shows the operands that can be coded in other definition statements or in the LINE statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MAXDATA	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
PUTYPE	S	S	M	n/a
SSCPFM	S	S	S	M
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE PU Statement for a Nonswitched Line

Name	Definition Statement	Operands
name	PU	ADDR = char[1,2] [,ASLENT = associated LU table entry name][2,5] [,ASLTAB = associated LU table name][2,5] [,DISCNT = ([YES|**NO**] [,**F**|NF])][2,5] [,DLOGMOD = default logmode entry name][2,5] [,EAS = n|**256**][2,5] [,ISTATUS = **ACTIVE**|INACTIVE][4,5] [,LOGAPPL = application program name][2,5] [,LOGTAB = interpret table name][2,5] [,MAXDATA = size|**261**(PUTYPE = 1)| **265**(PUTYPE = 2)][2,5] [,MDLENT = model name table entry name][2,5] [,MDLTAB = model name table name][2,5] [,MODETAB = logon mode table name][2,5] [,NETID = network id][2] [,PACING = n|0|**1**][2,5] [,PUTYPE = 1|**2**|4|5][4,5] [,SPAN = span name][4] [,SSCPFM = **FSS**|USSSCS][2,5] [,SUBAREA = n][3] [,TGN = n|**1**|ANY][3,5] [,USSTAB = USS table name][2,5] [,VPACING = n|0|**2**][2,5] [,XID = YES|**NO**][2,5]

Notes:

1. This operand is required for physical unit types 1 and 2. However, if you code physical unit types 4 or 5, you cannot code the ADDR operand. In this case, ADDR automatically defaults to C1.
2. This operand applies only to peripheral nodes (PUTYPE = 1 or 2).
3. This operand applies only to subarea nodes (PUTYPE = 4 or 5).
4. This operand applies to both peripheral and subarea nodes.
5. The following table shows the operands that can be coded in other statements or in the PU statement to take advantage of the sift-down effect.

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Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DISCNT	S	S	M	n/a
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MAXDATA	S	S	M	n/a
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
PUTYPE	S	S	M	n/a
SSCPFM	S	S	S	M
USSTAB	S	S	S	M
VPACING	S	S	S	M
XID	S	S	M	n/a

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LU Statement for a Nonswitched Line

Name	Definition Statement	Operands
name	LU	LOCADDR=n [,ASLENT=associated LU table entry name][1] [,ASLTAB=associated LU table name][1] [,DLOGMOD=default logmode entry name][1] [,EAS=n|**256**][1] [,ISTATUS=**ACTIVE**|INACTIVE][1] [,LOGAPPL=application program name][1] [,LOGTAB=interpret table name][1] [,MDLENT=model name table entry name][1] [,MDLTAB=model name table name][1] [,MODETAB=logon mode table name][1] [,PACING=n|0|**1**][1] [,SPAN=span name] [,SSCPFM=**FSS**|USSSCS][1] [,USSTAB=USS table name][1] [,VPACING=n|0|**2**][1]

Note:

1. The following table shows the operands that can be coded in the LU statement or in other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU	LU
ASLENT	S	S	S	M
ASLTAB	S	S	S	M
DLOGMOD	S	S	S	M
EAS	S	S	S	M
ISTATUS	S	M	M	M
LOGAPPL	S	S	S	M
LOGTAB	S	S	S	M
MDLENT	S	S	S	M
MDLTAB	S	S	S	M
MODETAB	S	S	S	M
PACING	S	S	S	M
SSCPFM	S	S	S	M
USSTAB	S	S	S	M
VPACING	S	S	S	M

Legend:

S — Code this operand on this definition statement to take advantage of the sift-down effect.

M — Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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VM VSE Defining a Packet Major Node: Switched Lines

VM VSE GROUP Statement for a Switched Line

Name	Definition Statement	Operands
name	GROUP	DIAL = YES [,ANSWER = **ON**|OFF]¹ [,CALL = **IN**|OUT|INOUT]¹ [,ISTATUS = **ACTIVE**|INACTIVE]¹ [,LNCTL = **SDLC**] [,SPAN = span name] [,SUBADIAL = YES|**NO**]

Note:

1. The following table shows the operands that can be coded in the GROUP statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ANSWER	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE LINE Statement for a Switched Line

Name	Definition Statement	Operands
name	LINE	[,ADDRESS = address] [,ANSWER = **ON**|OFF][1] [,AUTO = address] VSE [,CALL = **IN**|OUT|INOUT][1] [,ISTATUS = **ACTIVE**|INACTIVE][1] [,SPAN = span name]

Note:

1. The following table shows the operands that can be coded in the LINE statement or in other statements to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ANSWER	S	M	n/a
CALL	S	M	n/a
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or you can code it on this definition statement, to which it applies.
n/a	This operand does not apply to this definition statement.

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VM VSE PU Statement for a Switched Line

Name	Definition Statement	Operands
name	PU	[ISTATUS=**ACTIVE**|INACTIVE][1] [,SPAN=span name]

Note:

1. The following table shows the operands that can be coded in the PU statement to take advantage of the sift-down effect.

Operand	GROUP	LINE	PU
ISTATUS	S	M	M

Legend:

S	Code this operand on this definition statement to take advantage of the sift-down effect.
M	Code this operand on higher-level definition statements to take advantage of the sift-down effect, or code it on this definition statement, to which it applies.

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Defining a Cross-Domain Resource Manager Major Node

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = CDRM [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE

NETWORK Definition Statement

Name	Definition Statement	Operands
[name]	NETWORK	[NETID = network id]

CDRM Definition Statement

Name	Definition Statement	Operands
cdrmname	CDRM	[CDRDYN = YES|**NO**] [,CDRSC = OPT|**REQ**] [,ELEMENT = n|**1**] [,GWSELECT = **YES**|NO] [,ISTATUS = **ACTIVE**|INACTIVE] [,RECOVERY = **YES**|NO] [,SPAN = span name] [,SUBAREA = n] [,VPACING = n|0|**63**]

GWPATH Definition Statement (SNA Network Interconnection Only)

Name	Definition Statement	Operands
[name]	GWPATH	[ADJNET = adjacent network id] [,ADJNETCS = adjacent network cosname] MVS VM [,ADJNETEL = adjacent network element|**1**] [,ADJNETSA = adjacent network subarea] [,ELEMENT = element address|**1**] [,GWN = gateway NCP name] [,SUBAREA = subarea address]

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Defining a Cross-Domain Resource Major Node

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE = CDRSC [,CONFGDS = name] MVS VSE [,CONFGPW = password] MVS VSE

NETWORK Definition Statement

Name	Definition Statement	Operands
[name]	NETWORK	[NETID = network id]

CDRSC Definition Statement

Name	Definition Statement	Operands
cdrscname	CDRSC	[CDRM = cdrmname] [,ISTATUS = **ACTIVE**|INACTIVE] [,SPAN = span name] [,VFYOWNER = YES|**NO**]

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Defining VTAM Routes

VTAM PATH Definition Statement

Name	Definition Statement	Operands
[name]	PATH	DESTSA=n|(n1,n2,n3,...) [,DELETER=*er*|(ER0,ER1,ER2,...,ER15)] [,ER0=(adjsub[,tgn])] [,ER1=(adjsub[,tgn])] ⋮ [,ER15=(adjsub[,tgn])] [,VR0=*er*] [,VR1=*er*] ⋮ [,VR7=*er*] [,VRPWS00=(min,max)] [,VRPWS01=(min,max)] [,VRPWS02=(min,max)] [,VRPWS10=(min,max)] [,VRPWS11=(min,max)] [,VRPWS12=(min,max)] [,VRPWS20=(min,max)] ⋮ [,VRPWS72=(min,max)]

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Dynamic Path Update

Dynamic Update NCP Paths

NCPPATH Definition Statement

Name	Definition Statement	Operands
ncpname	NCPPATH	NETID=network id

NCP's PATH Definition Statement

Name	Definition Statement	Operands
[name]	PATH	DESTSA=n|(n1,n2,n3,...) [,DELETER=*er*|(ER0,ER1,ER2,...,ER15)] [,ER0=(adjsub[,tgn] [,lo|**5000**] [,med|**5000**] [,hi|**5000**] [,tot|**20000**])] [,ER1=(adjsub[,tgn] [,lo|**5000**] [,med|**5000**] [,hi|**5000**] [,tot|**20000**])] ⋮ [,ER15=(adjsub[,tgn] [,lo|**5000**] [,med|**5000**] [,hi|**5000**] [,tot|**20000**])] [,VR0=*er*] [,VR1=*er*] ⋮ [,VR7=*er*] [,VRPWS00=(min,max)] [,VRPWS01=(min,max)] [,VRPWS02=(min,max)] [,VRPWS10=(min,max)] [,VRPWS11=(min,max)] [,VRPWS12=(min,max)] [,VRPWS20=(min,max)] ⋮ [,VRPWS72=(min,max)]

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Dynamic Update VTAM Paths

VPATH Definition Statement

Name	Definition Statement	Operands
sscpname	VPATH	NETID=network id

VTAM's PATH Definition Statement

Name	Definition Statement	Operands
[name]	PATH	DESTSA=n|(n1,n2,n3,...) [,DELETER=*er*|(ER0,ER1,ER2,...,ER15)] [,ER0=(adjsub[,tgn])] [,ER1=(adjsub[,tgn])] ⋮ [,ER15=(adjsub[,tgn])] [,VR0=*er*] [,VR1=*er*] ⋮ [,VR7=*er*] [,VRPWS00=(min,max)] [,VRPWS01=(min,max)] [,VRPWS02=(min,max)] [,VRPWS10=(min,max)] [,VRPWS11=(min,max)] [,VRPWS12=(min,max)] [,VRPWS20=(min,max)] ⋮ [,VRPWS72=(min,max)]

Dynamic Reconfiguration

VBUILD Definition Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE=DR

Definition Statements for DR ADD

Adding PUs and LUs to a Line

Name	Definition Statement	Operands
[name]	ADD	TO=line name
pu name	PU	(Code operands as usual.)
lu name	LU	(Code operands as usual.)

Adding LUs to a PU

Name	Definition Statement	Operands
[name]	ADD	TO=pu name [,DRTYPE=**NCP**|LOCAL|CA|PACKET]
lu name	LU	(Code operands as usual.)

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Definition Statements for DR DELETE

Deleting a PU and Associated LUs

Name	Definition Statement	Operands
[name]	DELETE	FROM=line name
pu name	PU	(No operands required.)

Deleting an LU

Name	Definition Statement	Operands
[name]	DELETE	FROM=pu name
lu name	LU	(No operands required.)

Definition Statements for DR MOVE

Moving a PU

Name	Definition Statement	Operands
[name]	MOVE	TO=line name,FROM=line name
pu name	PU	[,ACTIVATE=YES|**NO**] [,ADDR=char]

Defining an Adjacent SSCP Table

VBUILD Statement

Name	Definition Statement	Operands
[name]	VBUILD	TYPE=ADJSSCP

NETWORK Definition Statement

Name	Definition Statement	Operands
[name]	NETWORK	[NETID=destination network id]

CDRM Definition Statement

Name	Definition Statement	Operands
sscpname	CDRM	(no operands)

ADJCDRM Definition Statement

Name	Definition Statement	Operands
cdrmname	ADJCDRM	(no operands)

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VTAM V3R3 Start Options

MVS VM VTAM V3R3 Start Options

NETID = network id
SSCPID = n
SSCPNAME = name
[ASYDE = **TERM**|KEEP]
[CDRSCTI = n|nS|nM|nH|nD|**480**]
[**COLD**|WARM] MVS
[CONFIG = x|**00**|name]
[CSALIMIT = **0**|n|nK|nM]
[CSA24 = **0**|n|nK|nM] MVS
[DLRTCB = n|**32**]
[DYNASSCP = **YES**|NO]
[FFDC = **YES**|NO] MVS VM/ESA
[GWSSCP = **YES**|NO]
[HOSTPU = host-subarea-puname|**ISTPUS**]
[HOSTSA = n|**1**]
[IOINT = 0|n|**180**]
[LIST = yy|**00**][7]
[MAXSUBA = n|**15**]
[MSGMOD = YES|**NO**]
[NCPBUFSZ = **512**|1024|2048]
[NMVTLOG = ALWAYS|**NPDA**|NEVER]
[NODELST = name] MVS
[poolname = (baseno,bufsize,slowpt,F,xpanno,xpanpt,xpanlim)][5]
[PPOLOG = YES|**NO**]
[**PROMPT**|NOPROMPT][1]
[SDLCMDRS = **YES**|NO]
[SONLIM = [m|**60**][,n|**30**]]
[SSCPDYN = **YES**|NO]
[SSCPORD = **PRIORITY**|DEFINED]
[SUPP = **NOSUP**|INFO|WARN|NORM|SER]
[TNSTAT|**NOTNSTAT**[,CNSL|**NOCNSL**][,TIME = n|**60**]]
[TRACE|**NOTRACE**,TYPE = BUF,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = IO,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SIT,ID = line name[COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SMS,ID = VTAMBUF][4]
[**TRACE**,TYPE = VTAM[,MODE = **INT**|EXT]
[,OPTION|OPT = ALL|NONE|CIO|option|(option[,option...])]
[,SIZE = n|2|50]][4,6]
[NOTRACE,TYPE = VTAM][4]
[USSTAB = table name]
[XNETALS = YES|**NO**] VM

Notes:

1. The VTAM operator cannot enter the PROMPT|NOPROMPT start option. It can be coded only in ATCSTR00.
2. EVERY can be abbreviated as E.
3. COUNT applies only to the 3720, 3725, and 3745 communication controllers.

4. Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list. VTAM accepts more than one TRACE start option during initialization. You can code only one type of VTAM trace in each TRACE|NOTRACE start option in a list of start options. If you code the TRACE option, you must code the TYPE= qualifier immediately following TRACE.
5. See *VTAM Resource Definition Reference* for more information on this start option.
6. The default value of this option depends upon the value of the replaceable constant RACINOP in the ISTRACON constants module. See *VTAM Resource Definition Reference* for more information.
7. The LIST start option can only be specified in the START command. For more information see *Resource Definition Reference*.

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VSE VTAM V3R3 Start Options

NETID = network id
SSCPID = n
SSCPNAME = name
[ASYDE = **TERM**|KEEP]
[CPSTAB = tablename]
[CDRSCTI = n|**480**]
[**COLD**|WARM]
[CONFIG = x|**00**|name]
[DYNASSCP = **YES**|NO]
[HOSTPU = host-subarea-puname|**ISTPUS**]
[HOSTSA = n|**1**]
[IOINT = 0|n|**180**]
[LIST = yy|**00**][6]
[MAXSUBA = n|**15**]
[MSGMOD = YES|**NO**]
[NODELST = name]
[poolname = (baseno,bufsize,slowpt,xpanno,xpanpt,xpanlim)][5]
[PPOLOG = YES|**NO**]
[**PROMPT**|NOPROMPT][1]
[SGALIMIT = **0**|n|nK||nM]
[SONLIM = [m|**60**][,n|**30**]]
[SSCPDYN = **YES**|NO]
[SSCPORD = **PRIORITY**|DEFINED]
[SUPP = [**NOSUP**|INFO|WARN|NORM|SER]]
[TNSTAT|**NOTNSTAT**[,CNSL|**NOCNSL**][,TIME = n|**60**]]
[TRACE|**NOTRACE**,TYPE = BUF,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = IO,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SIT,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name][4]
[TRACE|**NOTRACE**,TYPE = SMS,ID = VTAMBUF][4]
[**TRACE**,TYPE = VTAM[,MODE = **INT**|EXT]
[,OPTION|OPT = ALL|NONE|CIO|option|(option[,option...])]
[,SIZE = n|**2**]] [4]
[NOTRACE,TYPE = VTAM][4]
[USSTAB = table name]
[variable-length poolname = n][5]
[XNETALS = YES|**NO**]

Notes:

1. The VTAM operator cannot enter the PROMPT|NOPROMPT start option. It can be coded only in ATCSTR00.
2. EVERY may be abbreviated as E.
3. COUNT applies only to the 3720, 3725 and 3745 communication controllers.
4. Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list. VTAM accepts more than one TRACE start option during initialization. You can code only one type of VTAM trace in each TRACE|NOTRACE start option in a list of start options. If you code the TRACE option, you must code the TYPE = qualifier immediately following TRACE.

5. See *VTAM Resource Definition Reference* for more information about this start option.
6. The LIST start option can only be specified in the EXEC command. For more information see *Resource Definition Reference*.

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DTIGEN Macroinstruction for VM/SNA Console Support (VSCS)

Name	Macro	Operands
[symbol]	DTIGEN	[ACBLOOP=n|**3**] [,APPLID=name|**VM**] [,BFRFIFO=Y|**N**] [,BLKMULT=n|**1**] [,CONFTXT=Y|**N**][1] [,CSTRACE=**Y**|N] [,DEXIT=Y|**N**][1] [,DMPFREQ=n|**0**][1] [,DMPINTC=n|**0**][1] [,DMPSYSC=n|**0**][1] [,DMPTIME=n|**90**][1] [,DPACE=n|**screen depth**][1] [,DPTRACE=Y|**N**] [,DPXMTL=n|**1948**][1] [,DTIUSER=n|**0**] [,EXTRACE=Y|**N**] [,FRTRACE=Y|**N**] [,FSREAD=**Y**|N][1] [,GETRACE=Y|**N**] [,IDENT=identifier|**yyddd**] [,KEXIT=Y|**N**][1] [,KPACE=n|**10**][1] [,KPXMTL=n|**284**][1] [,LGNCMDS=pre-logon command table] [,LURTRY=n|**5**][1] [,ONELOGO=Y|**N**][1] [,PASSWRD=password] [,PRNTNUM=n|**16**] [,PRTSHR=**Y**|N][1] [,RCVBFRL=n|**284**][1] [,RDSPTMR=n|**10**] [,RPLNUM=n|**8**] [,SCHED=Y|**N**] [,SCIPCNT=n|**2**][1] [,SCIPNUM=n|**0**][1] [,SCIPTIM=n|**0**][1] [,SPEC=Y|**N**] [,STCHKTM=n|**0**][1] [,STRELTM=n|**0**][1] [,TIMECPY=n|**3**][1] [,TIMEREL=n|**120**][1] [,TRASIZE=n|**1000**] [,TSKRTRY=n|**10**][1] [,VSAMLM=n|**10**][1] [,VTTRACE=**Y**|N] [,W2741L=n|**129**][1] [,W3767L=n|**129**][1] [,WTWXL=n|**72**][1]

Note:

1. After VSCS is started, the operator can use the VSCS CHANGE command to dynamically change this operand. See *VTAM Operation* for more information about this command.

User-Defined Tables and Filters

Class-of-Service (COS) Tables

You define classes of service by creating a class-of-service (COS) table with entries that contain lists of routes grouped together on the basis of characteristics such as security, transmission priority, and bandwidth of the route. The characteristics of a particular list determine a class of service.

Name	Operation	Operands
name[1]	COSTAB	(no operands)

name
specifies a 1—8 character symbolic name for the class-of-service CSECT. This name is required. In a single-network INSTALLATION, YOU MUST SPECIFY ISTSDCOS as the COS table name.

Name	Operation	Operands
[name]	COS	VR=(vr,tp)|((vr,tp),(vr,tp),...)

Name	Operation	Operands
	COSEND	(no operands)

Call Progress Signal (CPS) Retry Table

Define a call progress signal table with a CPSTABL START macroinstruction, one or more CPSENTRY macroinstructions, followed by a CPSTABL STOP macroinstruction.

Name	Operation	Operands
[tabname]	CPSTABL	START

Name	Operation	Operands
[name]	CPSENTRY	CPSCODE=cpsnumber [,CPSRCNT=retry-count] [,CPSRDLY=retry-delay]

Name	Operation	Operands
[name]	CPSTABL	STOP

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Interpret Tables

Define each interpret table by one INTAB macroinstruction followed by at least one LOGCHAR macroinstruction, followed by one ENDINTAB macroinstruction.

Name	Operation	Operands
[name]	INTAB	(no operands)

Name	Operation	Operands
[name]	LOGCHAR	APPLID={(APPLICID,application name)}| {(ROUTINE,routine name)}| {(USERVAR,uservar name)} [,SEQNCE='characters']

Name	Operation	Operands
[name]	ENDINTAB	(no operands)

Logon Mode Tables

You define, create, or modify a logon mode table by specifying a MODETAB macroinstruction, one or more MODEENT macroinstructions, and a MODEEND macroinstruction.

Name	Operation	Operands
[name]	MODETAB	(no operands)

See *VTAM Network Implementation Guide* for additional information on coding the MODEENT macroinstruction for VM VM SNA console support (VSCS) or MVS TSO/VTAM.

Name	Operation	Operands
[name]	MODEENT	[COMPROT=value|**0**] [,COS=name] [,DCODE=value] MVS [,ENCR=value|**0**][1] MVS [,FMPROF=value|**0**] [,LANG=value|**X'01'**] [,LOGMODE=name] [,PRIPROT=value|**0**] [,PSERVIC=value|**0**] [,PSNDPAC=value|**0**][2] [,RUSIZES=value][2] [,SECPROT=value|**0**] [,SRCVPAC=value|**0**][2] [,SSNDPAC=value|**0**][2] [,TSPROF=value|**0**] [,TYPE=value|**1**]

Notes:

1. MVS For the VTAM data encryption facility only.
2. If the session partner of the logical unit for which this mode table applies is an independent logical unit, only the RUSIZES, PSNDPAC, SRCVPAC, and SSNDPAC operands are applicable.

Name	Operation	Operands
[name]	MODEEND	(no operands)

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Model Name Tables

You define, create, or modify a model name table by specifying an MDLTAB macroinstruction, one or more MDLENT macroinstructions, and one or more optional MDLPLU macroinstructions for each MDLENT.

Name	Operation	Operands
[name]	MDLTAB	(no operands)

Name	Operation	Operands
entname[1]	MDLENT	[MODEL = model name]

For the above table, *entname* is required and specifies the 1—8 character name of the table entry.

Name	Operation	Operands
[name]	MDLPLU	PLU = plu name [,MODEL = model name]

Associated LU Tables

You define, create, or modify a model name table by specifying an ASLTAB macroinstruction, one or more ASLENT macroinstructions, and one or more optional ASLPLU macroinstructions for each ASLENT.

Name	Operation	Operands
[name]	ASLTAB	(no operands)

name
is optional and has no function in the specification of a table name.

Name	Operation	Operands
entname	ASLENT	[PRINTER1 = lu name] [,PRINTER2 = lu name]

Name	Operation	Operands
[name]	ASLPLU	PLU = plu name [,PRINTER1 = lu name] [,PRINTER2 = lu name]

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USS Tables

Operation	Operands
LOGON	APPLID(name|uservar name) [,DATA(user data)] [,LOGMODE(name)] [,MODEL(name)] [,PRINTER1(name)] [,PRINTER2(name)]

Operation	Operands
LOGOFF	[APPLID(name)] [,HOLD(**YES**|NO)] [,TYPE(COND|**UNCOND**|FORCE)]

Operation	Operands
IBMTEST	[nn|**10**] [,data]

Operation	Operands
UNDIALVM	(no operands)

Operation	Operands
VMVM	(no operands)

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Coding the USS Table

Note: If you code both operands in the USSTAB macroinstruction, use a comma to separate them.

Name	Operation	Operands
[name]	USSTAB	[TABLE=name] [FORMAT=DYNAMIC|**OLD**]

Name	Operation	Operands
[name]	USSCMD	CMD=name [,FORMAT=BAL|**PL1**] [,REP=name]

Name	Operation	Operands
[name]	USSPARM	PARM=name|Pn [,DEFAULT=value] [,REP=name] [,VALUE=value]

Note: This USSMSG macroinstruction is for terminal operator messages.

Name	Operation	Operands
[name]	USSMSG[1]	MSG=n|(n1,n2,...) ,BUFFER=buffer address|(buffer address, LUNAME) ,TEXT='message text' [,OPT=**BLKSUP**|NOBLKSUP] [,SUPP=ALWAYS|NEVER]

Note: This USSMSG macroinstruction is for VTAM operator messages.

Name	Operation	Operands
[name]	USSMSG[1]	MSG=n|(n1,n2,...) [,DESC=(descriptor code)] [,MCSFLAG=(value)] [,OPT=**BLKSUP**|NOBLKSUP] [,ROUTCDE=(route code)] [,SUPP=ALWAYS|INFO|NEVER| NORM|SER|WARN] [,TEXT='message text']

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Note:

1. The USSMSG macroinstruction does not apply to independent LUs.

Name	Operation	Operands
[name]	USSEND	(no operands)

Note: The VMFLKED utility simplifies link-editing modules for class-of-service tables, interpret tables, logon mode tables, and USS tables. Refer to the *VTAM Resource Definition Reference* for more information on using VMFLKED.

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Session Awareness (SAW) Data Filter

Name	Operation	Operands
name	KEEPMEM	START|STOP

Name	Operation	Operands
name	KCLASS	SAW=**YES**|NO

Name	Operation	Operands
[name]	MAPSESS	KCLASS=kclass label [,PRI=pluname pattern] [,SEC=sluname pattern]

Name	Operation	Operands
[name]	END	(no operands)

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Chapter 2. Operation

VTAM Operator Commands

Note: When, in the following tables, one or more operating system symbols follow the "Operands" column-heading, they apply to the **entire** command. When one or more operating system symbols appear in the operands column, they apply **only** to the immediately preceding operand. For further information on the placement of symbols in this book, see "Symbols Used in This Book" on page viii and "Symbols Used in the Tables" on page ix.

DISPLAY Commands

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,ADJSSCPS [,CDRM = destsscp] [,NETID = netid] MVS VM [,SCOPE = {ALL|**ONLY**}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,APPLS [,SCOPE = {ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,BFRUSE [,BUFFER = {buffid|(buffid[,...,buffid])|*}] [,SUMMARY]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,CDRMS [,SCOPE = {ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,CDRSCS [,NETID = netid] [,SCOPE = {ACT|**ALL**|INACT}]

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VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,CLSTRS [,SCOPE={ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,COS [,ID=puname] [,NETID={netid|*}]

VM Prefix	Operation	Operands VSE
N/A	{DISPLAY|D}	NET,CPS

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,DISK ,ID=ncpname

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,GROUPS [,SCOPE={ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,ID=name [,NETID=netid] [,SCOPE={ACT|ALL|INACT|**ONLY**}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,LINES [,SCOPE={ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,MAJNODES

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VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,NCPSTOR ,ADDR=address ,ID=ncpname [,LENGTH=n|**32**] [,STORAGE={**MAIN**| DUMPVEC| DUMPMAIN}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,PATHS ,ID=switched physical unit name

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,PATHTAB [,{ADJSUB=subarea| DESTSUB=subarea}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,PENDING

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,ROUTE ,DESTSUB=subarea [,{COSNAME=name|ER=n| **ER=ALL**|VR=n}] [,NETID=netid] [,ORIGIN=subarea puname] [,TEST={YES|**NO**}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,SESSIONS [,LIST = {ALL|**COUNT**}] [,LU1 = luname] [,LU2 = luname] [,PLU = pluname] [,SCOPE = {PEND|**ALL**|Q|ACT}] [,SID = sessionid] [,SLU = sluname]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,STATIONS [,ID = node name] [,SCOPE = {ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
N/A	{DISPLAY|D}	NET,TABLE ,ID = tablename [,SCOPE = {**ONLY**|ALL}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,TERMS [,SCOPE = {ACT|**ALL**|INACT}]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,TRACES ,ID = 3710 physical unit name

VM Prefix	Operation	Operands MVS
N/A	{DISPLAY|D}	NET,TSOUSER ,ID = userid [,SID = sessionid]

VM Prefix	Operation	Operands
vtam	{DISPLAY|D}	NET,USERVAR [,ID = uservarname]

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VSE EXEC Command

VM Prefix	Operation	Operands
N/A	EXEC	PROC=procname

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VSE VTAM V3R3 Start Options

NETID = network id
SSCPID = n
SSCPNAME = name
[ASYDE = **TERM**|KEEP]
[CPSTAB = tablename]
[CDRSCTI = n|**480**]
[**COLD**|WARM]
[CONFIG = x|**00**|name]
[DYNASSCP = **YES**|NO]
[HOSTPU = host-subarea-puname|**ISTPUS**]
[HOSTSA = n|**1**]
[IOINT = 0|n|**180**]
[LIST = yy|**00**][6]
[MAXSUBA = n|**15**]
[MSGMOD = YES|**NO**]
[NODELST = name]
[poolname = (baseno,bufsize,slowpt,xpanno,xpanpt,xpanlim)][5]
[PPOLOG = YES|**NO**]
[**PROMPT**|NOPROMPT][1]
[SGALIMIT = **0**|n|nK|nM]
[SONLIM = [m|**60**][,n|**30**]]
[SSCPDYN = **YES**|NO]
[SSCPORD = **PRIORITY**|DEFINED]
[SUPP = [**NOSUP**|INFO|WARN|NORM|SER]]
[TNSTAT|**NOTNSTAT**[,CNSL|**NOCNSL**][,TIME = n|**60**]]
[TRACE|**NOTRACE**,TYPE = BUF,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = IO,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SIT,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name][4]
[TRACE|**NOTRACE**,TYPE = SMS,ID = VTAMBUF][4]
[**TRACE**,TYPE = VTAM[,MODE = **INT**|EXT]
[,OPTION|OPT = ALL|NONE|CIO|option|(option[,option...])]
[,SIZE = size|**2**]] [4]
[NOTRACE,TYPE = VTAM][4]
[USSTAB = table name]
[variable-length poolname = n][5]
[XNETALS = YES|**NO**]

Notes:

1. The VTAM operator cannot enter the PROMPT|NOPROMPT start option. It can be coded only in ATCSTR00.
2. EVERY may be abbreviated as E.
3. COUNT applies only to the 3720, 3725, and 3745 communication controllers.
4. Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list. VTAM accepts more than one TRACE start option during initialization. You can code only one type of VTAM trace in each TRACE|NOTRACE start option in a list of start options. If you code the TRACE option, you must code the TYPE = qualifier immediately following TRACE.

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5. See *VTAM Resource Definition Reference* for more information on this start option.
6. The LIST start option can only be specified in the EXEC command. For more information see *Resource Definition Reference*.

HALT Commands

VM Prefix	Operation	Operands
vtam	{HALT|Z}	NET [,CDLINK = {**ACT**|INACT}]

VM Prefix	Operation	Operands MVS VM
vtam	{HALT|Z}	NET,CANCEL [,DUMP = {YES|**NO**}]

VM Prefix	Operation	Operands
vtam	{HALT|Z}	NET,QUICK [,CDLINK = {**ACT**|INACT}]

MODIFY Commands

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname, CDRM = {new cdrm| (new cdrm[,old cdrm])} ,ID = {cdrsc major node name| cdrsc minor node name|*} [,TYPE = {IMMED|**NORM**}]

VM Prefix	Operation	Operands MVS VM
vtam	{MODIFY|F}	procname,CSALIMIT = {value|(value[,F])} [,OPTION = {**TOTAL**|BELOW}] MVS

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,DR ,FROM = {linename|puname} ,ID = {puname|luname} ,TYPE = {MOVE|DELETE} [,ACTIVATE = {YES|**NO**}] [,ADDR = char] [,TO = linename]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,DUMP ,ID = {ncpname|link station name} [,ACTION = {TRANSFER|PURGE| **COMP**|STORE}] [,DUMPDS = name] [,DUMPSTA = link station name] [,OPTION = {DYNA|**STATIC**}] [,RMPO = {YES|**NO**}] [,TYPE = {CSP|MOSS|**NCP**}]

VM Prefix	Operation	Operand MVS
N/A	{MODIFY|F}	procname,ENCR = {OPT|REQD} ,ID = logical unit name

VM Prefix	Operation	Operand MVS VM/ESA
VTAM	{MODIFY|F}	procname,FFDC

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VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,IMR ,ID = {link station|physical unit name} [,OPTION = {**ACT**|INACT}] [,RECLIM = n|**10**]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,IOPD [,IOINT = n]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,LL2 ,ID = name [,DATA = data] [,NFRAMES = n|**1**] [,NTRANS = **10**|m] [,OPTION = {CANCEL|CONT}]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,LOAD ,ID = ncpname [,ACTION = {**ADD**|REPLACE| PURGE|CANCEL}] [LOADMOD = load module name]

VM Prefix	Operation	Operands VSE
N/A	{MODIFY|F}	NET,MSG ,ID = subtask name

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,MSGMOD = {YES|NO}

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname ,ID = linename ,NEGPOLL = number of responses

VM Prefix	Operation	Operands MVS VM/ESA
VTAM	{MODIFY|F}	procname,NOFFDC

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,NOTNSTAT

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,NOTRACE ,TYPE = {BUF|GPT|IO|LINE|NETCTLR| SIT|SMS|TG|TSO|VTAM} [,ID = name] [,LINE = name] [,OPTION = {option|(option[,...,option])| ALL|END}] [,PU = 3710 physical unit name] [,SCOPE = {ALL|**ONLY**}] [,SID = sessionid]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,POLL = n ,ID = linename

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,PPOLOG = {YES|NO}

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,PROFILES ,ID = application program name

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,SESSION = n ,ID = linename

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VM Prefix	Operation	Operands VSE VM
vtam	{MODIFY|F}	NET,SUBTASK ,ID = {name|TPRINT} [,FUNCTION = {**ATTACH**|DETACH|MSG}] [,PARM = parameter] VM [,SUPVR = {YES|**NO**}] VM

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,SUPP = {NOSUP|INFO| WARN|NORM|SER}

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MODIFY TABLE Command

MODIFY TABLE,OPTION = ASSOCIATE

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,ID = name ,NEWTAB = newname ,OLDTAB = {oldname|*} ,OPTION = ASSOCIATE ,TYPE = {MODETAB|USSTAB|LOGTAB| ASLTAB|MDLTAB|VSECPSTAB}

MODIFY TABLE,OPTION = ASSOCIATE,TYPE = COSTAB

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,NETID = netid ,NEWTAB = newname ,OPTION = ASSOCIATE ,ORIGIN = name ,TYPE = COSTAB

MODIFY TABLE,OPTION = DELETE

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,ID = name ,OLDTAB = {oldname|*} ,OPTION = DELETE ,TYPE = {MODETAB|USSTAB|LOGTAB| ASLTAB|MDLTAB|VSECPSTAB}

MODIFY TABLE,OPTION = DELETE,TYPE = COSTAB

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,NETID = netid ,OPTION = DELETE ,ORIGIN = name ,TYPE = COSTAB

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MODIFY TABLE,OPTION=LOAD

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,NEWTAB=newname ,OPTION=LOAD [,OLDTAB=oldname]

MODIFY TABLE,OPTION=DELETE,TYPE=FILTER

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,OPTION=DELETE ,TYPE=FILTER

MODIFY TABLE,OPTION=LOAD,TYPE=FILTER

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TABLE ,OPTION=LOAD ,TYPE=FILTER [,NEWTAB=newname]

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VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TNSTAT [,CNSL={YES|**NO**}] [,TIME=n]

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,TRACE ,TYPE={BUF|GPT|IO|LINE|NETCTLR| SIT|SMS|TG|TSO|VTAM} [,COUNT=n|**ALL**] [,FRAMES={DATA|ALL}] [,ID=name] [,LINE=name] [,MODE={INT|EXT}] [,OPTION={option| (option[,...,option])|ALL}] [,PU=3710 physical unit name] [,SCOPE={ALL|**ONLY**}] [,SID=sessionid] [,SIZE=size]

Note: Figure 2-1 on page 2-15 displays MODIFY TRACE types.

VM Prefix	Operation	Operands
vtam	{MODIFY|F}	procname,USERVAR ,ID=uservarname [,OPTION={**UPDATE**|DELETE}] [,TYPE={**DYNAMIC**|STATIC|VOLATILE}] [,VALUE=value]

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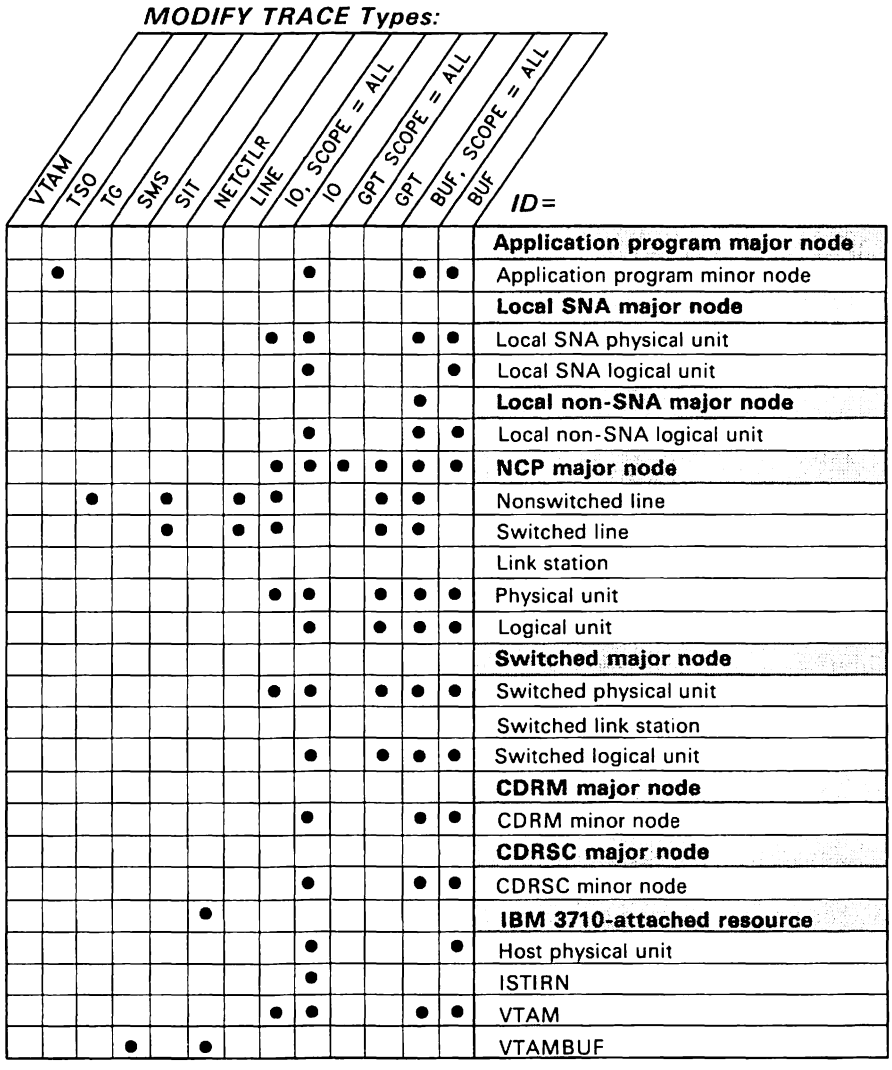

Figure 2-1. Resource and Trace Reference for MODIFY TRACE

Note: Gray shading indicates major nodes.

MVS VM START Command

VM Prefix	Operation	Operands
vtam	{START|S}	procname [,,,(option,option,...)] MVS [,option,option,...] VM

MVS VM VTAM V3R3 Start Options

NETID = network ID
SSCPID = n
SSCPNAME = name
[ASYDE = **TERM**|KEEP]
[CDRSCTI = n|nS|nM|nH|nD|**480**]
[**COLD**|WARM] MVS
[CONFIG = x|**00**|name]
[CSALIMIT = **0**|n|nK|nM]
[CSA24 = **0**|n|nK|nM] MVS
[DLRTCB = n|**32**]
[DYNASSCP = **YES**|NO]
[FFDC = **YES**|NO] MVS VM/ESA
[GWSSCP = **YES**|NO]
[HOSTPU = host-subarea-puname|**ISTPUS**]
[HOSTSA = n|**1**]
[IOINT = n|**180**]
[LIST = yy|**00**][7]
[MAXSUBA = n|**15**]
[MSGMOD = YES|**NO**]
[NCPBUFSZ = **512**|1024|2048]
[NMVTLOG = ALWAYS|**NPDA**|NEVER]
[NODELST = name] MVS
[poolname = (baseno,bufsize,slowpt,F,xpanno,xpanpt,xpanlim)][5]
[PPOLOG = YES|**NO**]
[**PROMPT**|NOPROMPT][1]
[SDLCMDRS = **YES**|NO]
[SONLIM = [m|**60**][,n|**30**]]
[SSCPDYN = **YES**|NO]
[SSCPORD = **PRIORITY**|DEFINED]
[SUPP = **NOSUP**|INFO|WARN|NORM|SER]
[TNSTAT|**NOTNSTAT**[,CNSL|**NOCNSL**][,TIME = n|**60**]]
[TRACE|**NOTRACE**,TYPE = BUF,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = IO,ID = node name[,EVERY][2]][4]
[TRACE|**NOTRACE**,TYPE = LINE,ID = line name[,COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SIT,ID = line name[COUNT = n|**ALL**][3]][4]
[TRACE|**NOTRACE**,TYPE = SMS,ID = VTAMBUF][4]
[**TRACE**,TYPE = VTAM[,MODE = **INT**|EXT]
[,OPTION|OPT = ALL|NONE|CIO|option|(option[,option...])]
[,SIZE = n|2|50]][4,6]
[NOTRACE,TYPE = VTAM][4]
[USSTAB = table name]
[XNETALS = YES|**NO**] VM

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Notes:

1. The VTAM operator cannot enter the PROMPT|NOPROMPT start option. It can be coded only in ATCSTR00.
2. EVERY may be abbreviated as E.
3. COUNT applies only to the 3720, 3725, and 3745 communication controllers.
4. Do not use NOTRACE when starting VTAM, except to override a TRACE start option coded in a predefined list. VTAM accepts more than one TRACE start option during initialization. You can code only one type of VTAM trace in each TRACE|NOTRACE start option (whether selected by the VTAM operator or predefined in a list of start options).
5. See *VTAM Resource Definition Reference* for more information about this start option.
6. The default value of this option depends upon the value of the replaceable constant RACINOP in the ISTRACON constants module. See *VTAM Resource Definition Reference* for more information.
7. The LIST start option can only be specified in the START command. For more information see *Resource Definition Reference*.

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VARY Commands

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,ACQ ,ID = name [,ACT] [,LOADMOD = load module name] [,OWNER = ownername] [,PUSUB]

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,ACT ,ID = name [,ACQ] [,ANS = {ON|OFF}] [,DUMPLOAD = {YES|**NO**}] [,DUMPSTA = name] [,LOAD = {YES|NO|**U**}] [,LOADFROM = {**HOST**|EXTERNAL}] [,LOADMOD = load module name] [,LOADSTA = name] [,LOGMODE = logon mode name] [,LOGON = {pluname| cdrscname| uservarname}] [,NEWPATH = {name|(name1,...,name3)}] [,RNAME = {name|(name1,...,name13)}] [,SAVEMOD = {YES|**NO**}] [,SCOPE = {ALL|**COMP**|ONLY|U}] [,U = channel device name] [,WARM] MVS VSE

Note: Figure 2-2 on page 2-19 displays the valid resource types for VARY ACT.

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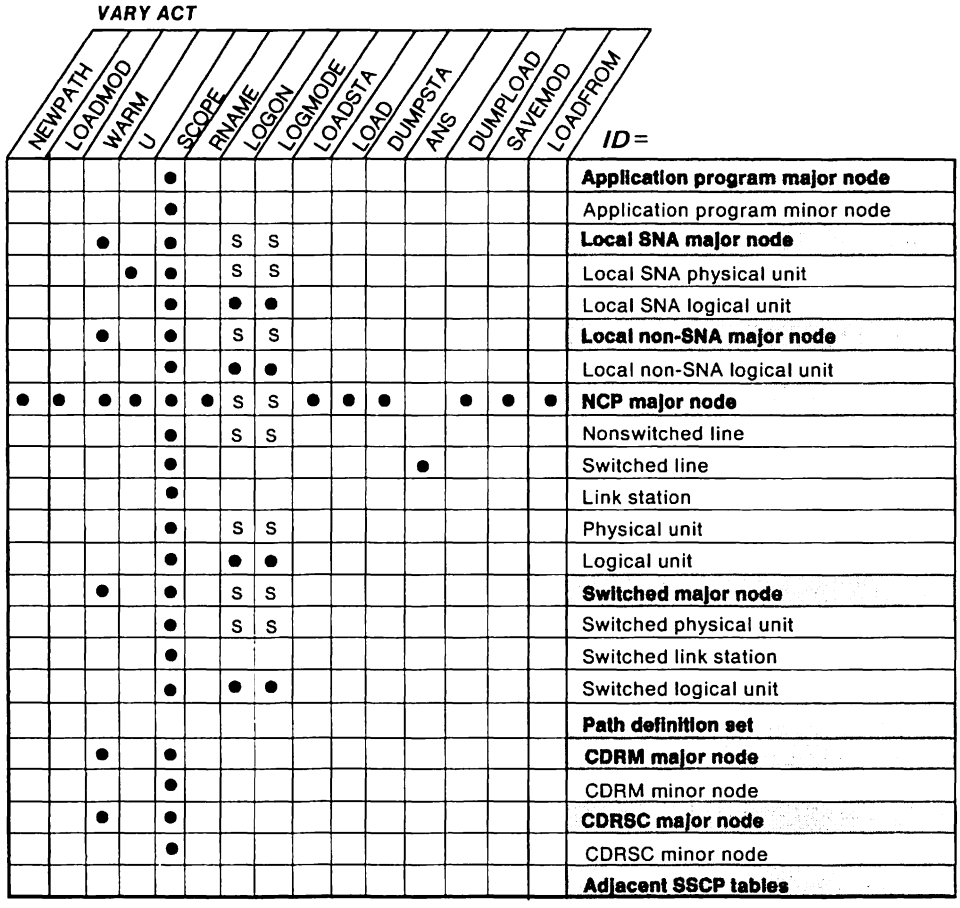

VARY ACT															
NEWPATH	LOADMOD	WARM	U	SCOPE	RNAME	LOGON	LOGMODE	LOADSTA	LOAD	DUMPSTA	ANS	DUMPLOAD	SAVEMOD	LOADFROM	ID=
				●											**Application program major node**
				●											Application program minor node
		●		●		S	S								**Local SNA major node**
			●	●		S	S								Local SNA physical unit
				●		●	●								Local SNA logical unit
		●		●		S	S								**Local non-SNA major node**
				●		●	●								Local non-SNA logical unit
●	●	●	●	●	●	S	S	●	●	●		●	●	●	**NCP major node**
				●		S	S								Nonswitched line
				●							●				Switched line
				●											Link station
				●		S	S								Physical unit
				●		●	●								Logical unit
		●		●		S	S								**Switched major node**
				●		S	S								Switched physical unit
				●											Switched link station
				●		●	●								Switched logical unit
															Path definition set
		●		●											**CDRM major node**
				●											CDRM minor node
		●		●											**CDRSC major node**
				●											CDRSC minor node
															Adjacent SSCP tables

Figure 2-2. Valid Resource Types for VARY ACT

Notes:

1. Gray shading indicates major nodes.
2. A bullet (•) means the operand can be specified for the resource, and an S means the operand can be specified for sifting to subordinate resources. An M means the operand applies to that resource only in certain migration cases.

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,ANS={ON|OFF} ,ID=linename [,ACT]

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,DIAL ,ID=name

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,DRDS ,ID=drname

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,HANGUP ,ID=name

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,INACT ,ID=name [,CDLINK={**ACT**|INACT}] [,FINAL={YES|**NO**}] [,RMPO={YES|**NO**}] [,TYPE={IMMED|UNCOND| FORCE|REACT|GIVEBACK}]

Note: Figure 2-3 on page 2-21 shows each resource type for which the VARY INACT command is valid and indicates which operands can be used on the command.

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VARY INACT

RMPO=YES/NO	TYPE=REACT	TYPE=FORCE	TYPE=UNCOND	TYPE=GIVEBACK	TYPE=IMMED	FINAL=YES/NO	CDLINK=ACT/INACT	ID=
	F	●	●		●			**Application program major node**
	F	●	●		●			Application program minor node
	I	I	●		●			**Local SNA major node**
	●	●	●		●	●		Local SNA physical unit
	F	●	●		●			Local SNA logical unit
	I	I	●		●			**Local non-SNA major node**
	F	●	●		●			Local non-SNA logical unit
●	●	●	●		●		●	**NCP major node**
	F	●	●	●	●			Nonswitched line
	F	●	●	●	●			Switched line
	●	●	●		●			Link station
	●	●	●		●	●		Physical unit
	F	●	●		●			Logical unit
	I	I	●		●			**Switched major node**
	●	●	●		●	●		Switched physical unit
	●	●	●		●			Switched link station
	F	●	●		●			Switched logical unit
	F	●	●		●			**CDRM major node**
	F	●	●		●			CDRM minor node
	F	●	●		●			**CDRSC major node**
	F	●	●		●			CDRSC minor node

Figure 2-3. Valid Resource Types for VARY INACT

Notes:

1. Gray shading indicates major nodes.
2. A bullet (•) means the operand applies to that resource. An I or F in the table shows what value is substituted if an IMMED, UNCOND (V3R2 only), FORCE, or REACT operand is specified for a resource to which it does not apply.

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VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,INOP ,ID={puname|linename} [,END]

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,LOGON={pluname| cdrscname| uservarname} ,ID=name [,ACT] [,LOGMODE=logon mode name]

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET ,ID=name ,NOLOGON={pluname| cdrscname| uservarname|*}

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,PATH={USE|NOUSE} ,GID=n,ID=switched major node name ,PID=n,ID=physical unit name

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,REL ,ID=name [,CDLINK={**ACT**|INACT}] [,OWNER=ownername] [,TYPE={GIVEBACK|IMMED}]

VM Prefix	Operation	Operands
vtam	{VARY|V}	NET,TERM [,LU1=luname] [,LU2=luname] [,NOTIFY={**YES**|NO}] [,PLU=pluname] [,SCOPE={**ACT**|ALL|Q}] [,SID=session identifier] [,SLU=sluname] [,TYPE={COND|**UNCOND**|FORCE}]

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VM VM SNA Console Support (VSCS) Operator Commands

VSCS Prefix	Operation	Operands
vscs	{BFRLIFO|BFRFIFO}	(no operands)

VSCS Prefix	Operation	Operands
vscs	{CHANGE|C}	[,CONFTXT=Y|**N**] [,DEXIT=Y|**N**] [,DMPFREQ=**0**|n] [,DMPINTC=**0**|n] [,DMPSYSC=**0**|n] [,DPACE=**screen size**|n] [,DPXMTL=**1948**|n] [,FSREAD=**Y**|N] [,KEXIT=Y|**N**] [,KPACE=n|**10**] [,KPXMTL=n|**284**] [,LURTRY=n|**min(5,TSKRTRY)**] [,ONELOGO=Y|**N**] [,PRTSHR=**Y**|N] [,RCVBFRL=n|**284**] [,SCIPCNT=n|**2**] [,SCIPNUM=n|**0**] [,SCIPTIM=n|**0**] [,STCHKTM=n|**0**] [,STRELTM=n|**0**] [,TIMECPY=n|**3**] [,TIMEREL=n|**120**] [,TSKRTRY=n|**10**] [,VSAMLM=n|**10**] [,WTWXL=n|**72**] [,W2741L=n|**129**] [,W3767L=n|**129**]

VSCS Prefix	Operation	Operands
vscs	{DISPLAY|D}	,ID=luname1 luname2...lunamen [,OPTIONS] [,PRTTAB]

VSCS Prefix	Operation	Operands
vscs	{FORCE|F}	,ID=luname1 luname2...lunamen

VSCS Prefix	Operation	Operands
vscs	{PRINTER|P}	,luname1 luname2...lunamen

VSCS Prefix	Operation	Operands
vscs	{QUERY|Q}	(no operands)

VSCS Prefix	Operation	Operands
vscs	{QUIT|HALT|CANCEL}	(no operands)

VSCS Prefix	Operation	Operands
vscs	START	[PARM=x]

VSCS Prefix	Operation	Operands
vscs	{STORAGE|S}	(no operands)

VSCS Prefix	Operation	Operands
vscs	{TRACEON|TRACEOFF}	[,luname1 luname2...lunamen] [,EXT|DISP|**CCS**|**VTAM**| GET|FRE|DAT|ALL] [,*]

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MVS Logon Manager Operator Commands

Operation	Operands
{MODIFY|F}	procname,HELP

Operation	Operands
{MODIFY|F}	procname,INFO,ID={name|APPL|CLU|ALL} [,PEND]

Operation	Operands
{MODIFY|F}	procname,MEMBER=membername

Operation	Operands
{MODIFY|F}	procname,MINLINK=n ,ID=name|ALL

Operation	Operands
{MODIFY|F}	procname,STOP

Operation	Operands
{START|S}	procname

Resource Status Codes

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

The 5-character state abbreviation appears in some VTAM messages in response to an operator DISPLAY ID= command. See *VTAM Operation* for more information about the DISPLAY ID command and the messages that respond to it.

State Code Categories

The classification of states into the following major categories may aid in deciding if a problem exists. If problem determination is needed, refer to *VTAM Diagnosis*.

Category	Meaning
Final (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 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.

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State Code Values

The first byte represents the 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. The following table shows the 2 bytes in combination (for example, value hexadecimal 0001 indicates a category of 00 and a specific code of 01).

Notes on the following table:

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.

Abbre-viation	Value (hex)	Category	Resource Status
ACTIV	0505	Final	The resource is in the active state.
APEER	0501	Final	Attach PU type 4 or 5 (peer): The node is the backup link station to which a PU type 4 or 5 in another domain is attached.
CONCT	0200	Final	Connectable: A VARY ACT command has completed for a switched or channel-attached physical or logical unit or for an application program. 1. A dial-in or dial-out request will be honored, but the resource is not in use at this time. 2. For application programs, an OPEN ACB has not yet been issued. 3. For a channel-attached resource, the device has not been powered-on.
CTDER	041D	Susp	Contacted error: A node, such as a link station or physical unit, was being activated and the Contacted request was received indicating the Contacted error state. For a physical unit, a request to deactivate the resource has been scheduled. For a link station, if the NCP it is trying to contact is being activated, the link station activation will be suspended until the activation is completed; then the link station will be contacted again. A second CTDER causes deactivation of the link station.
CTD1	043D	Susp	Contacted(1): A link station was being activated and received a Contacted request from the appropriate PU services. Because the communication controller contacted is being activated, the activation of the link station is suspended until the communication controller has been activated. Activation processing for the link station is redriven after the communication controller has been activated.
CTRQI	043A	Susp	Contacted(2) request IPL: A node, such as a link station or a physical unit, is being activated, and the Contacted request indicates that reload is required. For a physical unit, a request to deactivate the resource has been scheduled. For a link station, if the NCP it is trying to contact is being activated, the link station activation will be suspended until the communication controller has been activated. The link station will then be contacted again. A second CRTQI deactivates the link station.
CT1NS	040F	Susp	Contact(1) not sent: A link station reached the point in its activation where a Contact request should be sent, but the NCP to be contacted was not in a suitable state. The link station's activation is suspended and will be redriven when the NCP's activation reaches the point where it can be contacted (when its state is PAPU2).
DALUC	011E	Susp	DACTLU complete: A DACTLU request was sent and the response was received, but some higher-level node recovery processing has started. This node will remain in this state until the higher-level process redrives it.
DAPUC	011F	Int	DACTPU complete: A DACTPU request was sent as the result of a force deactivate or force reactivate command, and either the response was received or, in the case of a communication controller, a route failed and a DACTPU request was received.

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	Abbre-viation	Value (hex)	Category	Resource Status
	DEFND	0001	Short	Defined: A VARY ACT command is being processed for a major node. The major node and its subnodes are known to VTAM. The activation has been suspended while the processing of the command moves from one internal VTAM PAB to another.
*	DLLDD	05	Final	Loaded: The physical unit requested a load and that load has been successfully completed.
*	DLPAB	04	Short	Pending load abort: The physical unit's requested load cannot be completed; a request to cancel the load has been sent to the physical unit.
*	DLPLD	03	Long	Pending load: The physical unit is currently being loaded.
*	DLPRP	02	Short	Pending ACTPU response: An ACTPU request unit was sent to the physical unit, and VTAM is waiting for the ACTPU response by which the physical unit will indicate whether or not it needs to be loaded.
*	DLRST	01	Final	Reset: The physical unit is not being loaded.
	DUMPC	011B	Susp	Dump complete: A link station was used to dump an NCP and the dump is complete, but the recovery or deactivation of the NCP has not reached the point where link stations connected to that NCP are processed. For recovery, that point is reached when the NCP's load or dump procedure status is RESET. For a deactivation, that point is reached when the NCP's status is PRSET.
	FDSCC	0445	Int	Force Discontact completed: A Discontact has been sent as a result of a force deactivate or force reactivate command, and the response to the Discontact has been received.
	HLACF	0409	Int	Higher-level activate failed: A node was being activated, and activation of its higher-level node failed. For example, a channel-attached physical unit or logical unit was being activated, and PUB allocation failed for its associated channel. A deactivate request was scheduled for the channel-attached physical unit or logical unit.
	HLACT	042D	Int	Higher-level activate complete: A node is being activated and its higher-level node has completed activation. For example, a channel-attached physical unit or logical unit is being activated, and the activation of the associated channel has been completed. The activation of the resource is about to begin.
	IINOP	0005	Final	Inactive (Inoperative): The resource has been deactivated by an INOP request or a forced deactivate request.

Abbre-viation	Value (hex)	Category	Resource Status
INACS	0006	Final	Inactive with sessions: If the resource is a logical unit, the node is in the inactive state but may have active sessions. There is no LU-SSCP session, but the logical unit may have active LU-LU sessions. This state can occur when a cross-domain resource is made a same-domain resource as part of the takeover of the resources of an SSCP that failed. If the resource is a CDRM, the node is in an inactive state, but it supports active cross-domain LU-LU sessions. In this state, there is no SSCP-SSCP session, but the CDRM may be supporting active cross-domain LU-LU sessions. This state can occur when (1) the virtual route used by the SSCP-SSCP session is inoperative or has been deactivated by a DACTVR (FORCE), (2) activate CDRM contention has occurred, or (3) an unrecoverable error has been detected for the SSCP-SSCP session. The cross-domain active session, which used the SSCP-SSCP session to set up, will remain intact.
INACT	0003	Final	Inactive: The resource has been deactivated.
INACX	0007	Final	Inactive with address transforms: An external CDRM could not be activated. A gateway NCP along the path to the CDRM did not have enough information to support a cross-network session with the CDRM.
INOP	0441	Susp	Inoperative: An INOP request, route failure, or force reactivate command is being processed. Active user sessions have been terminated. The resource is about to be reactivated, but must wait for a higher-level node to activate it.
INVAP	0417	Int	Invalid Activate PU response: A node, such as a communication controller or physical unit, is being activated. The ACTPU request was sent, but the response is invalid. Two examples of invalid responses are (1) the response unit has invalid format or indicates the physical unit is not in COLD or ERP state and (2) the resource has been loaded and the contents ID is not the expected value. A request to deactivate the resource was scheduled.
LLQED	043B	Susp	Lower-level queued: A VARY ACT command is being processed for a communication controller, and the RDT segment has just been built. The network names of both the major node and its subnodes are known to VTAM. At least one of the subnode link stations has been queued on another link station queue, because it is an operand of the RNAME=*keyword* on the second communication controller's VARY ACT command. The activation of the communication controller has been suspended while the processing of the command moves from one internal VTAM PAB to another.
NACDR	042F	Int	Negative Activate CDRM response: A CDRM is being activated and the Activate CDRM request was sent, but the response was negative (the request failed). A request to deactivate the CDRM has been scheduled.
NACTL	0410	Int	Negative Activate LU response: A node, such as an application program or other logical unit was being activated, and the Activate LU request was sent, but the response was negative (the request failed). A request to deactivate the resource was scheduled.

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Abbre-viation	Value (hex)	Category	Resource Status
NACTP	0412	Int	Negative Activate PU response: A node, such as a communication controller or physical unit, was being activated and the Activate PU request was sent; but the response was negative and the request failed. A request to deactivate the resource was scheduled.
NADLK	0423	Int	Negative Add Link response: A channel link was being activated and an Add Link request was sent to the appropriate PU services. However, the response was negative and the request failed. A request to deactivate the resource was scheduled.
NADST	0420	Int	Negative Add Link Station response: A channel link station was being activated and an Add Link Station request was sent to the appropriate PU services. However, the response was negative and the request failed. A request to deactivate the resource was scheduled.
NALNK	0415	Int	Negative Activate Link response: A line was being activated, and the Activate Link request was sent, but the response was negative (the request failed). A request to deactivate the line has been scheduled.
NANNA	0431	Int	Negative allocate node network address: A node, such as a dynamically added physical unit or logical unit, was being activated, and the Request Network Address Assignment request was sent to the appropriate PU services, but the response was negative and the request failed. A request to deactivate the resource was scheduled.
NASNA	0426	Int	Negative allocate subnode network addresses: A node, such as a channel-attached or switched physical unit, is being connected and the Request Network Address Assignment request has been sent to the appropriate PU services. However, the response was negative and the request failed. A request to disconnect the resource was scheduled.
NCONO	0400	Int	Negative Connect Out response: A node, such as a channel-attached or switched physical unit, was being connected and the Connect Out request was sent to the appropriate physical unit services, but the response was negative and the request failed. A request to disconnect the resource was scheduled.
NCONT	041C	Int	Negative Contact response: A node, such as a link station or physical unit, was being activated and the Contact request was sent, but the response was negative (the request failed). A request to deactivate the resource has been scheduled.
NEVAC	0004	Final	Never activated: The resource has never been activated.
NLOAD	043C	Int	Negative Load response: A communication controller was being activated and a Load request was sent to the appropriate physical unit services, but the response was negative and the request failed. A request to deactivate the communication controller was scheduled.
NNAUV	0403	Int	Negative Set NAU Control Vector: A node, such as a switched or dynamically added logical unit, was being connected and the Set NAU Control Vector request was sent to the appropriate physical unit services; but the response was negative and the request failed. A request to disconnect the resource was scheduled.

Abbre-viation	Value (hex)	Category	Resource Status
NSARV	041A	Int	Negative Set SAR Control Vector: A node, such as a link station, was being activated and the Set SAR Control Vector request was sent to the appropriate PU services; but the response was negative and the request failed. A request to deactivate the resource was scheduled.
NSDT	0428	Int	Negative SDT response: A communication controller was being activated and the Start Data Traffic request was sent; but the response was negative and the request failed. A request to deactivate the communication controller was scheduled.
NSNCP	042E	Int	Negative Switch to NCP response: A PEP link was being activated, and the Switch to NCP request was sent, but the response was negative and the request failed. A request to deactivate the PEP link was scheduled.
NSSSV	0405	Int	Negative Set SSS Control Vector: A node, such as a DR-added physical unit added by dynamic reconfiguration, or a switched physical unit, was being connected, and the Set SSS Control Vector request was sent to the appropriate PU services, but the response was negative, and the request failed. A request to disconnect the node was scheduled.
NSTD	042A	Int	Negative Set Time and Date response: A node, such as a communication controller, was being activated and the Set Time and Date request was sent; but the response was negative and the request failed. A request to deactivate the node was scheduled.
NVYLM	0436	Int	Negative operator query (VFYLM) response: The resource was being activated and the response to the VTAM message IST361A was to terminate the NCP's activation. A request to deactivate the resource has been scheduled.
PABCN	010B	Short	Pending Abandon Connection response: A node, such as a channel-attached or switched physical unit, is about to become disconnected. The Abandon Connection request has been sent to the appropriate PU services, but the response has not been received.
PABCO	0116	Short	Pending Abandon Connection Out response: A node, such as a channel-attached or switched physical unit, is being disconnected and the Abandon Connect Out request has been sent to the appropriate physical unit services, but the response has not been received.
PACDR	0430	Long	Pending Activate CDRM response: A CDRM is being activated and the Activate CDRM request has been sent, but the response has not been received.
PACTL	0411	Short	Pending Activate LU response: A node, such as an application program or other logical unit, is being activated and the Activate LU request has been sent, but the response has not been received.
PADLK	0421	Short	Pending Add Link response: A channel link is being activated and an Add Link request was sent to the appropriate PU services, but the response has not been received.
PADST	0419	Short	Pending Add Link Station response: A channel-link station is being activated and an Add Link Station request was sent to the appropriate PU services, but the response has not been received.

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Abbre-viation	Value (hex)	Category	Resource Status
PALNK	0416	Short	Pending Activate Link response: A line is being activated, and the Activate Link request has been sent; but the response has not been received.
PALUC	0434	Short	Pending Activate LU Cleanup response: An active logical unit is undergoing recovery processing. An ACTLU request has been sent, but the response has not been received.
PANNA	0432	Short	Pending allocate node network address: A node, such as a dynamically added physical unit or logical unit, is being activated and the Request Network Address Assignment request has been sent to the appropriate PU services, but the response was not received.
PAPU1	0413	Short or Long	Pending Activate PU(1) response: A communication controller is being activated and may not need to be loaded. The ACTPU request was sent, but the response was not received. The sending of this request may have to wait for the availability of a virtual route. If one or more explicit routes are operative, this should be a short transient state while route activation proceeds. If no routes are operative, this may be a long transient state while VTAM waits for connectivity to be established along the route.
PAPU2	0425	Short or Long	Pending Activate PU(2) response: A physical unit is being activated, did not need to be loaded or has been loaded, and the Activate PU request has been sent, but the response has not been received. For a communication controller, the sending of this request may have to wait for the availability of a virtual route. If one or more explicit routes are operative, this should effectively be a short transient state while route activation proceeds. If no routes are operative, this may be a long transient state while VTAM waits for connectivity to be established along the route.
PASNA	0427	Short	Pending allocate subnode network addresses: A node, such as a channel-attached or switched physical unit, is being connected. The Assign Network Address or Request Network Address Assignment request has been sent to the appropriate PU services, but the response was not received.
PBFSI	0448	Short	Pending BFSESSINFO: Takeover processing is in progress for an LU, and active sessions have not been completely reported to the SSCP.
PCDLA	0121	Short	Pending Cleanup DACTLINK active: A VARY INACT,TYPE=FORCE command was entered for an NCP-attached line whose status is active, pending active, or pending inactive. The lower level nodes are being deactivated, and a DACTLINK (cleanup) request was sent for the line; but the response has not yet been received.
PCDLI	0122	Short	Pending Cleanup DACTLINK inactive: A VARY INACT,TYPE=FORCE command was entered for an NCP-attached line whose status is not active, pending active, or pending inactive. A DACTLINK (cleanup) request was sent for the line; but the response has not yet been received.
PCONO	0401	Short	Pending Connect Out response: A node, such as a channel-attached or switched physical unit, is being connected and the Connect Out request has been sent to the appropriate PU services, but the response was not received.

Abbre-viation	Value (hex)	Category	Resource Status
PCON1	041E	Short	Pending Contact(1) response: A node, such as a link station, is being activated, and the first Contact request was sent to the appropriate PU services; but the response was not received.
PCON2	0422	Short	Pending Contact(2) response: A node, such as a physical unit or link station, is being activated and the Contact request (second attempt for link station) has been sent to the appropriate physical unit services; but the response has not been received.
PCTD1	041F	Long	Pending Contacted(1) request: A node, such as a link station, is being activated, and the first Contact response was received as a positive response; but the Contacted request was not received. A communication controller will also be found in this state during activation while waiting for a link station connected to it to be activated. For CTC, if both sides are hung in PCTD1, enter VARY INACT,TYPE=FORCE then VARY ACT on one side only to bypass the problem.
PCTD2	0424	Long	Pending Contacted(2) request: A node, for example, a link station or a physical unit, is being activated. The final Contact request was sent by VTAM to the appropriate PU services and the response was received from the NCP, but the Contacted request has not been received from the remote device. A communication controller will also be found in this state (it is a suspended state in this case) during activation while waiting for a link station connected to it to be activated. The difference between PCTD2 and PCTD1 is that a communication controller in the PCTD1 state may be loaded if a link station receives a Contacted request indicating the NCP needs to be loaded, whereas in the PCTD2 state, both the link station and the NCP would be deactivated. **Note:** When the remote device is a 3274, the most likely cause is the NRZI definition parameter. The NCP defaults to NRZI. If the NRZI definition parameter in the 3274 differs from that specified in the NCP, PCTD2 will result. If a token-ring device connected to a SNA 3174 channel-attached controller is not logically and physically attached to the token ring at activation time, the device will remain in PCTD2 status until the device is made available.
PDACL	010F	Short	Pending DACTLU response: A node, such as an application program or a logical unit, is being disconnected or deactivated. The DACTLU request has been sent, but the response has not been received.
PDACP	0110	Short	Pending DACTPU response: A node, such as a communication controller or physical unit, is being disconnected or deactivated. The DACTPU request has been sent, but the response has not been received.
PDANC	0442	Short	Pending DACTPU ANSC: A DACTPU request was sent to the resource, but the response has not been received. The resource was being activated when the Automatic Network Shutdown Complete (ANSC) RU was received from the NCP. This request causes the SSCP to reset the SSCP-PU session and then resume the activation procedure.
PDANS	0104	Short	The Abandon Connect In request unit has been sent for a node such as a switched link.

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Abbre-viation	Value (hex)	Category	Resource Status
PDELR	010E	Short	Pending Delete Network Resource response: A node, such as an application program, is being disconnected. The Delete Network Resource request has been sent to the appropriate PU services, but the response has not been received.
PDGBK	0123	Short	Pending DACTLINK giveback: Records were lost when the VTAM subtask VTMTRACE was restarted. A VARY INACT,TYPE=GIVEBACK command was entered for an NCP attached line. A DACTLINK (giveback) request was sent for the line, but the response has not yet been received.
PDISC	010D	Short	Pending Discontact response: A node, such as a link station or physical unit, is being deactivated or disconnected. The Discontact request has been sent to the appropriate PU services, but the response has not been received.
PDLNK	0112	Short	Pending DACTLINK response: A line or channel-attached device is being deactivated, and the DACTLINK request has been sent to the appropriate PU services, but the response has not been received.
PDLUC	011D	Short	Pending Deactivate LU cleanup: An active logical unit is undergoing error-recovery processing and the DACTLU request has been sent, but the response has not been received.
PDPA1	0443	Short	Pending DACTPU (ACT1): A DACTPU request was sent to the resource, but the response has not been received. The communication controller was being activated and was found already loaded. When the DACTPU response is received, this state is exited and processing continues from the beginning. Another attempt to load is allowed.
PDPA2	0444	Short	Pending DACTPU (ACT2): A DACTPU has been sent to the resource, but the response has not been received. If the resource is a physical unit type 4, it was being activated and a load was performed. Once the DACTPU response is received, the activation of the communication controller will proceed. If the resource is a BSC 3270 physical unit, a general poll failure occurred and the DACTPU was sent to clean up internal control blocks. When the response is received, an ACTPU will be sent.
PFDCP	0440	Short	Pending Force DACTPU response: A DACTPU has been sent as a result of a force-reactivate or force-deactivate command against a node, such as a communication controller. The response has not been received.
PFDLU	0120	Short	Pending Force DACTLU response: A DACTLU has been sent as a result of a force-deactivate command for the logical unit, but the response has not yet been received.
PFDMP	0119	Short	Pending Dump response: A dump is being performed on a communication controller over a link station, and it has not yet completed processing.
PFDSC	042C	Short	Pending Force Discontact response: A physical unit is being forced to deactivate or forced to reactivate and the Discontact request has been sent to the appropriate PU services, but the response has not been received.

Abbre-viation	Value (hex)	Category	Resource Status
PFNNA	011C	Short	Pending free node network address: A node, such as a switched or dynamically added physical unit or logical unit, is being deactivated. The Free Network Address request has been sent to the appropriate PU services, but the response has not been received.
PFSNA	010C	Short	Pending free subnode network addresses: A node, such as a channel-attached or switched physical unit, is being disconnected. The Free Network Address request has been sent to the appropriate PU services, but the response has not been received.
PHLAC	040A	Susp	Pending higher-level activation: A node is awaiting activation of its higher-level node. For example, a channel-attached physical unit or logical unit is being activated, and the request to activate the associated channel (that is, the associated PUB) has not completed.
PHLIN	0102	Susp	Pending higher-level deactivation: A node is inactive and its higher-level node is being deactivated. For example, a channel-attached physical unit is inactive and the associated channel PUB is being deallocated.
PINAC	0100	Long	Pending inactive: CDRM is being deactivated.
PLOAD	040E	Long	Pending load: Either an NCP is being activated and a load operation has begun, or a peripheral physical unit, such as an 8775, is being activated, the physical unit has requested a load, and the SSCP sent the load request to an application program defined in the CNM routing tables. The physical unit has not received a response.
PLSTC	043F	Long	Pending load station conditional: Activation processing for a communication controller is waiting for the link station over which the communication controller will be loaded to become available. When the link station is capable of being used for loading, if the link station is a channel link station, VTAM determines if the communication controller is loaded. If it is, a load is not done and activation proceeds. If it is not a channel link station, or if the communication controller is not loaded, a load is performed.
PLSTU	040D	Long	Pending load station unconditional: Activation processing for a communication controller will be loaded to become available. When the link station is capable of being used for loading, a load of the NCP will be done.
PMALD	0446	Long	Pending migration ACTPU load/dump procedure: An NCP session recovery loop has been suspended because of an ongoing load or dump operation.
PMATM	0447	Long	Pending migration ACTPU timer: An NCP is waiting for the expiration of a time interval before retrying session activation.
PNAUV	0404	Short	Pending Set NAU Control Vector response: A node, such as a switched or dynamically added logical unit, is being connected, and the Set NAU Control Vector request has been sent to the appropriate PU services, but the response has not been received.

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Abbre-viation	Value (hex)	Category	Resource Status
PNFY1	0113	Long	Pending Notify(1): A node, such as a logical unit, is being deactivated or disconnected. The request to terminate user sessions has been scheduled, but the Notify request indicating that the user sessions have ended has not yet been received.
PNFY2	0108	Long	Pending Notify(2): A node, such as a logical unit, is about to become connectable and the request to terminate any queued user sessions has been scheduled. However, the Notify request indicating that the user sessions have ended has not yet been received.
PNFY3	0105	Long	Pending Notify(3): A node is about to become inactive and the request to terminate queued user sessions has been scheduled. However, the Notify request indicating that the user sessions have ended has not yet been received.
POAS1	0437	Long	Pending operator query (AUTOSYN1) response: A communication controller is being activated, and message IST183A, which asks if the communication controller should be reloaded or re-synchronized, has been entered. The message was sent after the communication controller was contacted but before an SSCP-PU session was established. The reply was not received.
POAS2	0438	Long	Pending operator query (AUTOSYN2) response: A communication controller is being activated, and message IST183A, which asks if the communication controller should be reloaded or re-synchronized, has been issued. The message was sent after an SSCP-PU session was established with the communication controller. The reply was not received.
PREQC	0402	Long	Pending Request Contact request: A node, such as a channel-attached or switched physical unit, is being connected and the Connect Out response has been received, but the Request Contact request has not been received.
PRMPO	0103	Short	Pending RMPO response: A Remote Power Off request has been sent over a link station and the response has not been received.
PRSET	0101	Short	Pending reset: The resource is inactive, but the network name is still known to VTAM.
PSARV	041B	Short	Pending Set SAR Control Vector response: A node, such as a link station, is being activated and the Set SAR Control Vector request has been sent to the appropriate PU services, but the response has not been received.
PSDT	0429	Short	Pending Start Data Traffic response: A node, such as a communication controller, was being activated, and the Start Data Traffic request was sent; but the response was not received.
PSNCP	0414	Short	Pending Switch to NCP response: A PEP link is being activated, and the Switch to NCP request was sent, but the response has not been received.
PSSSV	0406	Short	Pending Set SSS Control Vector response: A switched physical unit is being connected, or a dynamically added physical unit is being activated, and the Set SSS Control Vector request has been sent to the appropriate PU services; but the response has not been received.

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Abbre-viation	Value (hex)	Category	Resource Status
PSTD	042B	Short	Pending Set Time and Date response: A communication controller was being activated, and the Set Time and Date request was sent; but the response was not received.
PSUBR	0504	Susp	Pending subnode Release: An acquired communication controller that was activated before it was acquired is being released; that is, a request to release the subnodes in the unowned portion of the communication controller is in progress.
PSUB1	0115	Susp	Pending subnode deactivate(1): A node supporting subnodes, for example, an application program, communication controller, link, or physical unit, is being deactivated or disconnected. Terminate requests for user sessions for application programs or LUs are being performed.
PSUB2	010A	Susp	Pending subnode deactivate(2): A node supporting subnodes, for example, an application program, communication controller, link, or physical unit, is about to become connectable. Terminate requests for queued user sessions for application programs or LUs are being performed.
PSUB3	0107	Susp	Pending subnode deactivate(3): A node supporting subnodes, for example, an application program, communication controller, link, or physical unit, is about to become inactive. Terminate requests for queued user sessions that apply to application programs or LUs are being performed.
PSWEP	0111	Short	Pending Switch to EP response: A PEP link has been deactivated. The Switch to EP Mode request has been sent to the appropriate PU services, but the response has not been received.
PTRM1	0114	Short	Pending Terminate(1) response: A node, such as a logical unit, is being deactivated or disconnected. The request to terminate user sessions has been scheduled, but the response has not yet been received.
PTRM2	0109	Short	Pending Terminate(2): A node, such as a logical unit, is about to become connectable, and the request to terminate queued user sessions has been scheduled. However, the response has not yet been received.
PTRM3	0106	Short	Pending Terminate(3) response: A logical unit is about to become inactive and the request to terminate queued user sessions has been scheduled, but the response has not yet been received.
PVYLM	0435	Long	Pending operator query (VFYLM) response: The resource is being activated and the VTAM operator message IST361A or IST937A has been issued, but the reply has not yet been received. Message IST361A asked the operator if he wanted to load the NCP or terminate the NCP's activation. Message IST937A asked the operator if he wanted to reload the NCP, inactivate the NCP, or ignore the correlator mismatch.
P095A	0118	Long	Pending operator query response: An ERP has issued message IST095A asking whether an ERP dump is desired. The reply has not been received.
P284A	0408	Long	Pending operator query response: A communication controller is being recovered and message IST284A, asking whether the communication controller should be reloaded, has been issued. The reply has not been received.

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	Abbre-viation	Value (hex)	Category	Resource Status
	RACTH	0301		Reactivate at higher level: The resource is being deactivated and, once inactive, will wait for its reactivation to be driven by a higher-level node. (This is a desired state only.)
	RACTN	0300		Reactivate at this level: The resource is being deactivated and will then be reactivated at this level. (This is a desired state only.)
	RADDF	0433	Int	RDTADD failed: A node was being activated and the request to add the associated network address to the VTAM RDTADD data base has failed. A request to deactivate the resource has been scheduled.
	RDIAL	0201		Redial: A switched physical unit is being disconnected and an attempt to redial the physical unit will be made once disconnection is complete. (This is a desired state only.)
	RELSD	0002	Final	Released: A physical unit has been released, or it exists in the unowned portion of an activated-before-acquired communication controller and has not yet been acquired.
	RESET	0000	Final	Reset: VTAM built a control block to represent the resource, but the resource has not been added to the symbol table. The resource is not usable by VTAM. You may have a duplicate resource name. For NCP resources, you may need to enter a VTAM VARY ACQ command to acquire the resource before using it.
	RINAC	0600	Long	Routable, Inactive: A MODIFY LL2 command is being processed for an inactive, dynamically added physical unit. In order to process the command, a network address had to be obtained for the physical unit. When the LL2 test is terminated, the physical unit will be returned to the inactive state.
	RRLSD	0601	Long	Routable, Released: A MODIFY LL2 command is being processed for a released, dynamically added physical unit. In order to process the command, a network address had to be obtained for the physical unit. When the LL2 test is terminated, the physical unit will be returned to the released state.
**	TRACT	03	Final	Active: The trace indicated is active.
**	TRPAR	02	Short	Pending ACT TRACE: The trace is being activated and the ACTTRACE request has been sent to the appropriate PU services, but the response has not been received.
**	TRPDR	01	Short	Pending DACTTRACE: The trace is being deactivated and the DACTTRACE request has been sent.
**	TRRES	00	Final	Reset: The trace indicated is not active.
	183AF	0418	Int	Operator query (AUTOSYNCH) failed: A request to issue message IST183A was scheduled, but the message could not be issued. Processing continues as if the reply were negative.
	284AF	0407	Int	Operator query failed: A request to issue message IST284A has been scheduled, but the message could not be issued. Processing continues as if the reply were negative.

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.

Status Modifier	Meaning
/A	A call progress signal (CPS) has occurred and VTAM is delaying the retry attempt until the delay timer expires.
/B	A BIND is in progress for this node.
/C	A session between this node and its controlling application program is active, pending active, or queued.
/S	A session is in progress for this logical unit or terminal.
/U	A CLEAR preceding UNBIND or an UNBIND is in progress for this node.

Notes:

1. Since the abbreviation of the state code is truncated to 4 characters prior to adding the 2-character status modifier, a character which makes the state code unique (the fifth character) may be lost. For example: status modifier /U is appended to state code PCTD1 and displayed as PCTD/U. The displayed state code is indistinguishable from that displayed if status modifier /U were appended to state code PCTD2.
2. If status modifier /B or /U is present, the resource is PENDING.

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Resource Status Information

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

Resource Status Code	Character Position	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.
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. See *VTAM Operation* for an explanation of automatic activation.
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.
Y	10	The cross-domain resource (CDRSC) was created dynamically.

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VR Status Field

The *vrstat* field in message IST537I may present the following values:

ACTIV The VR is active.

The virtual route has been defined to VTAM in a path definition set. It has been successfully activated. It is in use by one or more sessions.

BLCKD The VR is blocked.

The virtual route has been defined to VTAM in a path definition set, and, it has been successfully activated. It is in use by one or more sessions, but congestion has been detected along the route.

PACT The VR is pending active.

The virtual route has been defined to VTAM in a path definition set and is in the process of being activated by this node.

PINAC The VR is pending inactive.

The virtual route has been defined to VTAM in a path definition set and has recently been active, but it is now in the process of being deactivated by this node. Unless VTAM is halting, the VR will be automatically reactivated when it is again needed for a session.

INACT The VR is inactive.

The virtual route has been defined to VTAM in a path definition set, but it is not currently active or is pending active. It will be automatically activated when it is needed for a session.

UNDEF The VR is undefined.

The virtual route has not been defined to VTAM in a path definition set.

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ER Status Field

The *erstat* field in message IST537I may present the following values:

ACTIV1 The ER is active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, and has been activated by the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

ACTIV2 The ER is active.

The explicit route has been defined to VTAM in a path definition deck, is physically available to the network, has been activated by the node at the other end of the route, and is in the process of being activated by this node. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

ACTIV3 The ER is active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, and has been activated by this node or by both this node and the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

MIGR The ER is active (but only for limited function, "migration" use).

The explicit route has been defined to VTAM in a path definition set and is believed to be physically available to the network. During activation processing, it was determined that one or more nodes along the route do not support the explicit route protocols. A route test (TEST=YES option) will likely fail, because one or more of its nodes does not support explicit route protocols. This does not mean that the physical connectivity of the route has failed. It only means that the route could not be completely tested because of the migration nodes.

PACT The ER is pending active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, has not been activated by the node at the other end of the route, and is in the process of being activated by this node. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

INACT The ER is inactive.

The explicit route has been defined to VTAM in a path definition set and is physically available to the network, but it has never been successfully activated. Activation will be attempted automatically when the ER is needed for a session. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

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INOP The ER is inoperative.

The explicit route has been defined to VTAM in a path definition set, but it is not physically available to the network. That is, connectivity does not exist along the entire route. A route test (TEST=YES option) will likely fail, because the explicit route does not have physical connectivity. See the **Operator Response** for this message.

PDEFA The ER is "pending definition—active."

The explicit route is physically available to the network and activation has been attempted by the node at the other end of the route, but it has not yet been defined to VTAM in a path definition set; it will be automatically activated by this node when an appropriate path definition set is processed. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to cause the route to become defined. In order to be used by VTAM to carry session message traffic, the explicit route must be defined to VTAM. See the **Operator Response** for this message.

PDEFO The ER is "pending definition—operative."

The explicit route is physically available to the network, but it has not yet been defined to VTAM in a path definition set. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to cause the route to become defined. In order to be used by VTAM to carry session message traffic, the explicit route must be defined to VTAM. See the **Operator Response** for this message.

UNDEF The ER is undefined.

The explicit route has not been defined to VTAM in a path definition set and is not physically available to the network. A route test (TEST=YES option) will always fail, because the explicit route is neither defined to VTAM nor operative. See the **Operator Response** for this message.

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MVS VM System Completion Codes

This section contains the system completion codes related to VTAM. For more information about system codes, refer to the system code manual for your operating system.

System completion codes indicate that the control program has determined that a task cannot continue processing reliably. For example, an error may have occurred during the execution of a user's application program and this error was detected by VTAM. In such a case, the task is terminated. A completion code indicates the reason for the termination.

MVS Table 2-1 on page 2-50 and VM Table 2-2 on page 2-50 give problem determination actions for the system completion codes.

0A7

Explanation: During VTAM HALT QUICK or VTAM HALT processing, VTAM found that storage was unavailable to schedule a TPEND exit for an access method control block (ACB) opened by the user's application program.

System Action: The user's application is abnormally terminated.

Programmer Response: None.

0A8

Explanation: VTAM detected an error that occurred during the execution of a user's application program. The contents of the 2 low-order bytes of register 15 indicate the cause of the error.

Register 15 Contents in Hexadecimal	Explanation
2101	A VTAM validity check of the user's request parameter list (RPL) failed because the RPL does not have the same protection key as the application program's TCB.
7001	The user's event control block (ECB) is invalid.
7003	The user's request parameter list (RPL) is invalid.
7004	An ACB OPEN failed due to an invalid access method control block (ACB) address.
FF01	An invalid session awareness (SAW) data buffer was passed to VTAM's data space services release routine.

System Action: The task abnormally terminates.

Programmer Response: Probable user error. For reason codes **2101, 7001,** and **7003**, verify that the RPL and ECB pointers are correct and execute the job step again. For reason code **7004**, verify that the ACB pointer is valid and check the storage to be sure it resides in the application's storage protection key. For reason code **FF01**, contact your IBM service representative.

Problem Determination:

- MVS Table 2-1 on page 2-50, items 1, 2, 3, 5a, 6, 7, 8, and 10
- VM Table 2-2 on page 2-50, items 1, 2, 3, and 5.

0A9

Explanation: When accompanied by a 0 value in Register 15, a VTAM HALT command has been successfully completed. If Register 15 is not 0, an error has occurred during the execution of a VTAM module. The contents of the 2 low-order bytes of register 15 indicate the cause of error.

Register 15 Contents in Hexadecimal	Explanation
0000	A VTAM HALT CANCEL command has been successfully completed.
2101	The request parameter list (RPL) is not in the correct storage key.
7002	A VTAM was unable to store its registers after a user exit routine returned to VTAM.
7005	VTAM was unable to restore its registers after a user exit routine returned to VTAM.
7006	VTAM was unable to obtain adequate storage for the register save area from VWA.
7007	A TPEXIT was entered while the process was holding a PSS lock.
7010	A GETRDTE for a resource failed because the RDTE chain has been corrupted.
7012	A lock's count shows no user is holding the lock, but the lock is held.
7071	A RELSTORE was issued for a previously freed buffer.
7072	A VTFREE was issued for a previously freed area.
7074 VM	A VTFREE was issued for an invalid buffer.
10F1 MVS	The ABEND was issued by VTAM's FRR retry routine to percolate the original abend to the next recovery routine (if any) associated with the TCB. See the original abend, which was recorded in SYS1.LOGREC and appears just prior to the SVC dump that was generated and indicated by **10F1**.
FF02	A FREEBLK macroinstruction returned a nonzero return code.
FF03	An invalid function code was detected by a called module.
FF04	A request, response, or vector was not defined to the RU information table.
FF05	The main entry for the extended router was invoked but processing was already occurring within a CALLSSCP environment.
FF06	No sense code was set, but one should have been.
FF07	The CPCBURC field contained no format, but the response has format.
FF10	A request was made to queue a response to a PAB.

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FF11	An invalid suspend code was passed to suspend.
FF12	An invalid SENDER invocation was made.
FF13	An unexpected value was received.
FF14	An invalid state was encountered.
FF15	An impossible bit value was set, for example, a 5th value in a field (enumerated type) that can take only 4 values (BIT(2)).
FF16	An unexpected control block was received as input.
FF17	An invalid SIB or SIB address was passed to FREESIB.
FF18	The SENDER buffer area is not large enough.
FF19	The DETERMINER routine returned invalid results.
FF20	The BUILD routine returned invalid results.
FF22	SRTDEL failed.

System Action: The task that initiated the VTAM request abnormally terminates.

Programmer Response: None.

Problem Determination:

- MVS Table 2-1 on page 2-50, items 1, 2, 3, 5a, 5b, 6, 8, and 9
- VM Table 2-2 on page 2-50, items 1, 2, 3, and 4.

0AA MVS

Explanation: An abend condition occurred during execution of VTAM. VTAM's functional recovery routines (FRRs) were unable to associate the failure with any particular TCB in the address space.

System Action: All the tasks in the address space are abnormally terminated.

Programmer Response: None.

Problem Determination: Table 2-1 on page 2-50, items 1, 2, 5a, 6, 8, and 10.

0AB

Explanation: An error occurred while TSO/VTAM was in operation and a VTIOC module was executing a VTAM macroinstruction. The contents of the 2 low-order bytes of register 15 indicate the cause of the error.

Register 15 Contents in Hexadecimal	Explanation
0101	The terminal-input manager for IBM 3767 and IBM 3770 terminals encountered an unrecoverable error while executing a VTAM macroinstruction that uses a request parameter list (RPL).
0102	The terminal-output manager for IBM 3767 and IBM 3770 terminals encountered an unrecoverable error while executing a VTAM macroinstruction that uses an RPL.

0103	The terminal-input manager for IBM 3270 SNA terminals encountered an unrecoverable error while executing a VTAM macroinstruction that uses an RPL.
0104	The terminal-output manager for IBM 3270 SNA terminals encountered an unrecoverable error while executing a VTAM macroinstruction that uses an RPL.
0105	The VTIOC LOSTERM exit routine encountered an error during execution of a SNA BIND or UNBIND command that used an RPL.
0201	An application ID problem was encountered during execution of a VTAM OPEN macroinstruction. The error occurred during initialization of a TSO/VTAM user-address space.
0202	An error occurred during execution of a VTAM OPEN macroinstruction. The ERROR field of the ACB indicates the problem. The values that can be set in the ERROR field are listed in *VTAM Programming*.
0203	An error occurred during execution of a VTAM CLOSE macroinstruction. The code in the ERROR field of the ACB is X'42', indicating that the ACB has been closed, but a VTAM error has prevented the successful disconnection of one or more TSO terminals.

System Action: The terminal session in which the error occurred terminates.

Programmer Response: None.

Problem Determination: MVS Table 2-1 on page 2-50, items 2, 6, 8, 9, and 10.

0AC MVS

Explanation: The terminal control address space (TCAS) was unable to continue its normal processing because of an error. The low-order bytes of register 15 and TCAS work area (TWAR) field TWARSON both contain the reason code that indicates the cause of the error.

Reason Code in Hexadecimal	Explanation
00	A STOP command was entered.
04	An Invalid START command was issued.
10	The TCAS main task was unable to attach the VTAM interface subtask.
14	The TCAS main task was unable to attach the user-interface subtask.
18	The TCAS main task was unable to attach the console-communication subtask.
1C	TCAS was unable to obtain storage for the TCAS table (TCAST) in the common service area (CSA).
20	The TCAS main task abnormally terminated and was unable to recover.

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30	The VTAM interface subtask abnormally terminated and was unable to recover.
34	The user-interface subtask abnormally terminated and was unable to recover.
38	The console-communication subtask abnormally terminated and was unable to recover.

System Action: TCAS abnormally terminates.

Operator Response: Reply 'DUMP' to TCAS termination message IKT012D to obtain a dump.

Problem Determination: Table 2-1 on page 2-50, items 2, 4, 6, 8, and 11.

0AD

Explanation: An error occurred while TSO/VTAM was in operation and VTIOC's queue manager was executing a GETCELL or FREECELL macroinstruction. The contents of the 2 low-order bytes of register 15 indicate the cause of the error.

Register 15 Contents in Hexadecimal	Explanation
0108	The cell address supplied to the FREECELL macroinstruction was invalid.
010C	No cell pool existed for the FREECELL request.
0110	An invalid cell pool ID was specified for the FREECELL request.
020C	No cell pool existed for the GETCELL request.
0210	An invalid cell pool ID was specified for the GETCELL request.

System Action: The queue manager abnormally terminates, and the terminal session in which the error occurred terminates.

Operator Response: None.

Problem Determination: MVS Table 2-1 on page 2-50, items 2, 7, 9, 10, and 11.

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Table 2-1. MVS Problem Determination Actions for System Completion Codes

Item	Action
1	If MSGLEVEL = (1,1) was not specified in the JOB statement, specify it and rerun the job.
2	Save the console sheet from the primary console. For systems with remote consoles, save the remote console sheet. In systems with multiple-console support (MCS), save a copy of the hard copy log.
3	Save the job stream associated with the job.
4	Save the system output (SYSOUT) associated with the job.
5	Make sure that the failing job step includes: 1. SYSABEND DD statement 2. SYSUDUMP DD statement.
6	Save all the associated output.
7	Save the program listing associated with the job.
8	Save the dump.
9	Execute the EREP service aid to dump the LOGREC file, and save the resulting output. For MSS, execute the following program to dump the LOGREC file: 1. Service aid IFCISDA0 2. Program ISDASDAO with the DETAIL(ALL) parameter.
10	Have the linkage editor/loader map available.
11	Print the associated SVC dump data set, using the AMDPRDMP service aid with the GO statement.

Table 2-2. VM Problem Determination Actions for System Completion Codes

Item	Action
1	Save the console sheet from the primary console. For systems with remote consoles, save the remote console sheet.
2	Save all the associated output.
3	Save the dump.
4	Execute the CPEREP service aid to dump the LOGREC file and save the resulting output.
5	Have the linkage editor/loader map available.

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VSE Cancel Codes

If an application program's partition is canceled, VTAM supplies a cancel code on all associated dumps. Some VTAM messages also pass on cancel codes as an aid to understanding a particular error condition. Message IST252I also passes function codes related to cancel codes 40 and 41. See cancel codes 40 and 41 in the following list for an explanation of these function codes. Refer to *VSE/Advanced Functions Handbook* for the message code and label associated with each cancel code.

Cancel code and function code (in hexadecimal):

00 Default – issued if no other code applies

08 CANCEL request from VSE/POWER

09 CANCEL request from LIOCS

0A Either of the following occurred:

- Error in system's access control table
- Processing error during an access-control operation.

0B Access control violation

0C Failure in an interactive VSE/ICCF partition

0D Program check in a subsystem or appendage routine

0E Page fault in a subsystem or appendage routine

0F Invalid disk address for an FBA system disk file

10 Normal end-of-job

11 No channel-program translation for unsupported device

12 Insufficient buffer space for channel-program translation

14 Page pool too small

15 Page fault in disabled program

17 Program request (same as 23 but causes dump because subtasks were attached when main task issued CANCEL macroinstruction)

18 Eliminates cancel message when main task issues DUMP macroinstruction with subtasks attached

19 I/O operator option

1A I/O error

1B Channel failure

1C CANCEL ALL macroinstruction

1D Main task termination

1E Unknown ENQ requester

1F CPU failure

20 Program check

21 Invalid SVC

22 Phase not found

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23 Program request

24 Operator intervention

25 Invalid address

26 SYS*xxx* not assigned (unassigned LUB code)

Note: If the CCB is not available, the logical unit is STSxxx.

27 Undefined logical unit

28 Phase too long for LTA or partition

29 Invalid library structure

2A I/O error on page data set

2B I/O error during fetch from PCIL

2C Invalid parameter passed by PHO routine

2D Program cannot be executed or restarted because of failing storage block

2E Invalid resource request (possible deadlock)

2F More than 255 PFIX requests for 1 page

30 Reading past /& statement (on SYSRDR or SYSIPT)

32 Invalid DASD address

33 No long seek (disk)

34 GETVIS space exhausted

35 Job control open failure

36 Page fault in I/O appendage routine

38 Wrong privately translated CCW

39 Error in SYSLOG channel program

3A Spool request out of sequence in SYSLOG channel program

40 Task terminated by VTAM

- **2101** A VTAM validity check of the user's request parameter list (RPL) failed because the RPL does not have the same protection key as the application program's task control block (TCB).
- **7001** The user's event control block (ECB) is invalid.
- **7003** The user's request parameter list (RPL) is invalid.

41 Invalid VTAM condition code

- **0000** A VTAM HALT CANCEL command has been successfully processed.
- **7002** A VTAM request for storage failed.
- **7005** VTAM was unable to restore its registers after a user exit routine returned to VTAM.
- **7007** A TPEXIT was issued while the process was holding a PSS lock.

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7010	A GETRDTE for a resource failed because the RDTE chain has been corrupted.
7012	A block' count shows no user is holding the lock, but the lock is held.
7071	A RELSTORE was issued for a previously freed buffer.
7072	A VTFREE was issued for a previously freed area.
FE01	A GETBLK request for a pool with a single fixed length was received and, but the length did not match the length defined in the SPTAE.
FE02	A pool has been defined by the POOLDEF macro with an unacceptable length or mapping area.
FF01	The info unit type was not request, response of vector.
FF02	A FREEBLK macroinstruction returned a nonzero return code.
FF03	An invalid function code was detected by a called module.
FF04	A request, response, or vector was not defined to the RU information table.
FF05	The main entry for the extended router was invoked but processing was already occurring within a CALLSSCP environment.
FF06	No sense code was set but, should one have been.
FF07	The CPCBURC field contained no format, but the response has format.
FF08	The associated RUPE pointer in response RUPE was zero.
FF09	The VWA area in use is too small to satisfy this request.
FF10	A request was made to queue a response to a PAB.
FF11	An invalid suspend code was passed to suspend.
FF12	An invalid SENDER invocation was made.
FF13	An unexpected value was received.
FF14	An invalid state was encountered.
FF15	An impossible bit value was set, for example, a 5th value in a field (enumerated type) that can take only 4 values (BIT(2)).
FF16	An unexpected control block was received as input.
FF17	An invalid SIB or SIB address was passed to FREESIB.
FF18	The SENDER buffer area is not large enough.
FF19	The DETERMINER routine returned invalid results.
FF20	The BUILD routine returned invalid results.
FF21	SRTDEL failed.
FF22	SRTDEL failed.

42 DASD file protection violation (program attempted access beyond file extent limits)

FF Multiple cancel condition (see SYSLST for details)

XX Can indicate one of the following:

- Unrecognized cancel code
- Supervisor catalog failure
- IPL failure.

* If the CCB is not available, the logical unit is SYS*xxx*.

** The cancel code is not significant in case of a supervisor catalog or IPL failure, because the system is placed in the wait state without any further processing by the terminator.

Note: In addition to recognizing the cancel codes above, the terminator also recognizes the same codes with the hexadecimal 80 bit on (cancel occurred in LTA). The hexadecimal 80 bit is tested by $$BEOJ and subsequently reset.

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Session States and Status Modifiers

This section lists all session states and session status modifiers resulting from DISPLAY SESSIONS and DISPLAY ID commands.

Session States

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.

Initiation States

The first column identifies the session initiation state seen when displaying a session. The second column identifies whether the session is queued (Q), pending active (P/A), or active (ACT) as described below:

QUEUED

A session is considered *queued* (Q) under the following circumstances:

- A session request has been received. Session establishment is in the process of locating 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.

PENDING ACTIVE

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

ACTIVE

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

STATE	STATUS	MEANING
ACTIV	ACT	The session is active. A session has been successfully established.
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.
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.

STATE	STATUS	MEANING
DSSPD	Q	DSRLST pending cross-domain routing in progress. The DSRLST will be sent when routing is complete for the previous request.
HIQUE	Q	Highest queued state.
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.
OLUEC	Q	OLU endpoint processing complete.
OLUCOMP	Q	OLU direction 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.
PCDCQ	Q	Pending CDCINIT request. This state is set when the SSCP(PLU) has sent or received CDINIT response and is waiting for the SSCP(SLU) to send CDCINIT. If a CDCINIT arrives before this state is reached, the CDCINIT is queued with no state change.
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.
PCINIT	P/A	Pending CINIT or BFCINIT response.
PCIST	P/A	Pending CINIT or BFCINIT response and session start has already been received.
PCRYPK	Q	Pending cryptographic keys.
PDDIAL	Q	Pending dial response for the DLU.
PDLUIO	Q	Pending USS message response in DLU direction.
PDRAMRU	Q	DLU pending response from address manager for a request.
PDRNAAD	Q	DLU RNAA response pending from the gateway NCP in the OLU direction.
PDSRLST	Q	Pending DSRLST response.
PODIAL	Q	Pending dial response for OLU.
POLUIO	Q	Pending USS message response in OLU direction.
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.
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.

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STATE	STATUS	MEANING
PREALC	Q	Pending re-allocation. A session has been queued.
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.
PSETCVR	Q	Pending SETCV response.
PSLUIO	Q	Pending USS message response in SLU direction.
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.
PTAKOVER	P/A	Pending SSCP takeover is complete.
PXASL	Q	Pending associated LU name translation
PXDAD	Q	Pending DLU alias translation.
PXDGC	Q	Pending DLU direction COS translation.
PXDLO	Q	Pending DLU logmode 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.
SETCVCOM	Q	SETCV complete.
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.
UNKNOWN	Q	The session state could not be determined.

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.
PLUIO	Pending device LU I/O.
PSESEND	Pending SESSEND or BFSESSEND. The session can expect any of several *session end* signals. Use D NET,SESSIONS,SID command to see specific signals needed. **Note:** Pending session end can also occur as a result of session outage notification processing when pre-V3R2 SSCPs are involved in the session setup even though the session may not currently be in termination.
PSESF	Pending CDSESSSF response.
PSETF	Pending CDSESSTF response.
POSAR	Pending Override Session Address (OSA) response. An OSA request was sent to the non-SNA SLU requesting termination.
UNKNOWN	The session state could not be determined.

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Session Status Modifiers

The following session status modifiers can appear in positions 6—8 of the session state:

STATUS MODIFIER	MEANING
/A	A call progress signal (CPS) has occurred and VTAM is delaying the retry attempt until the delay timer expires.
/B	A session establishment request is pending.
/U	A session termination 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).
/PB	The session is a primary XRF session, and a session establishment request is pending.
/XB	The session is a backup XRF session, and a session establishment request is pending.
/PU	The session is a primary XRF session, and a session termination request is pending.
/XU	The session is a backup XRF session, and a session termination request is pending.
/PC	The session is primary XRF session, and one of the session partners is a controlling LU.
/XC	The session is a backup XRF session, and one of the session partners is a controlling LU.

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Chapter 3. Programming

VTAM Macroinstructions

ACB—Create an Access Method Control Block

Name	Operation	Operands
[symbol]	ACB	AM=VTAM [,APPLID=address of application program's symbolic name] [,PASSWD=password address] [,EXLST=exit list address] [,MACRF=**LOGON**|NLOGON] [,PARMS=(NIB=nib address)] [,PARMS=(USERFLD=user data)]

CHECK—Check Request Status

Name	Operation	Operands
[symbol]	CHECK	RPL=rpl address

CLOSE—Close One or More ACBs

MVS This is the list and execute form.

Name	Operation	Operands
[symbol]	CLOSE	(acb address[,,acb address]...) [,MF=({E|L},{list address|(register)})]

VSE This standard form of CLOSE is valid.

Name	Operation	Operands
[symbol]	CLOSE	(acb address[,acb address]...)

VM This standard form of CLOSE is valid.

Name	Operation	Operands
[symbol]	CLOSE	(acb address[,,acb address]...)

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CLSDST—Terminate Sessions in Which the Application Program Acts as the Primary Logical Unit

Name	Operation	Operands
[symbol]	CLSDST	RPL=rpl address [,rpl field name=new value]...

EXECRPL—Execute a Request

Name	Operation	Operands
[symbol]	EXECRPL	RPL=rpl address [,rpl field name=new value]...

EXLST—Create an Exit List

Name	Operation	Operands
[symbol]	EXLST	AM=VTAM [,LERAD=exit routine address] [,SYNAD=exit routine address] [,DFASY=exit routine address] [,RESP=exit routine address] [,SCIP=exit routine address] [,TPEND=exit routine address] [,RELREQ=exit routine address] [,LOGON=exit routine address] [,LOSTERM=exit routine address] [,NSEXIT=exit routine address] [,ATTN=exit routine address]

GENCB—Generate a Control Block

Name	Operation	Operands
[symbol]	GENCB	BLK={ACB|EXLST|RPL|NIB} ,AM=VTAM [,keyword=value]... [,COPIES=quantity] [,WAREA=work area address, LENGTH=work area length] [,MF=list, generate, or execute form parameters]

INQUIRE—Obtain Logical Unit Information or Application Program Status

Name	Operation	Operands
[symbol]	INQUIRE	RPL=rpl address [,rpl field name=new value]...

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INTRPRET—Interpret an Input Sequence

Name	Operation	Operands
[symbol]	INTRPRET	RPL=rpl address [,rplfield name=new value]...

ISTGLBAL—Declare and Set Macro Global Variables

Name	Operation	Operands
[symbol]	ISTGLBAL	(no operands)

MODCB—Modify the Contents of Control Block Fields

Name	Operation	Operands
[symbol]	MODCB	AM=VTAM {,ACB=acb address| ,EXLST=exit list address| ,RPL=rpl address| ,NIB=nib address} ,field name=new value ... [,MF=list, generate, or execute form parameters]

NIB—Create a Node Initialization Block

Name	Operation	Operands
[symbol]	NIB	[NAME=name in VTAM configuration list] [,USERFLD=user data] [,LISTEND=**YES**|NO] [,MODE=RECORD] [,SDT=APPL|**SYSTEM**] [,EXLST=exit list address] [,ENCR=REQD|SEL|**NONE**] MVS [,RESPLIM=**1**|response limit] [,LOGMODE=**0**|C' '|logon mode name] [,BNDAREA=**0**|BIND area address] [,MTSAREA=MTS area address] [,PROC=([CA|CS|**RPLC**] [,**NDFASYX**|DFASYX] [,**NRESPX**|RESPX] [,**NCONFTXT**|CONFTXT] [,**KEEP**|TRUNC] [,**SYSRESP**|APPLRESP] [,ORDRESP|**NORDRESP**] [,NEGBIND|**NNEGBIND**])]

OPEN—Open One or More ACBs

VSE This standard form of OPEN is valid.

Name	Operation	Operands
[symbol]	OPEN	(acb address[,acb address]...)

MVS VM This standard form of OPEN is valid.

Name	Operation	Operands
[symbol]	OPEN	(acb address[acb address]...)

MVS This is the list and execute form.

Name	Operation	Operands
[symbol]	OPEN	(acb address[,,acb address]...) [,MF=({E|L},{list address|(register)})]

OPNDST—Establish Sessions in Which the Application Program Acts as the Primary Logical Unit

Name	Operation	Operands
[symbol]	OPNDST	RPL=rpl address [,rpl field name=new value]...

OPNSEC—Establish a Session in Which the Application Program Acts as the Secondary Logical Unit

Name	Operation	Operands
[symbol]	OPNSEC	RPL=rpl address [,rpl field name=new value]...

RCVCMD—Receive a Message from VTAM

Name	Operation	Operands
[symbol]	RCVCMD	RPL=rpl address [,rpl field name=new value]...

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RECEIVE—Receive Input on a Session

Name	Operation	Operands
[symbol]	RECEIVE	RPL=rpl address [,rpl field name=new value]...

REQSESS—Initiate a Session in Which the Application Program Acts as the Secondary Logical Unit

Name	Operation	Operands
[symbol]	REQSESS	RPL=rpl address [,rpl field name=new value]...

RESETSR—Cancel RECEIVE Operations and Switch a Session's CA-CS Mode

Name	Operation	Operands
[symbol]	RESETSR	RPL=rpl address [,rpl field name=new value]...

RPL—Create a Request Parameter List

Name	Operation	Operands
[symbol]	RPL	AM=VTAM [,ACB=acb address] [,NIB=nib address] [,AREA=data area address] [,AREALEN=data area length] [,RECLEN=data length] [,AAREA=alternate data area address] [,AAREALN=alternate data area length] [,ECB=**INTERNAL** |,ECB=event control block address |,EXIT=rpl exit routine address] [,CRYPT=YES|**NO**]MVS [,BRANCH=YES|**NO**]MVSVM [,SEQNO=sequence number] [,POST=SCHED|**RESP**] [,RESPOND=(EX|**NEX** ,**FME**|NFME ,RRN|**NRRN** ,QRESP|**NQRESP**)] [,CONTROL=(**DATA**|BID|BIS|CANCEL|CHASE|LUS| QC|RTR|QEC|RELQ|RSHUTD|SBI| SHUTC|SHUTD|SIGNAL|BIND|CLEAR| RQR|SDT|STSN|UNBIND|SWITCH[1]] [,CHAIN=FIRST|MIDDLE|LAST|**ONLY**] [,CHNGDIR=(CMD|**NCMD**,REQ|**NREQ**)] [,BRACKET=(BB|**NBB**,EB|**NEB**,CEB|**NCEB**)] [,RTYPE=(**DFSYN**|NDFSYN,DFASY|**NDFASY**, RESP|**NRESP**)] [,STYPE=**REQ**|RESP] [,STYPE=**SYN**|ASY] [,SSENSEO=**0**|CPM|STATE|FI|RR] [,SSENSMO=system-sense modifier value] [,USENSEO=user-sense value]

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Name	Operation	Operands
		[,IBSQAC=**SET**|TESTSET|INVALID| IGNORE|TESTPOS|TESTNEG|RESET]
		[,OBSQAC=**SET**|TESTSET|INVALID|IGNORE| TESTPOS|TESTNEG|RESET]
		[,IBSQVAL=inbound sequence number]
		[,OBSQVAL=outbound sequence number]
		[,SIGDATA=signal data]
		[,CODESEL=**STANDARD**|ALT]
		[,PARMS=(THRDPTY=NOTIFY|**NONOTIFY**)]
		[,PARMS=(SONCODE=code)]
		[,OPTCD=([,**NIBTK**|TRUNC|KEEP]
		[,**NFMHDR**|FMHDR]
		[,**CONALL**|CONANY]
		[,**ACCEPT**|ACQUIRE]
		[,**SPEC**|ANY]
		[,**RELEASE**|PASS]
		[,**NBACKUP**|BACKUP]MVS
		[,**LOGONMSG**|DEVCHAR|COUNTS| TERMS|APPSTAT|CIDXLATE| TOPLOGON|SESSPARM|SESSKEY[2]]
		[,**SYN**|ASY]
		[,**CA**|CS]
		[,**RELRQ**|NRELRQ]
		[,MTS|**NMTS**]
		[,**REQ**|RESP]
		[,**Q**|NQ]
		[,**NLMPEO**|LMPEO]
		[,**NBUFFLST**|BUFFLST]
		[,**NUSERRH**|USERRH]
		[,**NCONTCHN**|CONTCHN]
		[,**QALL**|QSESSLIM|QNOTENAB]
		[,**QUIESCE**|STOP|START|HOLD]
		[,**USERVAR**]
		[,**COND**|UNCOND|UNBIND
		[,**NSENSE**|SENSE]
		[,**NSONCODE**|SONCODE]
		[,**NRSPQUED**|RSPQUED])]

Notes:

1. MVS SWITCH is valid only in MVS systems.
2. MVS SESSKEY is valid only in MVS systems.

SEND—Send Output on a Session

Name	Operation	Operands
[symbol]	SEND	RPL=rpl address [,rpl field name=new value]...

SENDCMD—Send a VTAM Operator Command to VTAM

Name	Operation	Operands
[symbol]	SENDCMD	RPL=rpl address [,rpl field name=new value]...

SESSIONC—Send a Session-Control Request or Response

Name	Operation	Operands
[symbol]	SESSIONC	RPL=rpl address [,rpl field name=new value]...

SETLOGON—Modify an Application Program's Capability to Establish Sessions

Name	Operation	Operands
[symbol]	SETLOGON	RPL=rpl address [,rpl field name=new value]...

SHOWCB—Extract the Contents of Control Block Fields

Name	Operation	Operands
[symbol]	SHOWCB	AM=VTAM {,ACB=acb address ,EXLST=exit list address ,RPL=rpl address ,NIB=nib address} ,FIELDS=field name|(field name,...) ,AREA=data area address ,LENGTH=data area length [,MF=list, generate, or execute form parameters]

SIMLOGON—Initiate a Session in Which the Application Program Acts as the Primary Logical Unit

Name	Operation	Operands
[symbol]	SIMLOGON	RPL=rpl address [,rpl field name=new value]...

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TERMSESS—Request Termination of a Session in Which the Application Program Acts as the Secondary Logical Unit

Name	Operation	Operands
[symbol]	TERMSESS	RPL=rpl address [,rpl field name=new value]...

TESTCB—Test the Contents of a Control Block Field

Name	Operation	Operands
[symbol]	TESTCB	AM=VTAM {,ACB=acb address ,EXLST=exit list address ,RPL=rpl address ,NIB=nib address} ,field name=test value [,ERET=error exit routine address] [,MF=list, generate, or execute form parameters]

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VTAM APPCCMD Macroinstructions

APPCCMD CONTROL=ALLOC,QUALIFY=ALLOCD

Name	Operation	Operands
[name]	APPCCMD	CONTROL=**ALLOC**,QUALIFY=**ALLOCD** ,RPL=*rpl address* [,AAREA=*rpl extension address*] [,ACB=*acb address*] [,AREA=*address of FMH-5 and optional PIP GDS variable*] [,BRANCH=**YES**|**NO**] MVS VM [,CONMODE=**LLCA**|**BUFFCA**|**CS**] [{,ECB=*ecb address*|**INTERNAL**}|{EXIT=*exit routine address*}] [,LOGMODE=*8-byte logon mode name*] [,LUNAME=*8-byte LU name*] [,OPTCD=**SYN**|**ASY**] [,RECLEN=*length of the data area identified by AREA*] [,USERFLD=*4 bytes of user data*]

APPCCMD CONTROL=ALLOC,QUALIFY=CONWIN

Name	Operation	Operands
[name]	APPCCMD	CONTROL=**ALLOC**,QUALIFY=**CONWIN** ,RPL=*rpl address* [,AAREA=*rpl extension address*] [,ACB=*acb address*] [,AREA=*address of FMH-5 and optional PIP GDS variable*] [,BRANCH=**YES**|**NO**] [,CONMODE=**LLCA**|**BUFFCA**|**CS**] [{,ECB=*ecb address*|**INTERNAL**}|{EXIT=*exit routine address*}] [,LOGMODE=*8-byte logon mode name*] [,LUNAME=*8-byte LU name*] [,OPTCD=**SYN**|**ASY**] [,RECLEN=*length of the data area identified by AREA*] [,USERFLD=*4 bytes of user data*]

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APPCCMD CONTROL = ALLOC,QUALIFY = IMMED

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **ALLOC**,QUALIFY = **IMMED** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of FMH-5 and optional PIP GDS variable*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOGMODE = *8-byte logon mode name*] [,LUNAME = *8-byte LU name*] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of the data area identified by AREA*] [,USERFLD = *4 bytes of user data*]

APPCCMD CONTROL = CHECK

Name	Operation	Operands
[name]	APPCCMD	CONTROL = CHECK ,RPL = rpl address

APPCCMD CONTROL = DEALLOC,QUALIFY = ABNDPROG

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **ABNDPROG** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area containing optional log data*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of log data area*]

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APPCCMD CONTROL = DEALLOC,QUALIFY = ABNDSERV

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **ABNDSERV** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area containing optional log data*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of log data area*]

APPCCMD CONTROL = DEALLOC,QUALIFY = ABNDTIME

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **ABNDTIME** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area containing optional log data*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of log data area*]

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APPCCMD CONTROL = DEALLOC,QUALIFY = ABNDUSER

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **ABNDUSER** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area containing optional log data*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of log data area*] [,SENSE = *user-supplied 32-bit FMH-7 sense code*]

APPCCMD CONTROL = DEALLOC,QUALIFY = CONFIRM

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **CONFIRM** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [{,ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = DEALLOC,QUALIFY = DATACON

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **DATACON** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**]MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

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APPCCMD CONTROL = DEALLOC,QUALIFY = DATAFLU

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **DATAFLU** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

APPCCMD CONTROL = DEALLOC,QUALIFY = FLUSH

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **DEALLOC**,QUALIFY = **FLUSH** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**]MVS VM [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = OPRCNTL,QUALIFY = ACTSESS

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **OPRCNTL**,QUALIFY = **ACTSESS** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *0*|*BIND image address*] [,ARG = *4-byte session identifier (CID)*] [,BRANCH = **YES**|**NO**]MVS VM [,CONFTXT = **YES**|**NO**] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of BIND image*] [,USERFLD = *4 bytes of user data*]

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APPCCMD CONTROL = OPRCNTL,QUALIFY = CNOS

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **OPRCNTL**,QUALIFY = **CNOS** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of CNOS session limits structure or zero*] [,BRANCH = **YES**|**NO**]MVS VM [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOGMODE = *8-byte logon mode name*] (ignored if SESSLIM = 0 and NBRMODE = ALL) [,LUNAME = *8-byte LU name*] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of CNOS session limits structure supplied via AREA*] [,USERFLD = *4 bytes of user data*]

APPCCMD CONTROL = OPRCNTL,QUALIFY = DACTSESS

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **OPRCNTL**,QUALIFY = **DACTSESS** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,ARG = *4-byte session identifier (CID)*] [,BRANCH = **YES**|**NO**]MVS VM [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,USERFLD = *4 bytes of user data*]

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APPCCMD CONTROL = OPRCNTL,QUALIFY = DEFINE

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **OPRCNTL**,QUALIFY = **DEFINE** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of DEFINE/DISPLAY session limits structure*] [,BRANCH = **YES**|**NO**]MVS VM [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOGMODE = *8-byte logon mode name*] [,LUNAME = *8-byte LU name*] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of DEFINE/DISPLAY session limits structure*] [,USERFLD = *4 bytes of user data*]

APPCCMD CONTROL = OPRCNTL,QUALIFY = DISPLAY

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **OPRCNTL**,QUALIFY = **DISPLAY** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of the DEFINE/DISPLAY session limits structure*] [,AREALEN = *length of the DEFINE/DISPLAY session limits structure*] [,BRANCH = **YES**|**NO**]MVS VM [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOGMODE = *8-byte logon mode name*] [,LUNAME = *8-byte LU name*] [,OPTCD = **SYN**|**ASY**] [,USERFLD = *4 bytes of user data*]

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APPCCMD CONTROL = PREPRCV,QUALIFY = CONFIRM

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **PREPRCV**,QUALIFY = **CONFIRM** RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOCKS = **SHORT**|**LONG**] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = PREPRCV,QUALIFY = DATACON

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **PREPRCV**,QUALIFY = **DATACON** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,LOCKS = **SHORT**|**LONG**] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**) [,RECLEN = *length of data area or buffer list*]

APPCCMD CONTROL = PREPRCV,QUALIFY = DATAFLU

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **PREPRCV**,QUALIFY = **DATAFLU** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

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APPCCMD CONTROL = PREPRCV,QUALIFY = FLUSH

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **PREPRCV**,QUALIFY = **FLUSH** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = RCVFMH5

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **RCVFMH5** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area that returns the FMH-5*] [,AREALEN = *length of supplied data area*] [,BRANCH = **YES**|**NO**] MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,USERFLD = *user data*]

APPCCMD CONTROL = RECEIVE,QUALIFY = ANY

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **RECEIVE**,QUALIFY = **ANY** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area*] [,AREALEN = *length of data area*] [,BRANCH = **YES**|**NO**] MVS VM [,CD = **IMMED**|**DEFER**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

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APPCCMD CONTROL = RECEIVE,QUALIFY = SPEC

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **RECEIVE**,QUALIFY = **SPEC** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area*] [,AREALEN = *length of data area*] [,BRANCH = **YES**|**NO**] MVS VM [,CD = **IMMED**|**DEFER**] [,CONVID = *32-bit resource ID*] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,FILL = **LL**|**BUFF**] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = REJECT,QUALIFY = CONV

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **REJECT**,QUALIFY = **CONV** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] MVS VM [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,SENSE = *32-bit unbind (X'FE') sense code*]

APPCCMD CONTROL = REJECT,QUALIFY = SESSION

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **REJECT**,QUALIFY = **SESSION** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] MVS VM [,DEACTYP = *8-bit UNBIND (X'0F' or X'FE') type code*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,SENSE = *32-bit UNBIND (X'FE') sense code*] [,SESSID = *session instance ID*] [,SESSIDL = *session instance ID length*]

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APPCCMD CONTROL = RESETRCV

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **RESETRCV** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**]MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = SEND,QUALIFY = CONFIRM

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **CONFIRM** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**]MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = SEND,QUALIFY = CONFRMD

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **CONFRMD** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**]MVS VM [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

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APPCCMD CONTROL = SEND,QUALIFY = DATA

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **DATA** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

APPCCMD CONTROL = SEND,QUALIFY = DATACON

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **DATACON** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

APPCCMD CONTROL = SEND,QUALIFY = DATAFLU

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **DATAFLU** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area or buffer list*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = (**SYN**|**ASY**,**BUFFLST**|**NBUFFLST**)] [,RECLEN = *length of data area or buffer list*]

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APPCCMD CONTROL = SEND,QUALIFY = ERROR

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **ERROR** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,AREA = *address of data area containing optional log data*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**] [,RECLEN = *length of log data* | *0*] [,SENSE = *32-bit user-supplied FMH-7 sense code*] [,TYPE = **PROGRAM**|**SERVICE**|**USER**]

APPCCMD CONTROL = SEND,QUALIFY = FLUSH

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **FLUSH** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL = SEND,QUALIFY = RQSEND

Name	Operation	Operands
[name]	APPCCMD	CONTROL = **SEND**,QUALIFY = **RQSEND** ,RPL = *rpl address* [,AAREA = *rpl extension address*] [,ACB = *acb address*] [,BRANCH = **YES**|**NO**] [,CONMODE = **LLCA**|**BUFFCA**|**CS**|**SAME**] [,CONVID = *32-bit resource ID*] [,{ECB = *ecb address*|**INTERNAL**}|{EXIT = *exit routine address*}] [,OPTCD = **SYN**|**ASY**]

APPCCMD CONTROL=SETSESS,QUALIFY=RESUME

Name	Operation	Operands
[name]	APPCCMD	CONTROL=**SETSESS**,QUALIFY=**RESUME** ,RPL=*rpl address* ,SESSID=*session instance ID* [,AAREA=*rpl extension address*] [,ACB=*acb address*] [,BRANCH=**YES**|**NO**] [,{ECB=*ecb address*|**INTERNAL**}|{EXIT=*exit routine address*}] [,OPTCD=**SYN**|**ASY**] [,SESSIDL=*session instance ID length*]

APPCCMD CONTROL=SETSESS,QUALIFY=SUSPEND

Name	Operation	Operands
[name]	APPCCMD	CONTROL=**SETSESS**,QUALIFY=**SUSPEND** ,RPL=*rpl address* ,SESSID=*session instance ID* [,AAREA=*rpl extension address*] [,ACB=*acb address*] [,BRANCH=**YES**|**NO**] [,CONVID=*32-bit resource ID*] [,{ECB=*ecb address*|**INTERNAL**}|{EXIT=*exit routine address*}] [,OPTCD=**SYN**|**ASY**] [,SESSIDL=*session instance ID length*]

ISTGAPPC

Name	Operation	Operands
[name]	ISTGAPPC	(no operands)

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ISTRPL6

Name	Operation	Operands
[name]	ISTRPL6	[,CD=**DEFER**|**IMMED**] [,CONMODE=**LLCA**|**BUFFCA**|**CS**|**SAME**] [,FILL=**LL**|**BUFF**] [,LOCKS=**SHORT**|**LONG**] [,LOGMODE=*logon mode name*] [,LUNAME=*luname*] [,QUALIFY=**ACTSESS**|**ALLOCD**|**ANY**|**ABNDPROG**| **ABNDSERV**|**ABNDTIME**|**ABNDUSER**| **CNOS**|**CONFIRM**|**CONFRMD**|**CONV**| **CONWIN**|**DACTSESS**|**DATA**|**DATACON**| **DATAFLU**|**DEFINE**|**DISPLAY**|**ERROR**| **FLUSH**|**IMMED**|**RESUME**|**RQSEND**| **SESSION**|**SPEC**|**SUSPEND**] [,SENSE=*32-bit user-supplied sense code*] [,TYPE=**PROGRAM**|**SERVICE**|**USER**] [,USERFLD=*user data*]

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Chapter 5. Diagnosis

Internal Trace Record Summary

The following chart lists all internal trace entries alphabetically by record ID. For detailed descriptions of these trace records, see *VTAM Diagnosis*.

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VM Abend SNAP

ABND	CODE	PST ADDRESS	RPH ADDRESS	SDWA ADDRESS or 0	SDWA FLAGS or 0	ABEND PSW or 0

LU 6.2 Authorized IO or LU 6.2 TPIO (Part 1)

ACA1 or ACI1	ID	EXTDS	OPT1	OPT6	RPL ADDRESS	CNTRL	QUAL	BUFL or0	RPL AREA	APPCCMD FLAGS	CONV ID or USR FLD or CID or 0	SENSE DATA or 0

LU 6.2 Authorized IO or LU 6.2 TPIO (Part 2)

ACA2 or ACI2	RETURN ADDRESS	MODE NAME or SESSION ID or 0	LOCAL LU NAME or 0	PARTNER LU NAME or 0

LU 6.2 User Post or LU 6.2 RPL Exit (Part 1)

ACP1 or ACR1	ID	RTUN	RTNCD	FDB2	RPL ADDRESS	CNTRL	QUAL	0	RCPRI	RCSEC	APPCCMD FLAGS	CONV ID or 0	SENSE DATA or 0

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

LU 6.2 User Post or LU 6.2 RPL Exit (Part 2)

ACP2 or ACR2	ECB ADDRESS or EXIT ADDRESS	RPL6 ADDRESS	CNTRL	0	RCVIND	0	RPL AREA	RPL RECORD LENGTH	0

LU 6.2 User Exit (Part 1)

ACU1	ID	CODE	0	EXIT TYPE DEPEND INFO	0	PLU NAME or APPLICATION ID	SLU NAME or 0

LU 6.2 User Exit (Part 2)

ACU2	EXIT ADDRESS	MODE NAME or 0	0

VM VSE Adapter (Part 1)

ADPA ADPI ADPO	ID	CUA	TSCB ADDRESS	NCB ADDRESS	CBID	ACK	INDX	SLPT	FRNT	END	0	DATA FIELD

VM VSE Adapter (Part 2)

ADP2	DATA FIELD

VM VSE Asynchronous Dispatch

ADSP	ID	0	PST ADDRESS	0	SYNC TPPOSTD QUEUE	SYNC NORMAL QUEUE	ASYNC TPPOSTD QUEUE	ASYNC NORMAL QUEUE

MVS VM Authorized IO (Part 1)

AI1	REQTY	ID	EXTDS	0	OPT1	RPL ADDRESS	NIB ADDR or CID	RH3	SRTYP	VTFL1	VTFL2	CHN	RU CNTL CODE	OPTC2	OPTC3

MVS VM Authorized IO (Part 2)

AI2	0	RETURN ADDRESS	LOGON MODE NAME or 0	PLU NAME (if available)	SLU NAME (if available)

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

MVS VM Authorized IO (Part 3)

AI3	0	ADDRESS OF USER DATA, BIND, or 0	0

MVS VM Abend RELSTORE

AREL	ID	CBID	0	PST ADDRESS	BUFFER ADDRESS	RETURN ADDRESS	0

MVS Attention

ATT	TYPE	ID	STATE	0	CUA	NCB ADDRESS	FLAG BYTES	0	CODE	SENSE	CSW

VM VSE Asynchronous Exit

AXIT	ID	0	PST ADDRESS	0	SYNC TPPOSTD QUEUE	SYNC NORMAL QUEUE	ASYNC TPPOSTD QUEUE	ASYNC NORMAL QUEUE

SSCP (RUPE — Part 1)

CCI or CCO	FLAGS	ID	CBID	0	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	RUPE ORIGIN NETWORK ADDRESS	RUPE DESTINATION NETWORK ADDRESS

SSCP (RUPE — Part 2)

CC2	CBID	FIRST 24 BYTES OF RU	SENSE DATA or 0

SSCP (NCSPL — Part 1)

CCI or CCO	FLAGS	ID	CBID	FLAGS	RC	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	CPCB OPCODE	TYPE	0	DESTINATION NETWORK ADDRESS

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

SSCP (NCSPL — Part 2)

CC2	CBID	RDTE STATE	CPCB WTD	0

SSCP (not RUPE or NCSPL)

CCI or CCO	FLAGS	ID	CBID	CPCBF	RC	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	CPCB OPCODE	CPCB WORD 3	CPCB WORD 4

SSCP (RUPE — Part 1)

CI1 or CO1	FLAGS	ID	CBID	ITFSM	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	RUPE ORIGIN NETWORK ADDRESS	RUPE DESTINATION NETWORK ADDRESS

SSCP (NCSPL — Part 1)

CI1 or CO1	FLAGS	ID	CBID	FLAGS	RC	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	CPCB OPCODE	TYPE	0	RUPE DESTINATION NETWORK ADDRESS

SSCP (not RUPE or NCSPL — Part 1)

CI1 or CO1	FLAGS	ID	CBID	CPCBF	RC	SAVE AREA ADDRESS	SAVE AREA ID	RETURN ADDRESS	CPCB OPCODE	CPCB WORD 3	CPCB WORD 4

SSCP (RUPE — Part 2)

CI2 or CO2	CBID	FIRST 24 BYTES OF RU	SENSE DATA or 0

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

SSCP (NCSPL — Part 2)

CI2 or C02	CBID	RDTE STATE	CPCB WTD	0

SSCP (not RUPE or NCSPL — Part 2)

CI2 or C02	CBID	0

SSCP (RUPE, NCSPL, or not RUPE or NCSPL — Part 3)

CI3 or C03	0	SIB ADDRESS	PCID FOR THIS REQUEST	PLU NAME	SLU NAME

SSCP (RUPE, NCSPL, or not RUPE or NCSPL — Part 4)

CI4 or C04	0	PCID IN PREVIOUS REQUEST	PLU NETID	SLU NETID

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0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VM CNA

CNA	ID	EXTDS	OPT1	CNTRL	RPL ADDRESS	RPL3 ADDRESS	RPL AREA	VCNS FLAGS	0	PARAMETER-DEPENDENT DATA

VM ECB Posted or RPL Exit Dispatched (Part 1)

CNP1 or CNR1	ID	RTNCD	FDB2	CNTRL	RPL ADDRESS	RPL3 ADDRESS	RPL AREA	VCNS FLAGS	0	PARAMETER-DEPENDENT DATA

VM ECB Posted or RPL Exit Dispatched (Part 2)

CNP2 or CNR2	ECB ADDRESS or EXIT ADDRESS	RCPRI	RCSEC	LENGTH OF USER DATA AREA	MAX DATA LEN	DATA LEN	SENSE DATA or 0	EXPEDITED DATA

VM ECB Posted or RPL Exit Dispatched (Part 3)

CNP3 or CNR3	DATA FIELD

VSE SHM Connect

CONN	TIK	CFSM	PMFSM	SHSI	0	CUA	GROUP NCB ADDRESS	HALCB ADDRESS	PUT ADDRESS	0	PEA	0

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

CPPURGE or CPPOST for PVI or Non-PVI Event (Part 1)

CPPG or CPPT	ID	CODE	TYPE	OPT	LQAB ADDRESS	WREDATA IN WRE	WORK ELEMENT ADDRESS	OPC IN WORK ELEMENT or 0	SAVE AREA ID or 0	SENSE DATA or 0

CPPURGE or CPPOST (Part 2)

CPP2	RETURN ADDRESS	RUPEURC or 0	0

CPPURGE or CPPOST (Part 3)

CPP3	0	EIDLN	FIRST 24 BYTES OF EID

CPPURGE or CPPOST (Part 4)

CPP4	FIRST 24 BYTES OF RU or 0	0

CPRC (Part 1)

CPRC	ID	0	RUPE ADDRESS or 0	OPC IN THIS RUPE	SENSE CODE	RUPE ORIGIN NETWORK ADDRESS	RUPE DESTINATION NETWORK ADDRESS

CPRC (Part 2)

CPR2	RETURN ADDRESS	RUPEURC	0

Call Progress Signal Timeout

CPTO	ID	CFSM	PMFSM	SHSI	0	CUA	GROUP NCB ADDRESS	HALCB ADDRESS	PUT ADDRESS	TIME	0	RETRY	CPS	NUM

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

CPWAIT for PVI or Non-PVI Events (Part 1)

CPWT	ID	0	TYPE	0	LQAB ADDRESS	WREDATA IN WRE	WORK ELEMENT ADDRESS	OPC IN WORK ELEMENT or 0	SAVE AREA ID or 0	0

CPWAIT (Part 2)

CPW2	RETURN ADDRESS	RUPEURC or 0	0

CPWAIT (Part 3)

CPW3	0	EIDLN	FIRST 24 BYTES OF EID

CPWAIT (Part 4)

CPW4	FIRST 24 BYTES OF RU or 0	0

VSE SHM Disconnect

DISC	TIK	CFSM	PMFSM	SHSI	0	CUA	GROUP NCB ADDRESS	HALCB ADDRESS	PUT ADDRESS	0

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

PAB Dispatch

DISP	ID	CBID	FLAG	0-WEQ	PST ADDRESS	PAB ADDRESS	LAST WORK ELEMENT ADDRESS	CURRENT WORK ELEMENT ADDRESS	MODULE NAME or DVT ADDRESS	RPH ADDRESS

Discarded PIU Buffer (Part 1)

DSCD	ID	REASN CODE	TSCB ADDRESS	20 BYTES OF PIU

Discarded PIU Buffer (Part 2)

DSC2	24 MORE CHARACTERS OF THE PIU	MODULE ID

MVS Error Recovery Procedures

ERPI or ERPL	ID	STATE	0	CUA	NCB ADDRESS	FLAG BYTES	FLAG	CODE	SENSE	CSW

0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

VM Error Recovery Procedures (Part 1)

ERP	TYPE	ID	CUA			0	NCB ADDR	VIRTUAL CAW	FLAG BYTES	ERCOD		SENSE	0																	
ERPB		ID	LFSM	0			CUA	NCB ADDRESS	FLAG BYTES	ERCOD	0	SENSE	CSW																	
ERPH		ID	LFSM	0			CUA	NCB ADDRESS	FLAG BYTES	0			CSW																	
ERPI		ID	LNKST	0	CKEY		CUA	NCB ADDRESS	FLAG BYTES	ERCOD	0	SENSE	CSW																	
ERPL or ERPX		ID	LNKST	0	CKEY		CUA	NCB ADDRESS	FLAG BYTES	0		SENSE	CSW																	

VM Error Recovery Procedures (Part 2)

ERP2	0	DEVICE-DEPENDENT INFORMATION																												0

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

VSE Error Recovery Procedures (Part 1)

ERP	TYPE	ID	CUA			0	NCB ADDR		VIRTUAL CAW		FLAG BYTES		ERCOD		SENSE	0														
ERPB		ID	LFSM	0			CUA		NCB ADDRESS		FLAG BYTES		ERCOD	0	SENSE	CSW														
ERPH		ID	LFSM	0			CUA		NCB ADDRESS		FLAG BYTES		0	RCODE	0	CSW														
ERPI		ID	LNKST	ERACT	0		CUA		NCB ADDRESS		FLAG BYTES		ERCOD	RCODE	SENSE	CSW														
ERPL		ID	LNKST	ERACT	0		CUA		NCB ADDRESS		FLAG BYTES		0	RCODE	SENSE	CSW														

VSE Error Recovery Procedures (Part 2)

ERP2	0	DEVICE-DEPENDENT INFORMATION	0

TPESC

ESC	ID	0	PABOF	DISP ADDRESS	PAB ADDRESS	RETURN ADDRESS	RPH WORK ELEMENT	MODULE NAME or DVT ADDRESS	RPH ADDRESS

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

TPEXIT

EXIT	ID	TPEXIT	PABOF	PST ADDRESS	PAB ADDRESS	RETURN ADDRESS	WORK EL QUEUE or NEXT DISP QUEUE LEVEL	MODULE NAME or DVT ADDRESS	RPH ADDRESS

FREEBLK

FBLK	ID	0	POOL	0	STORAGE ADDRESS or 0	ADDRESS OF SPTAE	RETURN ADDRESS	LENGTH OF FREE STORAGE REQUEST	CALLER OF UTILITY or 0	RETURN CODE

GETBLK

GBLK	ID	0	POOL	0	STORAGE ADDRESS or 0	ADDRESS OF SPTAE	RETURN ADDRESS	LENGTH OF STORAGE REQUEST	CALLER OF UTILITY or 0	RETURN CODE

Halt I/O

HIOB HIOH HIOX	ID	STATE	MODID	0	CUA	NCB ADDRESS	FLAG BYTES	0

VM VSE Halt I/O

HIOP	ID	CPFSM	MODID	0	CUA	NCB ADDRESS	PDATA	0

MVS Interrupt

INTI INTL INTX	ID	STATE	EOPCD	0	CUA	NCB ADDRESS	FLAG BYTES	FLAG	CODE	So Er NS 0E	CSW

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

VM Interrupt (Part 1)

INT	TYPE	ID	CUA	CSW	SENSE_STATUS CCW	NCB ADDR

INTB or INTH	ID	LFSM	0	CUA	NCB ADDRESS	FLAG BYTES	0	TYPE	SENSE	CSW	
INTI	ID	LNKST	0	CKEY	CUA	NCB ADDRESS	FLAG BYTES	0	TYPE	SENSE	CSW
INTL	ID	LNKST	0	CKEY	CUA	NCB ADDRESS	FLAG BYTES	0	TYPE	0	CSW
INTP	ID	CPFSM	0	CUA	NCB ADDRESS	PDATA 0	STIM	CODE	SENSE 0	ENDING CSW	
INTX	ID	STATE	EOPCD	0	CKEY	CUA	NCB ADDRESS	FLAG BYTES	FLAG	TYPE	SENSE or 0	CSW

VM Interrupt (Part 2)

INT2	0	DEVICE-DEPENDENT INFORMATION	0

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VSE Interrupt (Part 1)

INT	TYPE	ID	CUA	CSW	SENSE_STATUS CCW	NCB ADDR

INTB or INTH	ID	LFSM	0	CUA	NCB ADDRESS	FLAG BYTES	0	CODE	SENSE	CSW

INTI	ID	LNKST	ERACT	0	CUA	NCB ADDRESS	FLAG BYTES	ERCOD	CODE	SENSE	CSW

INTL	ID	LNKST	ERACT	0	CUA	NCB ADDRESS	FLAG BYTES	0	CODE	0	CSW

INTP	ID	CPFSM	0	CUA	NCB ADDRESS	PDATA	0	STIM	CODE	SENSE	0	ENDING CSW

VSE Interrupt (Part 2)

INT2	0	DEVICE-DEPENDENT INFORMATION	0

TPIO Request (Part 1)

IO1	REQTY	ID	EXTDS	0	OPT1	RPL ADDRESS	NIB ADDRESS or CID	RH3	SRTYP	VTFL1	VTFL2	CHN	RU CNTL CODE	OPTC2	OPTC3

MVS VSE TPIO Request (Part 2)

IO2	0	RETURN ADDRESS	LOGON MODE NAME or 0	PLU NAME (if available)	SLU NAME (if available)

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

MVS VSE TPIO Request (Part 3)

I03	0	ADDRESS OF USER DATA, BIND, or 0	0

VM TPIO Request (Part 2)

I02	0	RETURN ADDRESS	LOGON MODE NAME or 0	PLU NAME (if available)	SLU NAME (if available)

VM TPIO Request (Part 3)

I03	0	ADDRESS OF BIND or 0	0

MVS IRB Dispatch

IRBD	ID	0	PST ADDRESS	PST SYNC TPPOSTD QUEUE	PST SYNC NORMAL QUEUE	IRB ADDRESS	TCB ADDRESS	FLG 1	0

MVS IRB Exit

IRBX	ID	0	PST ADDRESS	NEW TCB ADDRESS	OLD TCB ADDRESS	NEW ASCB ADDRESS	OLD ASCB ADDRESS	IRB ADDRESS

VM VSE LAN Interface Control

LICI LICO	ID	CUA	TSCB ADDRESS	NCB ADDRESS	CBID	CMD	TFSMS	VFSMS	FLAGS	TSCB CONT ADDRESS
LICS	ID	CUA	TSCB ADDRESS	NCB ADDRESS	CBID	CMD	TFSMS	REASON		

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

TPLOCK Exclusive

LKEX	ID	0	LOCK	LEVEL	LOCK ADDRESS	CRA LKACT	RETURN ADDRESS	LOCKWORD	RPH ADDRESS

TPLOCK Shared

LKSH	ID	0	LOCK	LEVEL	LOCK ADDRESS	CRA LKACT	RETURN ADDRESS	LOCKWORD	RPH ADDRESS

Lost Trace Record

LOST	ID	0	REG 14	LOST TRACE RECORD

TPMSG or CPMSG (Part 1)

MSG	ID	0	S or U	SAVE AREA ADDRESS	MSG ID or 'USS '	RETURN ADDRESS	MODULE ID	DESTINATION

Message Sent Record (Part 1)

MSGS	ID	0	DESTINATION	MESSAGE HEADER	FIRST 12 CHARACTERS OF MESSAGE TEXT

TPMSG or CPMSG (Part 2 for both MSG and MSGS)

MSG2	VARIABLE DATA or MORE MESSAGE TEXT

LU 6.2 Message Unit (Part 1)

MU1	ID	MU ID	MU ADDRESS	HS ID	CORR ADDRESS	RETCD	0	AMU FLAGS	SENSE DATA or 0

LU 6.2 Message Unit (Part 2)

MU2	0	MU ID	DATA ADDRESS or 0	DATA LENGTH or 0	RAB ADDRESS or 0	SES CNT or 0	SES LIM or 0	CONV ID or 0	VARI-ABLE OVERLAY FIELD

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

LU 6.2 Message Unit (Part 3)

MU3	0	MU ID	MODE NAME or SESSION ID or 0	LOCAL LU NAME	PARTNER LU NAME

Negative Response to a PIU Request (Part 1)

NRSP	ID	CBID	FLAGS	0	TSCB ADDRESS	20 BYTES OF PIU

Negative Response to a PIU Request (Part 2)

NRS2	24 MORE CHARACTERS OF THE PIU	RETURN ADDRESS

VM NSIND exit scheduled

NSD	ID	0	ACB ADDR	NETWORK ACCESS POINT	EXIT REASON	STORAGE ADDRESS	ERROR INFO

Operator Command (Part 1)

OPER	ID	FLAG	0	FIRST 24 CHARACTERS OF OPERATOR COMMAND

Operator Command (Part 2)

OPE2	UP TO 28 MORE CHARACTERS OF THE OPERATOR COMMAND

VM VSE Packet Interface

PIC	PICB DATA

PIU Record (Part 1)

PIU	ID	CBID	FLAGS	0	TSCB or RUPE ADDRESS	20 BYTES OF PIU

PIU Record (Part 2)

PIU2	28 MORE BYTES OF PIU

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

VM VSE Packet Inbound
or
Packet Outbound

PKTI PKTO	ID	CUA	PFSM	INDX	LNGTH	FIRST 20 BYTES OF THE PACKET

VM VSE Packet Extension

PKTX	ID	ADDITIONAL BYTES OF PACKET (if needed)

TPPOST

POST	ID	0	PABOF	PST ADDRESS	PAB ADDRESS	RETURN ADDRESS	WORK ELEMENT ADDRESS	DVT ADDRESS	RPH ADDRESS

MVS VM Queued REQSTORE

QREQ	ID	CBID	0	PST ADDRESS	BUFFER ADDRESS	0	NUM BUF REQ	0	RPH ADDRESS

TPQUE

QUE	CBID	ID	FLAG	NOP	GATE	PST ADDRESS	PAB ADDRESS	RETURN ADDRESS	WORK ELEMENT ADDRESS	MODULE NAME or DVT ADDRESS	RPH ADDRESS or 0

TPQUE None

QUEN	ID	CBID	0	PST ADDRESS or 0	QUEUE ADDRESS	RETURN ADDRESS	WORK ELEMENT ADDRESS	0	RPH ADDRESS or 0

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

MVS VM RACR

RACR	ID	REQ	TYPE	0	ACEE ADDRESS	HALF SESSID	0	RACR COMPLET CODE	REQUEST RETURN CODE	REQUEST REASON CODE

RCE

RCEA RCEC RCED RCEF	ID	RC	TYPE	MODE	KEY VALUE	RETURN ADDRESS	OUT1 or NEW TABLE NAME	OUT2 or NEW TABLE NAME	DATA ADDRESS

RPL Exit

RE	REQTY	EXTDS	ID	RTNCD	FDB2	FDB3	RPL ADDRESS	EXIT ADDRESS	RPL AREA	RPL RLEN	CID or 0	RPL FDBK2

RELSTORE

RELS	ID	CBID	POOL	ID	PST ADDRESS	BUFFER ADDRESS	RETURN ADDRESS	NEXT BUFFER ADDRESS or 0	REG 1	CALLER OF UTILITY or 0

REQSTORE

REQS	ID	CBID	0	PST ADDRESS or 0	BUFFER ADDRESS or 0	RETURN ADDRESS	NUM BUF REQ	0	REG 1	RETURN CODE

Resume from TPWAIT

RESM	ID	CBID	PABOF	PST ADDRESS	PAB ADDRESS	WORK ELEMENT ADDRESS	WORK ELEMENT QUEUE	DVT ADDRESS	RPH ADDRESS

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0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 A	0 B	0 C	0 D	0 E	0 F	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	1 A	1 B	1 C	1 D	1 E	1 F

TPSCHED

SCHD	ID	FLAG	NOP	GATE	PST ADDRESS	PAB ADDRESS	RETURN ADDRESS	WORK ELEMENT QUEUE or NEXT DISP QUEUE LEVEL	MODULE NAME or DVT ADDRESS	RPH ADDRESS

MVS Start I/O (Part1)

SIOI or SIOL	ID	STATE	MODID	WRITE	CUA	NCB ADDRESS	FLAG BYTES	CAW	CCW or DEVICE-DEPENDENT INFORMATION
SIOX	ID	STATE	MODID	0	CUA	NCB ADDRESS	FLAG BYTES	CAW	CCW or OUTPUT CONTROL AREA (STATUS INFORMATION)

MVS Start I/O (Part 2)

SIO2	VIRTUAL BUFFER ADDRESS	0

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VM Start I/O (Part 1)

SIO	TYPE	ID	CUA			PFSM	0	DUMP OF WRITE CONTROL AND READ CONTROL DATA AREAS																							
SIOB or SIOH		ID	LFSM		MODID	0	CUA		NCB ADDRESS			FLAG BYTES			CAW			0												
SIOI or SIOL		ID	LNKST		MODID	0	CUA		NCB ADDRESS			FLAG BYTES			CAW			0												
SIOP		ID	CPFSM		MODID	0	CUA		NCB ADDRESS			PDATA		0	CAW			CODE			0									
SIOX		ID	STATE		MODID	0	CUA		NCB ADDRESS			FLAG BYTES			CAW			CCW or OUTPUT CONTROL AREA (STATUS INFORMATION)												

VM Start I/O (Part 2)

SIO2	0	TECT	ERCOD	0	DEVICE-DEPENDENT INFORMATION or 0																										0

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VSE Start I/O (Part 1)

SIO	TYPE	ID	CUA		PFSM	0	DUMP OF WRITE CONTROL AND READ CONTROL DATA AREAS																								
SIOB or SIOH	ID	LFSM	MODID		0	CUA	NCB ADDRESS				FLAG BYTES				CAW								0								
SIOI or SIOL	ID	LNKST	MODID		0	CUA	NCB ADDRESS				FLAG BYTES				CAW								0								
SIOP	ID	CPFSM	MODID		0	CUA	NCB ADDRESS				PDATA		0		CAW								CODE	0							

VSE Start I/O (Part 2)

SIO2	ERACT	TECT	ERCOD	RCODE	DEVICE-DEPENDENT INFORMATION or 0																										

MVS SRB Dispatch

SRBD	ID	0		PST ADDRESS		PST ASYNC DISP QUEUE (ADSP)		PST ASYNC FLAG FIELD (IAF)		PST ASYNC N-DISP QUEUE (ANDSP)		TCB ADDRESS		FLG1	0																

MVS SRB Exit

SRBX	ID	0		PST ADDRESS		PST ASYNC DISP QUEUE (ADSP)		PST ASYNC FLAG FIELD (IAF)		NEW ASCB ADDRESS		OLD ASCB ADDRESS		0																	

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00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

SRTADD, SRTCHG, SRTDEL, SRTFIND

SRTA SRTC SRTD SRTF	ID	RC	0	TYPE	HASH NAME (NAME or NETWORK ADDRESS)	RETURN ADDRESS	SRT ENTRY ADDRESS	NETWORK ID

USER Exit (DFASY or RESP)

UE	CODE	EXTDS	ID	RTNCD	FDB2	FDB3	RPL ADDRESS	EXIT ADDRESS	RPL AREA	RPL RLEN	CID or 0	RPL FDBK2

USER Exit (Part 1, not DFASY or RESP)

UE1	ID	CODE	0	EXIT-TYPE DEPENDENT INFORMATION	PRIMARY (APPL) LU NAME	SECONDARY LU NAME or 0

USER Exit (Part 2, not DFASY or RESP)

UE2	EXIT ADDRESS	0

TPUNLOCK All

ULKA	ID	0	PST ADDRESS	CRA LKACT	RETURN ADDRESS	0	RPH ADDRESS

TPUNLOCK

UNLK	ID	0	LOCK	LEVEL	LOCK ADDRESS	CRA LKACT	RETURN ADDRESS	LOCKWORD	RPH ADDRESS

User Post

UP	REQTY	EXTDS	ID	RTNCD	FDB2	FDB3	RPL ADDRESS	EXIT or ECB ADDRESS	RPL AREA	RPL RLEN	CID or 0	RPL FDBK2

00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

VM Work element dequeued

VCDQ	ID	STATE	CBID	WKEL	WORK ELEMENT TYPE	RU Type or 0	WORK ELEMENT ADDRESS	CAB ADDRESS OR 0	0	RPH ADDRESS

VM PICB queued (Part 1)

VCP1	ID	STATE	CBID	TYPE	SEQNO	FLAGS	0	FORMAT DEPEND DATA	PICB ADDRESS	CAB ADDRESS	CONT POINTER	LENGTH	0

VM PICB queued (Part 2)

VCP2	DATA FIELD

VTALLOC

VTAL	ID	0	STORAGE ADDRESS	SUBPOOL NUMBER or POOL ID	RETURN ADDRESS	LENGTH OF STORAGE REQUEST	CALLER OF UTILITY or 0	RETURN CODE

VTFREE

VTFR	ID	0	STORAGE ADDRESS	SUBPOOL NUMBER or POOL ID	RETURN ADDRESS	LENGTH OF STORAGE FREED	CALLER OF UTILITY or 0	0

TPWAIT

WAIT	ID	FLAG	0	PST ADDRESS	PAB ADDRESS	RETURN ADDRESS	WORK ELEMENT QUEUE or NEXT DISP QUEUE LEVEL	MODULE NAME or DVT ADDRESS	RPH ADDRESS

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VM VSCS Trace Record Formats

VM VSCS Trace Table Header

The VSCS trace table contains a header record (DTITHDR) followed by the trace records (DTITREC). Figure 5-1 shows the trace header format.

00	T	R	Number of entries
04	Zero		
08	Current trace entry address		
0C	First trace entry in table		
10	Last trace entry in table		
14	Storage address used to free table		
18	Zero		
1C	Zero		
20	Address of DTIISDA1		
24	Address of DTIISDA2		
28	Address of first CSECT in load module		
2C	Address of DTIPATCH		
30	Address of DTIIPARM		
34	Zero		
38	Zero		
3C	Zero		

Figure 5-1. VM VSCS Trace Header Format

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VM VSCS CCS Trace Record Formats

VM Format for a CCS Trace Entry for a Logical Unit

00	X'00'	DTIWEB ADDRESS		
04	PATH IDs			
08	VTAM CID			
0C	Flow ind.	LBCSTATE	WEBCOUNT	
10	WEBFUN	WEBMODE	WEBCHAR	WEBEDIT
14	WEBFLAGS	WEBCPFLG	WEBLINE	
18	WEBCURSR		WEBTABCH	WEBRSVSA
1C	First four characters of data			

VM Format for a Global CCS Trace Entry

00	X'00'	DTIWEB address		
04	PATH IDs			
08	G	L	B	L
0C	Flow ind.	WEBCAN	WEBCOUNT	
10	WEBFUN	WEBMODE	WEBCHAR	WEBEDIT
14	WEBFLAGS	WEBCPFLG	WEBLINE	
18	WEBCURSR		WEBTABCH	WEBRSVSA
1C	First four characters of data			

VM Format for CCS Data Trace Entries

ACNT Entry: Accept connection, CCS = > VSCS

0	4	8	C	1F
'ACNT'	Module ID	Zero	IUCV parameter list	

CMSG Entry: Completion of a one-way send, CCS = > VSCS

0	4	8	C	1F
'CMSG'	Module ID	Zero	IUCV parameter list	

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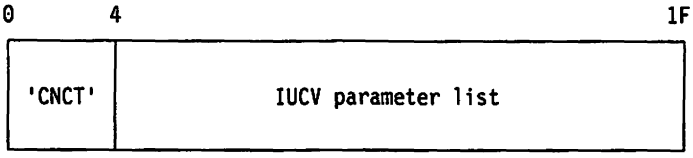
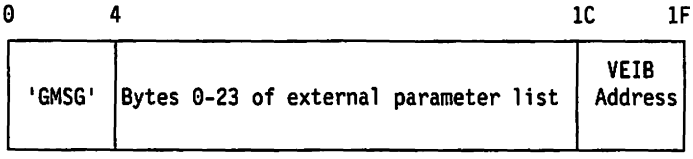
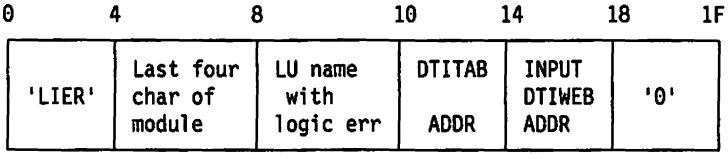
CNCT Entry: Request for connection, VSCS = > CCS



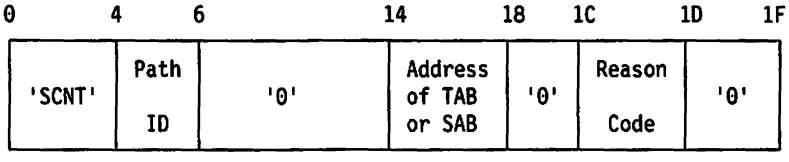
GMSG Entry: Traffic on global path is ignored, CCS = > VSCS



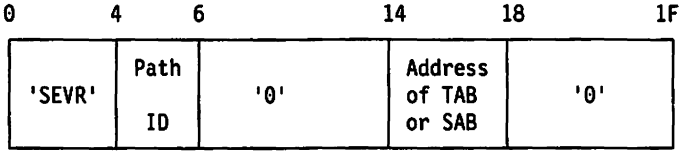
LIER Entry: Logical interface error, CCS = > VSCS



SCNT Entry: Request to sever connection, CCS = > VSCS



SEVR Entry: Connection severed, VSCS = > CCS or CCS to = > VSCS



VM VSCS Dispatcher Trace Record Formats

VM Format for a Dispatcher Trace Entry for a Logical Unit

00	Header	LBCSTTUS	WEBFUN	WEBMODE
04	WEBVSRPS	DTITAB address		
08	PLBDFLG1	DTIWEB address		
0C	LBCSTATE	PLBFSSMF	PLBLFLG1	PLBFLG1
10	PLBPRLBC	PLBOFLG1	PLBNOM	
14	PLBEDIT	PLBIAFLG	LBCSTATE	VLBFLG
18	VLBFLG1	VLBFLG2	VLBSENDF	VLBLRCD
1C	Last four characters of module name			

VM Format for a Dispatcher Trace Entry for a Global Connection

00	Header ID	Task/Busy	SABIQECB	
04	Address passed			
08	DTIWEB address			
0C	SABFLG1	SABABIPF	SABLFLG1	SABRFLG1
10	WEBFUN	WEBMODE	WEBCHAR	WEBEDIT
14	WEBFLAGS	WEBCPFLG	WEBLINE	
18	WEBCURSR		WEBTABCH	WEBRSVSA
1C	Last four characters of module name			

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VM VSCS VTAM Exit Trace Record Formats

VM VSCS VTAM Exit Normal Trace Entries

00	V	Module ID		
04	RTN CODE	DTITAB address		
08	RPL REQ	RPL address		
0C	RPLFDB2		RPLSSNSI or RPLUSNSI	
10	SOURCE NAU		LBCSTATE	PLBFSSMF
14	PLBLFLG1	PLBNFLG1	PLBOFLG1	LBCSTATE
18	VLBSWAP			
1C	VLBLRCD	VXIT data		

Exit routines that record normal trace records:

DTIVCLSX
DTIVDFAX
DTIVLOGX
DTIVNSEX
DTIVOPNX
DTIVRECX
DTIVRESX
DTIVRLQX
DTIVSCIX
DTIVSNDX

VM Format for VTAM Exit Data Trace Entries

DTIVCLSX

00	V	C	L	S
04	RPL REQ	RPL address		
08	DTITAB address			
0C	RPL		CID	
10	Zero			
1C	FF	DTIWEB address or zero		

DTIVDFAX

00	V	D	F	A
04	ACB address			
08	RPL CID			
0C	DTITAB address			
10	Zero			
14	RPL address			
18	Zero			
1C	FF	WEBFUN	Zero	Mod. flow

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DTIVLOGX

00	V	L	O	G
04	ACB address			
08	LU name address			
0C	Reserved			
10	Length of logon message			
14	LU name			
1C	FF	WEBFUN	SABTFLG1	Mod. flow

DTIVLOSX

00	V	L	O	S
04	ACB address			
08	RPL CID			
0C	NIB user field			
10	Reason code			
14	DTITAB address			
18	DTIWEB address			
1C	FF	Zero		Mod. flow

DTIVNSEX

00	V	N	S	E
04	ACB address			
08	RPL CID			
0C	DTITAB address			
10	Zero			
14	RPL address			
18	RPL REQ	RPL address		
1C	FF	Bytes 0 - 2 of user data field		

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DTIVOPNX

00	V	O	P	N
04	RPL REQ	RPL address		
08	DTITAB address			
0C	Zero			
1C	FF	WEBFUN	Zero	Mod. flow

DTIVRECX

00	V	R	E	C
04	RPL REQ	RPL address		
08	DTITAB address			
0C	DTIVLB address			
10	DTIWEB address			
14	Zero			
1C	FF	WEBFUN	CHK RC	Mod. Flow

DTIVRESX

Note: This trace record is created only when exception response is used.

00	V	R	E	S
04	REQCODE	R P L	A D D R E S S	
08	D T I T A B	A D D R E S S		
0C	D T I V L B	A D D R E S S		
10	D T I W E B	A D D R E S S		
14	Z E R O			
1C	X'FF'	ZERO	ZERO	MOD FLOW

DTIVRLQX

00	V	R	L	Q
04	ACB name			
0C	LU name			
14	DTITAB address			
18	Zero			
1C	FF	Ret. code	ZERO	

DTIVSCIX

00	V	S	C	I
04	ACB address			
08	CID (not used)			
0C	DTITAB address			
10	Zero			
14	RPL address			
18	RPLREQ	RPL address		
1C	FF	Req code	Unbind	Zero

DTIVSIMX

00	V	S	I	M
04	RPL REQ	RPL address		
08	RPLFDBD			
0C	RPLFDB2			
10	LU name			
18	DTITAB address			
1C	FF	Return code from CHECK macro		

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DTIVSEND

Note: This trace record is created only when exception response is used.

00	V	S	E	N
04	DTITAB ADDRESS			
08	VLBERCVY	DTIWEB ADDRESS		
0C	XMTFLG1	XMTFLG2	MODE/TYPE	LBCSTATE
10	PLBFSSMF	PLBLFLG1	PLBNFLG1	PLBOFLG1
14	VLBLRCD	VLBERFLG	VLBERSQ1	
18	VLBSWAP			
1C	X'FF'	CALLER'S RETURN ADDRESS		

DTIVSNDX

00	V	S	N	D
04	RPL REQ	RPL address		
08	DTITAB address			
0C	DTIVLB address			
10	DTIWEB address			
14	Zero			
18	Zero			
1C	FF	WEBVSRPS	VLBERCVY	Mod. flow

VM Cleanup Error Trace Record Formats

VM Logical Unit Related Trace Entry (VPUR or PBRK)

00	Module ID			
04	WEBFUN	DTITAB address		
08	RPL REQ	LBCSTATE	PLBFSSMF	PLBLFLG1
0C	PLBFLG1	PLBNOM		PLBOFLG1
10	LBCSTATE	VLBLRCD	Zero	
14	VLBSWAP			
18	VLBCID			
1C	TRCFLOW	DTIWEB or RPL address		

VM Logical Unit Related Trace Entry (PFOR)

00	P	F	O	R
04	DTITAB	ADDRESS		
08	LBCSTATE	PLBLFLG1	PLBNFLG1	PLBOFLG1
0C	TABDTYPE	TABDSUB	LBCSTATE	VLBLRCD
10	VLBSWAP			
14	TABLUNM			
1C	'FF'	MOD FLOW 1	MOD FLOW 2	STAT IND

VM Data-Related Error Trace Entry (CXIT)

Invalid external interrupt, CCS = > VSCS

0	4	1C	1D	1F
'CXIT'	Bytes 0-23 of external parameter list	Error Code	VEIB Address	

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VM ABEND Trace Record (ABND)

00	A B N D			
04	TASK ID		ABEND CODE	
08	F A I L I N G P S W			
10	S D W A A D D R E S S			
14	R E G I S T E R 13			
18	DMP NUM	0		
1C	X'FF'	RTNCODE	SABFLG1	SABABIPF

VM Internal Error Trace Record (INTR)

00	I N T R			
04	Occurrence		Value	
08	Last 4 characters of module name			
0C	Return register first caller			
10	Return register second caller			
14	R E G I S T E R 13			
18	DMP NUM	0		
1C	X'FF'	RTNCODE	SABFLG1	SABABIPF

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VM VSCS Storage Trace Entries

VM FREB Trace Entry

00	F	R	E	B
04	DTIPDB		ADDRESS	
08	BLOCK		ADDRESS	
0C	SMP HEADER ID		BLOCK	ID
10	RESERVED			POOL NUMBER
14	RETURN1		ADDRESS	
18	RETURN2		ADDRESS	
1C	RESERVED			

VM GETB Trace Entry

00	G	E	T	B
04	DTIPDB		ADDRESS	
08	BLOCK		ADDRESS	
0C	REQUESTED SIZE			CLEAR
10	SIZE		POOL NO.	RTNCODE
14	RETURN1		ADDRESS	
18	RETURN2		ADDRESS	
1C	CALLERS		STATE	

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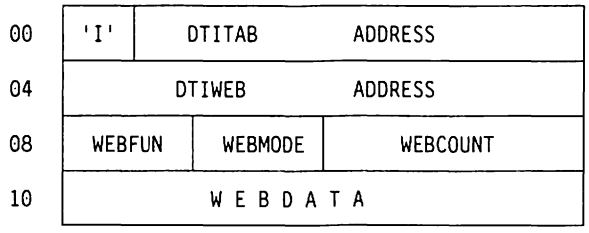
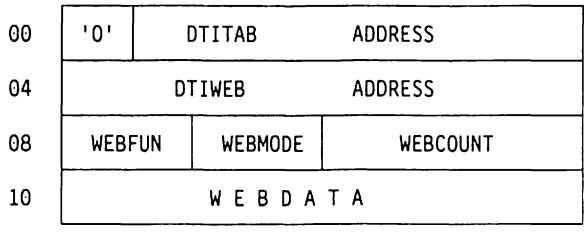
VM VSCS Data Trace Entries

VM Input Trace Entry



VM Output Trace Entry



VM/ESA VSCS Trace Record Formats

VM/ESA VSCS LU Dispatcher Trace Record Format: Entry 1

00	Header	LBCSTTUS	Zero	
04	DTITAB address			
08	DTIWEB address			
0C	WEBFUN	WEBMOD	WEBVSRPS	Zero
10	LBCSTATE	PLBFSSMF	PLBLFLG1	PLBFLG1
14	PLBPRLBC	PLBOFLG1	PLBNOM	
18	PLBEDIT	PLBIAFLG	PLBDFLG1	Zero
1C	Last four characters of module name			

VM/ESA VSCS LU Dispatcher Trace Record Format: Entry 2

00	'Z'	Zero	LU path ID	
04	LBCSTATE	VLBFLG	VLBFLG1	VLBFLG2
08	VLBSENDF	VLBERFLG	VLBLRCD	VLBERCVY
0C	V T A M		C I D	
10	Zero			

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VM/ESA VSCS VTAM Exit Trace Record Format: Entry 1

00	'V'	Module ID		
04	DTITAB address			
08	IFGRPL address			
0C	RPLREQ	RTNCODE	V T A M N A U	
10	RPLFDBK		RPLSSNSI or RPLUSNSI	
14	LBCSTATE	VLBERFLG	LU path ID	
18	V L B S W A P			
1C	VLBLRCD	V X I T D A T A		

VM/ESA VSCS VTAM Exit Trace: Entry 2

00	'X'	Last three letters		
04	LBCSTATE	PLBFSSMF	PLBLFLG1	PLBFLG1
08	PLBPRLBC	PLBOFLG1	PLBNOM	
0C	PLBEDIT	PLBIAFLG	PLBDFLG1	Zero
10	Zero			

VM/ESA Format for VTAM Exit Data Trace Entries

DTIVCLSX

00	V	C	L	S
04	RPLREQ	Zero		
08	DTITAB address			
0C	RPL	CID		
10	RPL address			
14	DTIWEB address			
18	Zero			
1C	X'FF'	Zero		

DTIVDFAX

00	V	D	F	A
04	ACB address			
08	RPL	CID		
0C	DTITAB address			
10	Zero			
14	RPL address			
18	WEB address			
1C	X'FF'	EXIT	Data	

DTIVNSEX

00	V	N	S	E
04	ACB address			
08	RPL	CID		
0C	DTITAB address			
10	RPL address			
14	RPL address			
18	RPLREQ	Zero		
1C	X'FF'	Bytes 0 - 2 of user data field		

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DTIVOPNX

00	V	O	P	N
04	RPLREQ	Zero		
08	DTITAB address			
0C	RPL address			
10	Zero			
1C	X'FF'	Exit	Data	

DTIVRECX

00	V	R	E	C
04	RPLREQ	Zero		
08	DTITAB address			
0C	DTIVLB address			
10	DTIWEB address			
14	RPL address			
18	Zero			
1C	X'FF'	Exit	Data	

DTIVRESX

00	V	R	E	S
04	RPLREQ	Zero		
08	DTITAB address			
0C	DTIVLB address			
10	DTIWEB address			
14	RPL address			
18	Zero			
1C	X'FF'	Exit	Data	

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DTIVSNDX

00	V	S	N	D
04	RPLREQ	Zero		
08	DTITAB address			
0C	DTIVLB address			
10	DTIWEB address			
14	RPL address			
18	Zero			
1C	X'FF'	Exit	Data	

DTIVSCIX

00	V	S	C	I
04	ACB name			
08	CID (not used)			
0C	DTITAB address			
10	RPL address			
14	RPL address			
18	RPLREQ	Zero		
1C	X'FF'	Exit	Data	

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DTIVSEND: Entry 1

00	V	S	E	N
04	DTITAB address			
08	DTIWEB address			
0C	XMTFLG1	XMTFLG2	MODE/TYPE	XMTSTATE
10	LBCSTATE	PLBFSSMF	PLBLFLG1	PLBFLG1
14	PLBPRLBC	PLBNFLG1	PLBOFLG1	PLBFSSM1
18	Caller's return address			
1C	X'FF'	Zero		

DTIVSEND: Entry 2

00	V	S	E	1
04	VTAM		CID	
08	VLBSWAP			
0C	VLBLRCD	VLBERFLG	VLBERSQ1	
10	VLBFLG3	VLBERCVY	RESERVED	
14	Zero			
1C	X'FF'	Zero		

DTIVSIML

00	V	S	I	M
04	RPL address			
08	RPLFDBWD			
0C	RPLFDB2			
10	LU	name		
18	DTITAB	address		
1C	X'FF'	Exit	Data	

VM/ESA VSCS Common Cleanup Error Trace Record Format

00	Module ID			
04	DTITAB address			
08	RPLREQ	LBCSTATE	PLBFSSMF	PLBLFLG1
0C	PLBFLG1	PLBNOM		PLBOFLG1
10	LBCSTATE	VLBLRCD	WEBFUN	TRCFLOW
14	VLBSWAP			
18	VLBCID			
1C	DTIWEB or RPL address			

VM/ESA VSCS CCS Trace Record Format

DTICEXIT

00	C	X	I	T
04	Bytes 0 - 2 2			
08	of			
0C	external			
10	parameter			
14	list			1B→
18				Mod. flow
1C	DTIVEIB address			

VM/ESA ABND Trace Entry

00	A	B	N	D
04	TASK ID		ABEND CODE	
08	F A I L I N G	P S W		
10	S D W A	A D D R E S S		
14	R E G I S T E R	13		
18	DMP NUM	0		
1C	X'FF'	RTNCODE	SABFLG1	SABABIPF

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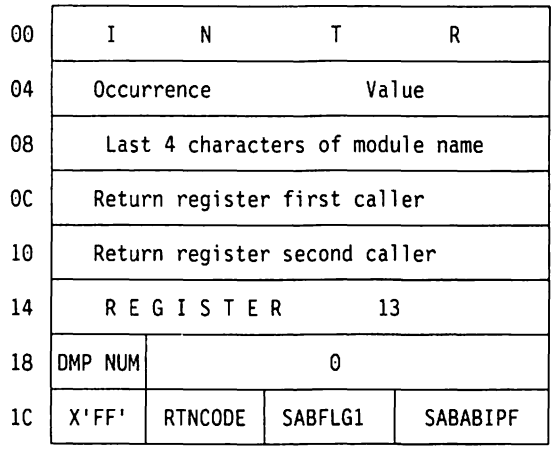
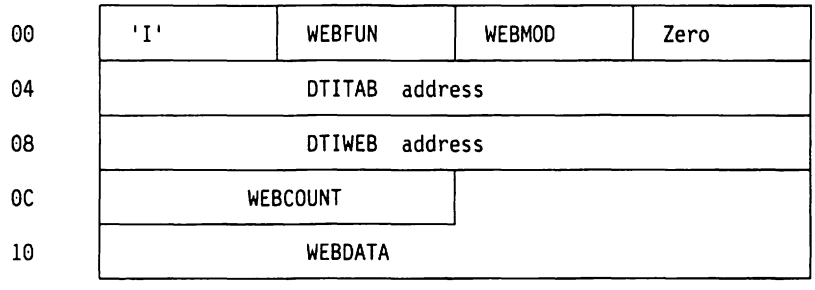
VM/ESA Internal Error Trace Record

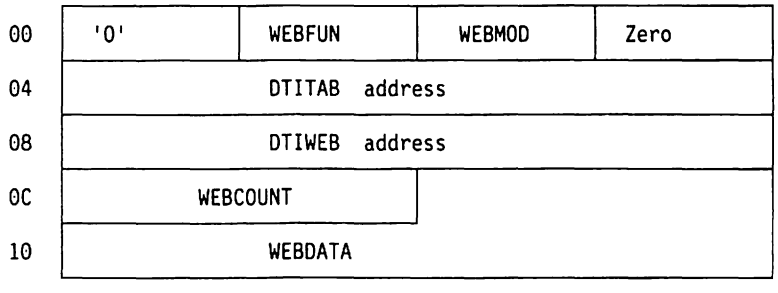


VM/ESA VSCS Data Trace Entries

VM/ESA Input Trace Entry



VM/ESA Output Trace Entry



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VM/ESA VSCS CCS Trace Record Format

VM/ESA Format for a CCS Trace Entry for a Logical Unit

00	DTIWEB address			
04	PATH IDs			
08	VSCS		CID	
0C	IUCV REQTP	PSSTATE	WEBCOUNT	
10	WEBFUN	WEBMODE	WEBCHAR	WEBEDIT
14	WEBFLAGS		WEBLINE	
18	WEBCURSR		WEBTABCH	WEBRSVSA
1C	WEBDATA			

VM Format for a Global CCS Trace Entry

00	X'00'	DTIWEB address		
04	PATH IDs			
08	G	L	B	L
0C	Flow ind.	WEBCAN	WEBCOUNT	
10	WEBFUN	WEBMODE	WEBCHAR	WEBEDIT
14	WEBFLAGS	WEBCPFLG	WEBLINE	
18	WEBCURSR		WEBTABCH	WEBRSVSA
1C	First four characters of data			

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VM/ESA Format for CCS Data Trace Entries

VM/ESA SCNT Entry

00	S	C	N	T
04	PATH ID		Zero	
08	Zero			
0C	Zero			
10	Zero			
14	DTITAB address			
18	Zero			
1C	Return code	Zero		

DTIVLOSX

00	V	L	O	S
04	ACB address			
08	CID address			
0C	RPL user field			
10	RPL reason code			
14	DTITAB address			
18	DTIWEB address			
1C	X'FF'	Exit	Data	

VM/ESA VSCS Storage Trace Entries

VM/ESA FREB Trace Entry

00	F	R	E	B
04	DTIPDB address			
08	block address			
0C	DTISMP	IDENTIFIER	DTIEHDR	IDENTIFIER
10	POOLID	Zero		
14	Return address			
18	Return address			
1C	Zero			

VM/ESA GETB Trace Entry

00	G	E	T	B
04	DTIPDB address			
08	Block address			
0C	Request size (3 bytes)			Clear size
10	Clear size (bytes 2 and 3)		POOLID	Return code
14	Return address			
18	Return address			
1C	State			

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Glossary

This glossary defines important NCP, NetView, NetView/PC, SSP, and VTAM abbreviations and terms. It includes information from the *IBM Dictionary of Computing*, SC20-1699. Definitions from the *American National Dictionary for Information Processing* are identified by an asterisk (*). Definitions from draft proposals and working papers under development by the International Standards Organization, Technical Committee 97, Subcommittee 1 are identified by the symbol **(TC97)**. Definitions from the *CCITT Sixth Plenary Assembly Orange Book, Terms and Definitions* and working documents published by the Consultative Committee on International Telegraph and Telephone of the International Telecommunication Union, Geneva, 1980 are preceded by the symbol **(CCITT/ITU)**. Definitions from published sections of the *ISO Vocabulary of Data Processing*, developed by the International Standards Organization, Technical Committee 97, Subcommittee 1 and from published sections of the *ISO Vocabulary of Office Machines*, developed by subcommittees of ISO Technical Committee 95, are preceded by the symbol **(ISO)**.

For abbreviations, the definition usually consists only of the words represented by the letters; for complete definitions, see the entries for the words.

Reference Words Used in the Entries

The following reference words are used in this glossary:

Deprecated term for. Indicates that the term should not be used. It refers to a preferred term, which is defined.

Synonymous with. Appears in the commentary of a preferred term and identifies less desirable or less specific terms that have the same meaning.

Synonym for. Appears in the commentary of a less desirable or less specific term and identifies the preferred term that has the same meaning.

Contrast with. Refers to a term that has an opposed or substantively different meaning.

See. Refers to multiple-word terms that have the same last word.

See also. Refers to related terms that have similar (but not synonymous) meanings.

abend. Abnormal end of task.

abnormal end of task (abend). Termination of a task before its completion because of an error condition that cannot be resolved by recovery facilities while the task is executing.

ACB. (1) In VTAM, access method control block. (2) In NCP, adapter control block.

ACB name. (1) The name of an ACB macroinstruction. (2) A name specified in the ACBNAME parameter of a VTAM APPL statement. Contrast with *network name.*

accept. (1) For a VTAM application program, to establish a session with a logical unit (LU) in response to a CINIT request from a system services control point (SSCP). The session-initiation request may begin when a terminal user logs on, a VTAM application program issues a macroinstruction, or a VTAM operator issues a command. See also *acquire (1).* (2) In NPM, an SMP process that moves distributed code to the distribution libraries.

access method. A technique for moving data between main storage and input/output devices.

access method control block (ACB). A control block that links an application program to VSAM or VTAM.

accounting exit routine. In VTAM, an optional installation exit routine that collects statistics about session initiation and termination.

ACF. Advanced Communications Function.

ACF/NCP. Advanced Communications Function for the Network Control Program. Synonym for *NCP.*

ACF/SSP. Advanced Communications Function for the System Support Programs. Synonym for *SSP.*

ACF/VTAM. Advanced Communications Function for the Virtual Telecommunications Access Method. Synonym for *VTAM.*

acquire. (1) For a VTAM application program, to initiate and establish a session with another logical unit (LU). The acquire process begins when the application program issues a macroinstruction. See also *accept.* (2) To take over resources that were formerly controlled by an access method in another domain, or to resume control of resources that were controlled by this domain but released. Contrast with *release.* See also *resource takeover.*

activate. To make a resource of a node ready to perform the functions for which it was designed. Contrast with *deactivate.*

active. (1) The state a resource is in when it has been activated and is operational. Contrast with *inactive, pending,* and *inoperative.* (2) Pertaining to a major or

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minor node that has been activated by VTAM. Most resources are activated as part of VTAM start processing or as the result of a VARY ACT command.

adapter. Hardware card that allows a device, such as a PC, to communicate with another device, such as a monitor, a printer, or other I/O device.

adapter control block (ACB). In NCP, a control block that contains line control information and the states of I/O operations for BSC lines, SS lines, or SDLC links.

adaptive session pacing. Synonym for *adaptive session-level pacing*.

adaptive session-level pacing. A form of session-level pacing in which session components exchange pacing windows that may vary in size during the course of a session. This allows transmission to adapt dynamically to variations in availability and demand of buffers on a session by session basis. Session pacing occurs within independent stages along the session path according to local congestion at the intermediate nodes. Synonymous with *adaptive session pacing*. See *pacing*, *session-level pacing*, and *virtual route pacing*.

adjacent SSCP table. A table containing lists of the system services control points (SSCPs) that VTAM can be in session with or can use to reach destination SSCPs in the same network or in other networks. The table is filed in the VTAM definition library.

Advanced Communications Function (ACF). A group of IBM licensed programs (principally VTAM, TCAM, NCP, and SSP) that use the concepts of Systems Network Architecture (SNA), including distribution of function and resource sharing.

Advanced Program-to-Program Communication (APPC). A synonym for logical unit (LU) 6.2 and its implementations.

alias name. A name defined in a host used to represent a logical unit name, logon mode table name, or class-of-service name in another network. This name is defined to a name translation program when the alias name does not match the real name. The alias name translation program is used to associate the real and alias names.

allocate. A logical unit (LU) 6.2 application program interface (API) verb used to assign a session to a conversation for the conversation's use. Contrast with *deallocate*.

APPC. Advanced Program-to-Program Communication.

appendage. An application program routine provided to assist in handling a specific occurrence.

application program. (1) A program written for or by a user that applies to the user's work. (2) A program used to connect and communicate with stations in a network, enabling users to perform application-oriented activities.

application program major node. A group of application program minor nodes. In the VTAM definition library, it is a member, book, or file that contains one or more APPL statements, which represent application programs. In MVS, it is a member of the library; in VSE, it is a book; and in VM, it is a CMS file of filetype VTAMLST.

apply. In NPM, an SMP process that moves distributed code to the system libraries.

attaching device. Any device that is physically connected to a network and can communicate over the network.

authorization exit routine. In VTAM, an optional installation exit routine that approves or disapproves requests for session initiation.

authorized path. In VTAM for MVS, a facility that enables an application program to specify that a data transfer or related operation be carried out in a privileged and more efficient manner.

automatic activation. In VTAM, the activation of links and link stations in adjacent subarea nodes as a result of channel device name or RNAME specifications related to an activation command that names a subarea node. See *direct activation*.

automatic logon. (1) A process by which VTAM automatically creates a session-initiation request to establish a session between two logical units (LUs). The session will be between a designated primary logical unit (PLU) and a secondary logical unit (SLU) that is neither queued for nor in session with another PLU. See also *controlling application program* and *controlling logical unit*. (2) In VM, a process by which a virtual machine is initiated by other than the user of that virtual machine. For example, the primary VM operator's virtual machine is activated automatically during VM initialization.

autotask. An unattended NetView operator station task that does not require a terminal or a logged-on user. Autotasks can run independent of VTAM and are typically used for automated console operations. Contrast with *logged-on operator*.

available. In VTAM, pertaining to a logical unit what is active, connected, enabled, and not at its session limit.

begin bracket. In SNA, the value (binary 1) of the begin-bracket indicator in the request header (RH) of

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the first request in the first chain of a bracket; the value denotes the start of a bracket. Contrast with *end bracket*. See also *bracket*.

bidder. In SNA, the LU-LU half-session defined at session activation as having to request and receive permission from the other LU-LU half-session to begin a bracket. Contrast with *first speaker*. See also *bracket protocol* and *contention*.

Binary Synchronous Communication (BSC). (1) Communication using binary synchronous line discipline. (2) A uniform procedure, using a standardized set of control characters and control character sequences, for synchronous transmission of binary-coded data between stations.

bind. In SNA, a request to activate a session between two logical units (LUs). See also *session activation request*. Contrast with *UNBIND*.

BIU segment. In SNA, the portion of a basic information unit (BIU) that is contained within a path information unit (PIU). It consists of either a request/response header (RH) followed by all or a portion of a request/response unit (RU), or only a portion of an RU.

blocking of PIUs. In SNA, an optional function of path control that combines multiple path information units (PIUs) into a single basic transmission unit (BTU).

boundary function. (1) A capability of a subarea node to provide protocol support for attached peripheral nodes, such as: (a) interconnecting subarea path control and peripheral path control elements, (b) performing session sequence numbering for low-function peripheral nodes, and (c) providing session-level pacing support. (2) The component that provides these capabilities. See also *boundary node*, *network addressable unit (NAU)*, *peripheral path control*, *subarea node*, and *subarea path control*.

boundary node. (1) A subarea node with boundary function. See *subarea node*. See also *boundary function*. (2) The programming component that performs FID2 (format identification type 2) conversion, channel data link control, pacing, and channel or device error recovery procedures for a locally attached station. These functions are similar to those performed by a network control program for an NCP-attached station.

bracket. In SNA, one or more chains of request units (RUs) and their responses that are exchanged between the two LU-LU half-sessions and that represent a transaction between them. A bracket must be completed before another bracket can be started. Examples of brackets are data base inquiries/replies, update transactions, and remote job entry output sequences to work stations. See also *begin bracket* and *end bracket*.

bracket protocol. In SNA, a data flow control protocol in which exchanges between the two LU-LU half-sessions are achieved through the use of brackets, with one LU designated at session activation as the first speaker and the other as the bidder. The bracket protocol involves bracket initiation and termination rules. See also *bidder* and *first speaker*.

BSC. Binary synchronous communication.

buffer. A portion of storage for temporarily holding input or output data.

buffer list. In VTAM, a contiguous set of control blocks (buffer list entries) that allow an application program to send function management data (FMD) from a number of discontiguous buffers with a single SEND macroinstruction.

bypass. To eliminate an attaching device or an access unit from a ring network by allowing the data to flow in a path around it.

call. (1) * (ISO) The action of bringing a computer program, a routine, or a subroutine into effect, usually by specifying the entry conditions and jumping to an entry point. (2) To transfer control to a procedure, program, routine, or subroutine. (3) The actions necessary to make a connection between two stations. (4) To attempt to contact a user, regardless of whether the attempt is successful.

call connected packet. A call supervision packet that a data circuit-terminating equipment (DCE) transmits to indicate to a calling data terminal equipment (DTE) that the connection for the call has been completely established.

call progress signal (CPS). A call control signal transmitted from the data circuit-terminating equipment (DCE) to the calling data terminal equipment (DTE) to indicate the progress of the establishment of a call, the reason why the connection could not be established, or any other network condition.

call request packet. A call supervision packet that a data terminal equipment (DTE) transmits to ask that a connection for a call be established throughout the network.

call-accepted packet. * (ISO) A call supervision packet that a called data terminal equipment (DTE) transmits to indicate to the data circuit-terminating equipment (DCE) that it accepts the incoming call.

calling. * (ISO) The process of transmitting selection signals in order to establish a connection between data stations.

CALLOUT. The logical channel type on which the data terminal equipment (DTE) can send a call, but cannot receive one.

CCS. Console communication services.

CDRM. Cross-domain resource manager.

CDRSC. Cross-domain resource.

CEB. Conditional end bracket.

chain. (1) A group of logically linked records. (2) See *RU chain*.

channel. * A path along which signals can be sent, for example, data channel, output channel. See *data channel* and *input/output channel*. See also *link*.

channel link. A System/370 I/O channel to control unit interface that has an SNA network address. A channel link can be either a subarea link or a peripheral link and is defined in an NCP generation definition using the GROUP, LINE, and PU definition statements. See also *link* and *subarea link*.

channel-attached. (1) Pertaining to the attachment of devices directly by input/output channels to a host processor. (2) Pertaining to devices attached to a controlling unit by cables, rather than by telecommunication lines. Contrast with *link-attached*. Synonymous with *local*.

channel-attachment major node. (1) A major node that includes an NCP that is channel-attached to a data host. (2) A major node that may include minor nodes that are the line groups and lines that represent a channel attachment to an adjacent (channel-attached) host. (3) In VM or VSE operating systems, a major node that may include minor nodes that are resources (host processors, NCPs, line groups, lines, SNA physical units and logical units, cluster controllers, and terminals) attached through a communication adapter.

character-coded. Synonym for *unformatted*.

CID. Communication identifier.

CINIT. A network services request sent from a system services control point (SSCP) to a logical unit (LU) asking that LU to establish a session with another LU and to act as the primary end of the session.

circuit switching. (1) * (ISO) A process that, on demand, connects two or more data terminal equipments (DTEs) and permits the exclusive use of a data circuit between them until the connection is released. (2) Synonymous with *line switching*. (3) See also *message switching* and *packet switching*.

class of service (COS). In SNA, a designation of the path control network characteristics, such as path security, transmission priority, and bandwidth, that apply to a particular session. The end user designates class of service at session initiation by using a symbolic name that is mapped into a list of virtual routes, any one of which can be selected for the session to provide the requested level of service.

cleanup. A network services request, sent by a system services control unit (SSCP) to a logical unit (LU), that causes a particular LU-LU session with that LU to be ended immediately and without the participation of either the other LU or its SSCP.

clear indication packet. A call supervision packet that a data circuit-terminating equipment (DCE) transmits to inform a data terminal equipment (DTE) that a call has been cleared.

clear request packet. A call supervision packet transmitted by a data terminal equipment (DTE) to ask that a call be cleared.

cluster controller. A device that can control the input/output operations of more than one device connected to it. A cluster controller may be controlled by a program stored and executed in the unit; for example, the IBM 3601 Finance Communication Controller. Or it may be controlled entirely by hardware; for example, the IBM 3272 Control Unit.

CNM. Communication network management.

CNOS. Change number of sessions.

command. (1) A request from a terminal for the performance of an operation or the execution of a particular program. (2) In SNA, any field set in the transmission header (TH), request header (RH), and sometimes portions of a request unit (RU), that initiates an action or that begins a protocol; for example: (a) Bind Session (session-control request unit), a command that activates an LU-LU session, (b) the change-direction indicator in the RH of the last RU of a chain, (c) the virtual route reset window indicator in a FID4 transmission header. See also *VTAM operator command*.

communication adapter. An optional hardware feature, available on certain processors, that permits communication lines to be attached to the processors.

communication controller. A type of communication control unit whose operations are controlled by one or more programs stored and executed in the unit; for example, the IBM 3725 Communication Controller. It manages the details of line control and the routing of data through a network.

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communication identifier (CID). In VTAM, a key for locating the control blocks that represent a session. The key is created during the session-establishment procedure and deleted when the session ends.

communication line. Deprecated term for *telecommunication line* and *transmission line.*

communication management configuration host node. The type 5 host processor in a communication management configuration that does all network-control functions in the network except for the control of devices channel-attached to data hosts. Synonymous with *communication management host.* Contrast with *data host node.*

communication management host. Synonym for *communication management configuration host node.* Contrast with *data host.*

communication network management (CNM). The process of designing, installing, operating, and managing the distribution of information and controls among end users of communication systems.

communication network management (CNM) application program. A VTAM application program that issues and receives formatted management services request units for physical units. For example, the NetView program.

communication network management (CNM) interface. The interface that the access method provides to an application program for handling data and commands associated with communication system management. CNM data and commands are handled across this interface.

communication network management (CNM) processor. A program that manages one of the functions of a communications system. A CNM processor is executed under control of the NetView program.

communication scanner processor (CSP). A processor in the 3725 Communication Controller that contains a microprocessor with control code. The code controls transmission of data over links attached to the CSP.

composite end node (CEN). A group of nodes made up of a single type 5 node and its subordinate type 4 nodes that together support type 2.1 protocols. To a type 2.1 node, a CEN appears as one end node. For example, NCP and VTAM act as a composite end node.

conditional end bracket (CEB). In SNA, the value (binary 1) of the conditional end bracket indicator in the request header (RH) of the last request of the last chain of a bracket; the value denotes the end of the bracket. Contrast with *end bracket.* See also *begin bracket* and *bracket.*

configuration. (1) (TC97) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. The term may refer to a hardware or a software configuration. (2) The devices and programs that make up a system, subsystem, or network. (3) In CCP, the arrangement of controllers, lines, and terminals attached to an IBM 3710 Network Controller. Also, the collective set of item definitions that describe such a configuration.

configuration services. In SNA, one of the types of network services in the control point (CP) and in the physical unit (PU); configuration services activate, deactivate, and maintain the status of physical units, links, and link stations. Configuration services also shut down and restart network elements and modify path control routing tables and address-translation tables. See also *maintenance services, management services, network services,* and *session services.*

connected. In VTAM, pertaining to a physical unit (PU) or logical unit (LU) that has an active physical path to the host processor containing the system services control point (SSCP) that controls the PU or LU.

connection. Synonym for *physical connection.*

console communication services (CCS). The SNA facility that acts as an interface between the control program and the VSCS component of VTAM for VM.

contention. A situation in which two logical units (LUs) that are connected by an LU 6.2 session both attempt to allocate the session for a conversation at the same time. The control operator assigns "winner" and "loser" status to the LUs so that processing may continue on an orderly basis. The contention loser requests permission from the contention winner to allocate a conversation on the session, and the contention winner either grants or rejects the request. See also *bidder.*

control block. (1) (ISO) A storage area used by a computer program to hold control information. (2) In the IBM Token-Ring Network, a specifically formatted block of information provided from the application program to the Adapter Support Interface to request an operation.

control program (CP). The VM operating system that manages the real processor's resources and is responsible for simulating System/370s for individual users.

controller. A unit that controls input/output operations for one or more devices.

controlling application program. In VTAM, an application program with which a secondary logical

unit (other than an application program) is automatically put in session whenever the secondary logical unit is available. See also *automatic logon* and *controlling logical unit*.

controlling logical unit. In VTAM, a logical unit with which a secondary logical unit (other than an application program) is automatically put in session whenever the secondary logical unit is available. A controlling logical unit can be either an application program or a device-type logical unit. See also *automatic logon* and *controlling application program*.

converted command. An intermediate form of a character-coded command produced by VTAM through use of an unformatted system services definition table. The format of a converted command is fixed; the unformatted system services definition table must be constructed in such a manner that the character-coded command (as entered by a logical unit) is converted into the predefined, converted command format. See also *unformatted*.

COS. Class of service.

cross-domain. In SNA, pertaining to control of resources involving more than one domain.

cross-domain resource (CDRSC). A resource owned by a cross-domain resource manager (CDRM) in another domain but known by the CDRM in this domain by network name and associated CDRM.

cross-domain resource manager (CDRM). In VTAM, the function in the system services control point (SSCP) that controls initiation and termination of cross-domain sessions.

cross-network. In SNA, pertaining to control or resources involving more than one SNA network.

cross-network session. An LU-LU or SSCP-SSCP session whose path traverses more than one SNA network.

cryptographic. Pertaining to the transformation of data to conceal its meaning. See also *encipher* and *decipher*.

CSA. Common storage area.

CSP. Communication scanner processor.

DASD. Direct access storage device.

data channel. Synonym for *input/output channel*. See *channel*.

data flow synchronous (DFSYN) response. In VTAM, a normal-flow response that is treated as a normal-flow request so that it may be received in sequence with normal-flow requests.

data host. Synonym for *data host node*. Contrast with *communication management configuration host*.

data host node. In a communication management configuration, a type 5 host node that is dedicated to processing applications and does not control network resources, except for its channel-attached or communication adapter-attached devices. Synonymous with *data host*. Contrast with *communication management configuration host node*.

data link. In SNA, synonym for *link*.

data link control (DLC) layer. In SNA, the layer that consists of the link stations that schedule data transfer over a transmission medium connecting two nodes and perform error control for the link connection. Examples of data link control are SDLC for serial-by-bit link connection and data link control for the System/370 channel.

data packet. At the interface between a data terminal equipment (DTE) and a data circuit-terminating equipment (DCE), a packet used to transmit user data over a virtual circuit.

data services task (DST). The NetView subtask that gathers, records, and manages data in a VSAM file and/or a network device that contains network management information.

data set. The major unit of data storage and retrieval, consisting of a collection of data in one of several prescribed arrangements and described by control information to which the system has access.

data terminal equipment (DTE). (TC97) That part of a data station that serves as a data source, data link, or both, and provides for the data communication control function according to protocols.

data types. In the NetView program, a concept to describe the organization of panels. Data types are defined as alerts, events, and statistics. Data types are combined with resource types and display types to describe NetView's display organization. See also *display types* and *resource types*.

DCE clear confirmation packet. A call supervision packet that a data circuit-terminating equipment (DCE) transmits to confirm that a call has been cleared.

deactivate. To take a resource of a node out of service, rendering it inoperable, or to place it in a state in which it cannot perform the functions for which it was designed. Contrast with *activate*.

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deallocate. A logical unit (LU) 6.2 application program interface (API) verb that terminates a conversation, thereby freeing the session for a future conversation. Contrast with *allocate*.

decipher. To convert enciphered data into clear data. Contrast with *encipher*. Synonymous with *decrypt*.

decrypt. To convert encrypted data into clear data. Contrast with *encrypt*. Synonym for *decipher*.

decryption. The unscrambling of data using an algorithm which works under the control of a key. The key allows data to be protected even when the algorithm is unknown. Data is unscrambled after transmission. Contrast with *encryption*.

definite response (DR). In SNA, a value in the form-of-response-requested field of the request header. The value directs the receiver of the request to return a response unconditionally, whether positive or negative, to that request. Contrast with *exception response* and *no response*.

definition statement. (1) In VTAM, the statement that describes an element of the network. (2) In NCP, a type of instruction that defines a resource to the NCP. See Figure X-1, Figure X-2, and Figure X-3. See also *macroinstruction*.

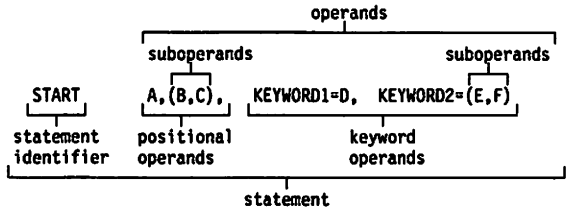

Figure X-1. Example of a Language Statement

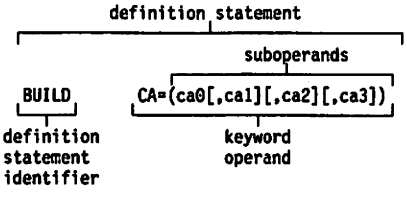

Figure X-2. NCP Examples

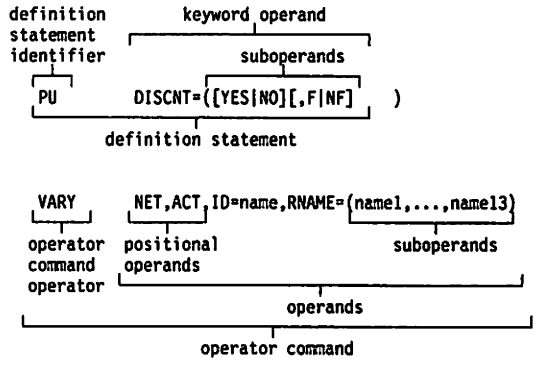

Figure X-3. VTAM Examples

destination logical unit (DLU). The logical unit to which data is to be sent. Contrast with *origin logical unit (OLU)*.

device. An input/output unit such as a terminal, display, or printer. See *attaching device*.

dial-in. Refers to the direction in which a switched connection is requested by any node or terminal other than the receiving host or an NCP.

dial-out. Refers to the direction in which a switched connection is requested by a host or an NCP.

direct access storage device (DASD). A device in which the access time is effectively independent of the location of the data. For example, a disk.

direct activation. In VTAM, the activation of a resource as a result of an activation command specifically naming the resource. See *automatic activation*. Contrast with *indirect activation*.

directory. In VM, a control program (CP) disk that defines each virtual machine's normal configuration.

disabled. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is temporarily not ready to establish LU-LU sessions. An initiate request for a session with a disabled logical unit (LU) can specify that the session be queued by the SSCP until the LU becomes enabled. The LU can separately indicate whether this applies to its ability to act as a primary logical unit (PLU) or a secondary logical unit (SLU). See also *enabled* and *inhibited*.

discarded packet. A packet that is intentionally destroyed.

disconnection. The termination of a physical connection.

display. (1) To present information for viewing, usually on a terminal screen or a hard-copy device. (2) A device or medium on which information is

presented, such as a terminal screen. (3) Deprecated term for *panel*.

display levels. Synonym for *display types*.

display types. In the NetView program, a concept to describe the organization of panels. Display types are defined as total, most recent, user action, and detail. Display types are combined with resource types and data types to describe NetView's panel organization. See *data types* and *resource types*. Synonymous with *display levels*..

DLU. Destination logical unit.

domain. (1) An access method, its application programs, communication controllers, connecting lines, modems, and attached terminals. (2) In SNA, a system services control point (SSCP) and the physical units (PUs), logical units (LUs), links, link stations, and all the associated resources that the SSCP has the ability to control by means of activation requests and deactivation requests. See *system services control point domain* and *type 2.1 node control point domain*. See also *single-domain network* and *multiple-domain network*.

domain operator. In a multiple-domain network, the person or program that controls the operation of the resources controlled by one system services control point. Contrast with *network operator* (2).

DR. (1) In NCP and CCP, dynamic reconfiguration. (2) In SNA, definite response.

DRDS. Dynamic reconfiguration data set.

DST. Data services task.

DTE. Data terminal equipment.

dump. (1) Computer printout of storage. (2) To write the contents of all or part of storage to an external medium as a safeguard against errors or in connection with debugging. (3) (ISO) Data that have been dumped.

dynamic path update. The process of changing the network path for sending information without regenerating complete configuration tables.

dynamic reconfiguration (DR). The process of changing the network configuration (peripheral PUs and LUs) without regenerating complete configuration tables.

dynamic reconfiguration data set (DRDS). In VTAM, a data set used for storing definition data that can be applied to a generated communication controller configuration at the operator's request. A dynamic reconfiguration data set can be used to dynamically add PUs and LUs, delete PUs and LUs, and move PUs. It is activated with the VARY DRDS operator command. See also *dynamic reconfiguration*.

ECB. Event control block.

element. (1) A field in the network address. (2) The particular resource within a subarea identified by the element address. See also *subarea*.

element address. In SNA, a value in the element address field of the network address identifying a specific resource within a subarea. See *subarea address*.

Emulation Program (EP). An IBM control program that allows a channel-attached 3705 or 3725 communication controller to emulate the functions of an IBM 2701 Data Adapter Unit, an IBM 2702 Transmission Control, or an IBM 2703 Transmission Control. See also *network control program*.

enabled. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is now ready to establish LU-LU sessions. The LU can separately indicate whether this prevents it from acting as a primary logical unit (PLU) or as a secondary logical unit (SLU). See also *disabled* and *inhibited*.

encipher. (1) To scramble data or convert it, before transmission, to a secret code that masks the meaning of the data to any unauthorized recipient. (2) In VTAM, to convert clear data into enciphered data. Contrast with *decipher*. Synonymous with *encrypt*.

encrypt. Synonym for *encipher*.

encryption. The scrambling or encoding of data using an algorithm which works under the control of a key. The key allows data to be protected even when the algorithm is unknown. Data is scrambled prior to transmission. Contrast with *decryption*.

end bracket. In SNA, the value (binary 1) of the end bracket indicator in the request header (RH) of the first request of the last chain of a bracket; the value denotes the end of the bracket. Contrast with *begin bracket*. See also *bracket*.

end node. A type 2.1 node that does not provide any intermediate routing or session services to any other node. For example, APPC/PC is an end node. See *composite end node*, *node*, and *type 2.1 node*.

EP. Emulation Program.

ER. (1) Explicit route. (2) Exception response.

error-to-traffic (E/T). The number of temporary errors compared to the traffic associated with a resource.

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E/T. Error-to-traffic.

event. (1) In the NetView program, a record indicating irregularities of operation in physical elements of a network. (2) An occurrence of significance to a task; typically, the completion of an asynchronous operation, such as an input/output operation.

event control block (ECB). A control block used to represent the status of an event.

exception response (ER). In SNA, a value in the form-of-response-requested field of a request header (RH). An exception response is sent only if a request is unacceptable as received or cannot be processed. Contrast with *definite response* and *no response*. See also *negative response*.

exchange identification (XID). A data link control command and response passed between adjacent nodes that allows the two nodes to exchange identification and other information necessary for operation over the data link.

EXEC. In a VM operating system, a user-written command file that contains CMS commands, other user-written commands, and execution control statements, such as branches.

exit list (EXLST). In VSAM and VTAM, a control block that contains the addresses of routines that receive control when specified events occur during execution; for example, routines that handle session-establishment request processing or I/O errors.

exit routine. Any of several types of special-purpose user-written routines. See *accounting exit routine, authorization exit routine, logon-interpret routine, virtual route selection exit routine, EXLST exit routine,* and *RPL exit routine*.

EXLST exit routine. In VTAM, a routine whose address has been placed in an exit list (EXLST) control block. The addresses are placed there with the EXLST macroinstruction, and the routines are named according to their corresponding operand; hence DFASY exit routine, TPEND exit routine, RELREQ exit routine, and so forth. All exit list routines are coded by the VTAM application programmer. Contrast with *RPL exit routine*.

explicit route (ER). In SNA, the path control network elements, including a specific set of one or more transmission groups, that connect two subarea nodes. An explicit route is identified by an origin subarea address, a destination subarea address, an explicit route number, and a reverse explicit route number. Contrast with *virtual route (VR)*. See also *path* and *route extension*.

extended architecture (XA). An extension to System/370 architecture that takes advantage of continuing high performance enhancements to computer system hardware.

extended recovery facility (XRF). Software designed to minimize the effect of failures in MVS, VTAM, the host processor, or IMS/VS on sessions between IMS/VS and designated terminals. It provides an alternate subsystem to take over failing sessions.

feature. A particular part of an IBM product that a customer can order separately.

field-formatted. Pertaining to a request or response that is encoded into fields, each having a specified format such as binary codes, bit-significant flags, and symbolic names. Contrast with *character-coded*.

filter. In the NetView program, a function that limits the data that is to be recorded on the data base and displayed at the terminal. See *recording filter* and *viewing filter*.

first speaker. In SNA, the LU-LU half-session defined at session activation as: (1) able to begin a bracket without requesting permission from the other LU-LU half-session to do so, and (2) winning contention if both half-sessions attempt to begin a bracket simultaneously. Contrast with *bidder*. See also *bracket protocol*.

flow control. In SNA, the process of managing the rate at which data traffic passes between components of the network. The purpose of flow control is to optimize the rate of flow of message units, with minimum congestion in the network; that is, to neither overflow the buffers at the receiver or at intermediate routing nodes, nor leave the receiver waiting for more message units. See also *adaptive session-level pacing, pacing, session-level pacing,* and *virtual route pacing*.

FMH. Function management header.

formatted system services. A portion of VTAM that provides certain system services as a result of receiving a field-formatted command, such as an Initiate or Terminate command. Contrast with *unformatted system services (USS)*. See also *field-formatted*.

frame. (1) The unit of transmission in some local area networks, including the IBM Token-Ring Network. It includes delimiters, control characters, information, and checking characters. (2) In SDLC, the vehicle for every command, every response, and all information that is transmitted using SDLC procedures.

function management header (FMH). In SNA, one or more headers, optionally present in the leading request units (RUs) of an RU chain, that allow one half-session

in an LU-LU session to: (1) select a destination at the session partner and control the way in which the end-user data it sends is handled at the destination, (2) change the destination or the characteristics of the data during the session, and (3) transmit between session partners status or user information about the destination (for example, a program or device). Function management headers (FMHs) can be used on LU-LU types 1, 4, and 6.2.

gateway. (1) The combination of machines and programs that provide address translation, name translation, and system services control point (SSCP) rerouting between independent SNA networks to allow those networks to communicate. A gateway consists of one gateway NCP and at least one gateway SSCP. (2) In the IBM Token-Ring Network, a device and its associated software that connect a local area network to another local area network or a host that uses different logical link protocols.

gateway NCP. An NCP that performs address translation to allow cross-network session traffic. The gateway NCP connects two or more independent SNA networks. Synonymous with *gateway node*.

gateway node. Synonym for *gateway NCP*.

generalized path information unit trace (GPT). A record of the flow of path information units (PIUs) exchanged between the network control program and its attached resources. PIU trace records consist of up to 44 bytes of transmission header (TH), request/response header (RH), and request/response unit (RU) data.

generation. The process of assembling and link editing definition statements so that resources can be identified to all the necessary programs in a network.

generic unbind. Synonym for *session deactivation request*.

giveback. The process by which an alternate subsystem releases itself from its extended recovery facility (XRF) sessions with terminal users and is replaced by the primary subsystem. See also *takeover*

GPT. Generalized path information unit trace.

group. In the NetView/PC program, to identify a set of application programs that are to run concurrently.

half-session. In SNA, a component that provides function management data (FMD) services, data flow control, and transmission control for one of the sessions of a network addressable unit (NAU). See also *primary half-session* and *secondary half-session*.

hard copy. A printed copy of machine output in a visually readable form; for example, printed reports, listings, documents, summaries, or network logs.

help panel. An online display that tells you how to use a command or another aspect of a product. See *task panel*.

host node. A node providing an application program interface (API) and a common application interface. See *boundary node*, *node*, *peripheral node*, *subarea host node*, and *subarea node*. See also *boundary function* and *node type*.

IMR. Intensive mode recording.

inactive. Describes the state of a resource that has not been activated or for which the VARY INACT command has been issued. Contrast with *active*. See also *inoperative*.

incoming call packet. A call supervision packet transmitted by a data circuit-terminating equipment (DCE) to inform a called data terminal equipment (DTE) that another DTE has requested a call.

indirect activation. In VTAM, the activation of a lower-level resource of the resource hierarchy as a result of SCOPE or ISTATUS specifications related to an activation command naming a higher-level resource. Contrast with *direct activation*.

information (I) format. A format used for information transfer.

inhibited. In VTAM, pertaining to a logical unit (LU) that has indicated to its system services control point (SSCP) that it is not ready to establish LU-LU sessions. An initiate request for a session with an inhibited LU will be rejected by the SSCP. The LU can separately indicate whether this applies to its ability to act as a primary logical unit (PLU) or as a secondary logical unit (SLU). See also *enabled* and *disabled*.

initial program load (IPL). (1) The initialization procedure that causes an operating system to commence operation. (2) The process by which a configuration image is loaded into storage at the beginning of a work day or after a system malfunction. (3) The process of loading system programs and preparing a system to run jobs.

initiate. A network services request sent from a logical unit (LU) to a system services control point (SSCP) requesting that an LU-LU session be established.

inoperative. The condition of a resource that has been active, but is not. The resource may have failed, received an INOP request, or is suspended while a reactivate command is being processed. See also *inactive*.

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input/output channel. (1) (ISO) In a data processing system, a functional unit that handles the transfer of data between internal and peripheral equipment. (2) In a computing system, a functional unit, controlled by a processor, that handles the transfer of data between processor storage and local peripheral devices. Synonymous with *data channel*. See *channel*. See also *link*.

intensive mode recording (IMR). An NCP function that forces recording of temporary errors for a specified resource.

inter-user communication vehicle (IUCV). A VM facility for passing data between virtual machines and VM components.

interconnection. See *SNA network interconnection*.

interface. * A shared boundary. An interface might be a hardware component to link two devices or it might be a portion of storage or registers accessed by two or more computer programs.

interpret table. In VTAM, an installation-defined correlation list that translates an argument into a string of eight characters. Interpret tables can be used to translate logon data into the name of an application program for which the logon is intended.

IPL. (1) * Initial program loader. (2) Initial program load.

ISTATUS. In VTAM and NCP, a definition specification method for indicating the initial status of resources. See also *indirect activation*.

item. In CCP, any of the components, such as communication controllers, lines, cluster controllers, and terminals, that comprise an IBM 3710 Network Controller configuration.

IUCV. Inter-user communication vehicle.

keyword. (1) (TC97) A lexical unit that, in certain contexts, characterizes some language construction. (2) * One of the predefined words of an artificial language. (3) One of the significant and informative words in a title or document that describes the content of that document. (4) A name or symbol that identifies a parameter. (5) A part of a command operand that consists of a specific character string (such as DSNAME=). See also *definition statement* and *keyword operand*. Contrast with *positional operand*.

keyword operand. An operand that consists of a keyword followed by one or more values (such as DSNAME=HELLO). See also *definition statement*. Contrast with *positional operand*.

keyword parameter. A parameter that consists of a keyword followed by one or more values.

LAN. An industry-wide acronym for local area network.

large message performance enhancement outbound (LMPEO). In VTAM, a facility in which VTAM reformats function management data (FMD) that exceed the maximum request unit (RU) size (as specified in the BIND) into a chain or partial chain of RUs.

last-in-chain (LIC). A request unit (RU) whose request header (RH) end chain indicator is on and whose RH begin chain indicator is off. See also *RU chain*.

LERAD exit routine. A synchronous EXLST exit routine that is entered automatically when a logic error is detected.

LIC. (1) Last-in-chain. (2) In NCP, line interface coupler.

line. See *communication line*.

line group. One or more telecommunication lines of the same type that can be activated and deactivated as a unit.

line switching. Synonym for *circuit switching*.

link. In SNA, the combination of the link connection and the link stations joining network nodes; for example: (1) a System/370 channel and its associated protocols, (2) a serial-by-bit connection under the control of Synchronous Data Link Control (SDLC). A link connection is the physical medium of transmission. A link, however, is both logical and physical. Synonymous with *data link*. See Figure X-4 on page X-14.

link connection segment. A portion of the configuration that is located between two resources listed consecutively in the service point command service (SPCS) query link configuration request list.

link problem determination aid (LPDA). A series of testing procedures initiated by the NetView program or NCP that provide modem status, attached device status, and the overall quality of a communications link.

link station. (1) In SNA, the combination of hardware and software that allows a node to attach to and provide control for a link. (2) In VTAM, a named resource within a subarea node that represents another subarea node that is attached by a subarea link. In the resource hierarchy, the link station is subordinate to the subarea link.

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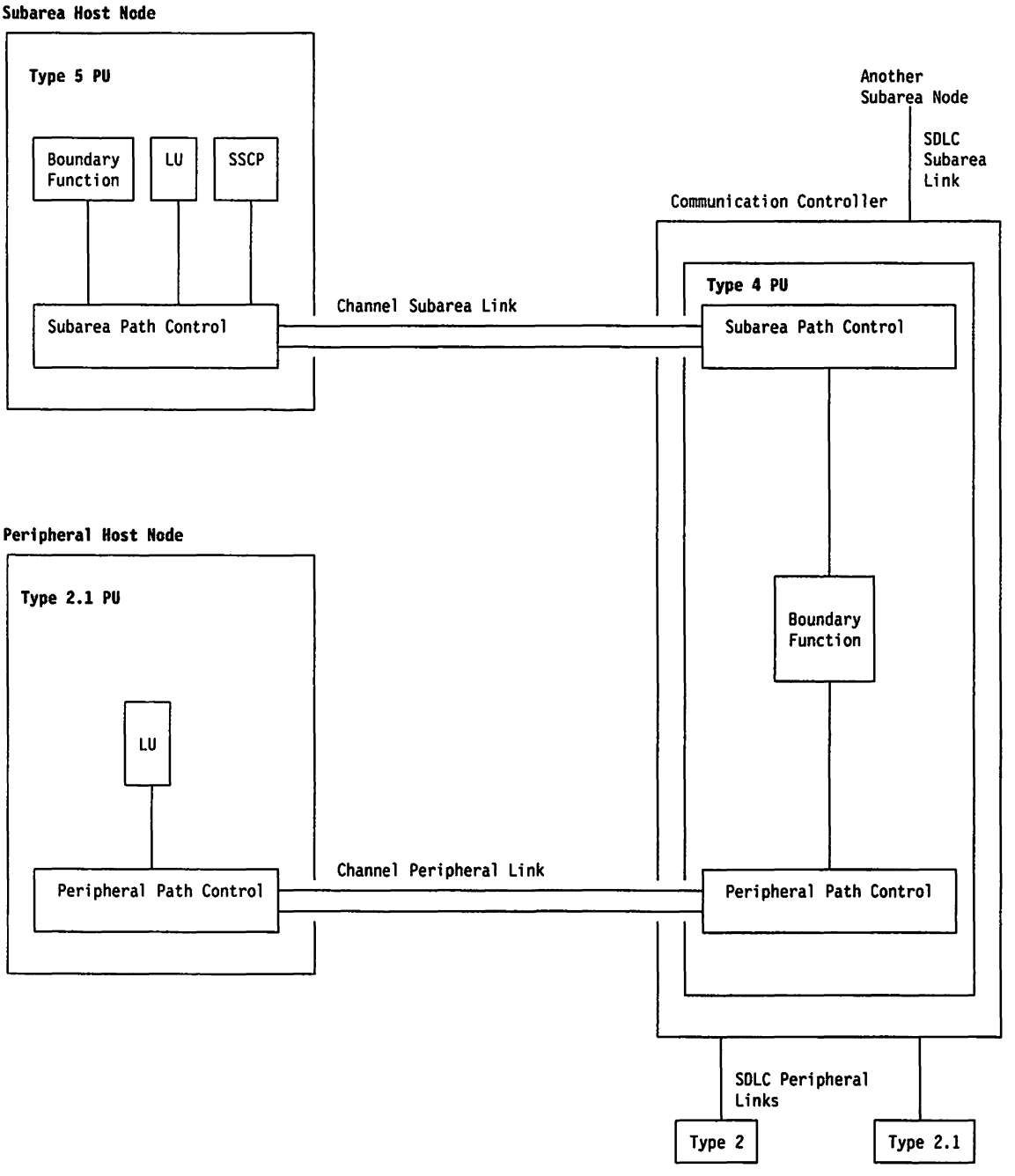

Figure X-4. Links and Path Controls

link-attached. Pertaining to devices that are physically connected by a telecommunication line. Contrast with *channel-attached*. Synonymous with *remote*.

LMPEO. Large message performance enhancement outbound.

load module. (ISO) A program unit that is suitable for loading into main storage for execution; it is usually the output of a linkage editor.

local. Pertaining to a device that is attached to a controlling unit by cables, rather than by a telecommunication line. Synonymous with *channel-attached*.

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local address. In SNA, an address used in a peripheral node in place of an SNA network address and transformed to or from an SNA network address by the boundary function in a subarea node.

local area network (LAN). (1) A network in which a set of devices are connected to one another for communication and that can be connected to a larger network. See also *token ring.* (2) A network in which communications are limited to a moderately sized geographic area such as a single office building, warehouse, or campus, and which do not generally extend across public rights-of-way. Contrast with *wide area network.*

local non-SNA major node. In VTAM, a major node whose minor nodes are channel-attached non-SNA terminals.

local SNA major node. In VTAM, a major node whose minor nodes are channel-attached peripheral nodes.

logged-on operator. A NetView operator station task that requires a terminal and a logged-on user. Contrast with *autotask.*

logical channel. In packet mode operation, a sending channel and a receiving channel that together are used to send and receive data over a data link at the same time. Several logical channels can be established on the same data link by interleaving the transmission of packets.

logical channel identifier. A bit string in the header of a packet that associates the packet with a specific switched virtual circuit or permanent virtual circuit.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network and the functions provided by system services control points (SSCPs). An LU can support at least two sessions—one with an SSCP and one with another LU—and may be capable of supporting many sessions with other LUs. See also *network addressable unit (NAU), peripheral LU, physical unit (PU), system services control point (SSCP), primary logical unit (PLU),* and *secondary logical unit (SLU).*

logical unit (LU) services. In SNA, capabilities in a logical unit to: (1) receive requests from an end user and, in turn, issue requests to the system services control point (SSCP) in order to perform the requested functions, typically for session initiation; (2) receive requests from the SSCP, for example to activate LU-LU sessions via Bind Session requests; and (3) provide session presentation and other services for LU-LU sessions. See also *physical unit (PU) services.*

logical unit (LU) 6.2. A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (1) a peer relationship between session partners, (2) efficient utilization of a session for multiple transactions, (3) comprehensive end-to-end error processing, and (4) a generic application program interface (API) consisting of structured verbs that are mapped into a product implementation.

logmode table. Synonym for *logon mode table.*

logoff. In VTAM, an unformatted session termination request.

logon. In VTAM, an unformatted session initiation request for a session between two logical units. See *automatic logon* and *simulated logon.* See also *session-initiation request.*

logon data. In VTAM: (1) The user data portion of a field-formatted or unformatted session-initiation request. (2) The entire logon sequence or message from a logical unit (LU). Synonymous with *logon message.*

logon message. Synonym for *logon data.*

logon mode. In VTAM, a subset of session parameters specified in a logon mode table for communication with a logical unit. See also *session parameters.*

logon mode table. In VTAM, a set of entries for one or more logon modes. Each logon mode is identified by a logon mode name. Synonymous with *logmode table.*

logon-interpret routine. In VTAM, an installation exit routine, associated with an interpret table entry, that translates logon information. It may also verify the logon.

LPDA. Link Problem Determination Aid.

LU. Logical unit.

LU type. In SNA, the classification of an LU-LU session in terms of the specific subset of SNA protocols and options supported by the logical units (LUs) for that session, namely:

- The mandatory and optional values allowed in the session activation request.
- The usage of data stream controls, function management headers (FMHs), request unit (RU) parameters, and sense codes.
- Presentation services protocols such as those associated with FMH usage.

LU types 0, 1, 2, 3, 4, 6.1, 6.2, and 7 are defined.

LU 6.2. Logical unit 6.2.

LU-LU session. In SNA, a session between two logical units (LUs) in an SNA network. It provides

communication between two end users, or between an end user and an LU services component.

LU-LU session type. A deprecated term for *LU type*.

macroinstruction. (1) An instruction that when executed causes the execution of a predefined sequence of instructions in the same source language. (2) In assembler programming, an assembler language statement that causes the assembler to process a predefined set of statements called a macro definition. The statements normally produced from the macro definition replace the macroinstruction in the program. See also *definition statement*.

maintenance and operator subsystem (MOSS). A subsystem of an IBM communication controller, such as the 3725 or the 3720, that contains a processor and operates independently of the rest of the controller. It loads and supervises the controller, runs problem determination procedures, and assists in maintaining both hardware and software.

maintenance services. In SNA, one of the types of network services in system services control points (SSCPs) and physical units (PUs). Maintenance services provide facilities for testing links and nodes and for collecting and recording error information. See also *configuration services, management services, network services*, and *session services*.

major node. In VTAM, a set of resources that can be activated and deactivated as a group. See *node* and *minor node*.

management services. In SNA, one of the types of network services in control points (CPs) and physical units (PUs). Management services are the services provided to assist in the management of SNA networks, such as problem management, performance and accounting management, configuration management and change management. See also *configuration services, maintenance services, network services*, and *session services*.

message. (1) (TC97) A group of characters and control bit sequences transferred as an entity. (2) In VTAM, the amount of function management data (FMD) transferred to VTAM by the application program with one SEND request.

message switching. (1) * (ISO) In a data network, the process of routing messages by receiving, storing, and forwarding complete messages. (2) The technique of receiving a complete message, storing, and then forwarding it unaltered to its destination.

message unit. In SNA, the unit of data processed by any layer; for example, a basic information unit (BIU), a path information unit (PIU), or a request/response unit (RU).

migration. Installing a new version or release of a program when an earlier version or release is already in place.

minor node. In VTAM, a uniquely-defined resource within a major node. See *node* and *major node*.

mode name. A symbolic name for a set of session characteristics. For LU 6.2, a mode name and a partner LU name together define a group of parallel sessions having the same characteristics.

module. * A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading; for example, the input to or output from an assembler, compiler, linkage editor, or executive routine.

MOSS. Maintenance and operator subsystem.

Multiple Virtual Storage (MVS). An IBM licensed program whose full name is the Operating System/Virtual Storage (OS/VS) with Multiple Virtual Storage/System Product for System/370. It is a software operating system controlling the execution of programs.

Multiple Virtual Storage for Extended Architecture (MVS/XA). An IBM licensed program whose full name is the Operating System/Virtual Storage (OS/VS) with Multiple Virtual Storage/System Product for Extended Architecture. Extended architecture allows 31-bit storage addressing. MVS/XA is a software operating system controlling the execution of programs.

multiple-domain network. In SNA, a network with more than one system services control point (SSCP). Contrast with *single-domain network*.

MVS. Multiple Virtual Storage.

MVS/ESA. Multiple Virtual Storage/Enterprise Systems Architecture.

MVS/XA. Multiple Virtual Storage for Extended Architecture.

name translation. In SNA network interconnection, converting logical unit names, logon mode table names, and class-of-service names used in one network into equivalent names to be used in another network. This function can be provided through the NetView program and invoked by a gateway system services control point (SSCP) when necessary. See also *alias name*.

NAU. Network addressable unit.

NCP. (1) Network Control Program (IBM licensed program). Its full name is Advanced Communications

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Function for the Network Control Program. Synonymous with *ACF/NCP*. (2) Network control program (general term).

NCP major node. In VTAM, a set of minor nodes representing resources, such as lines and peripheral nodes, controlled by a network control program. See *major node*.

negative response (NR). In SNA, a response indicating that a request did not arrive successfully or was not processed successfully by the receiver. Contrast with *positive response*. See *exception response*.

NetView. A system 370-based IBM licensed program used to monitor a network, manage it, and diagnose its problems.

NetView-NetView task (NNT). The task under which a cross-domain NetView operator session runs. See *operator station task*.

network. (1) (TC97) An interconnected group of nodes. (2) In data processing, a user application network. See *path control network, public network, SNA network*, and *user-application network*.

network address. In SNA, an address, consisting of subarea and element fields, that identifies a link, a link station, or a network addressable unit. Subarea nodes use network addresses; peripheral nodes use local addresses. The boundary function in the subarea node to which a peripheral node is attached transforms local addresses to network addresses and vice versa. See *local address*. See also *network name*.

network addressable unit (NAU). In SNA, a logical unit, a physical unit, or a system services control point. It is the origin or the destination of information transmitted by the path control network. Each NAU has a network address that represents it to the path control network. See also *network name, network address*, and *path control network*.

network control (NC). In SNA, an RU category used for requests and responses exchanged for such purposes as activating and deactivating explicit and virtual routes and sending load modules to adjacent peripheral nodes. See also *session control*.

network control program. A program, generated by the user from a library of IBM-supplied modules, that controls the operation of a communication controller.

Network Control Program (NCP). An IBM licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network capability. Its full name is Advanced Communications Function for the Network Control Program.

network identifier (network ID). The network name defined to NCPs and hosts to indicate the name of the network in which they reside. It is unique across all communicating SNA networks.

network name. (1) In SNA, the symbolic identifier by which end users refer to a network addressable unit (NAU), a link, or a link station. See also *network address*. (2) In a multiple-domain network, the name of the APPL statement defining a VTAM application program is its network name and it must be unique across domains. Contrast with *ACB name*. See *uninterpreted name*.

network operator. (1) A person or program responsible for controlling the operation of all or part of a network. (2) The person or program that controls all the domains in a multiple-domain network. Contrast with *domain operator*.

Network Problem Determination Application (NPDA). An IBM licensed program that helps you identify network problems, such as hardware, software, and microcode, from a central control point using interactive display techniques. It runs as an NCCF communication network management (CNM) application program. Its function is included and enhanced in NetView's hardware monitor.

network services (NS). In SNA, the services within network addressable units (NAUs) that control network operation through SSCP-SSCP, SSCP-PU, and SSCP-LU sessions. See *configuration services, maintenance services, management services*, and *session services*.

network services (NS) header. In SNA, a 3-byte field in a function management data (FMD) request/response unit (RU) flowing in an SSCP-LU, SSCP-PU, or SSCP-SSCP session. The network services header is used primarily to identify the network services category of the request unit (RU) (for example, configuration services, session services) and the particular request code within a category.

Network Terminal Option (NTO). An IBM licensed program used in conjunction with NCP that allows certain non-SNA devices to participate in sessions with SNA application programs in the host processor. NTO converts non-SNA protocol to SNA protocol when data is sent to the host from a non-SNA device and reconverts SNA protocol to non-SNA protocol when data is sent back to the device.

NIB. Node initialization block.

no response. In SNA, a value in the form-of-response-requested field of the request header (RH) indicating that no response is to be returned to the request, whether or not the request is received and processed successfully. Contrast with *definite response* and *exception response*.

node. (1) In SNA, an endpoint of a link or junction common to two or more links in a network. Nodes can be distributed to host processors, communication controllers, cluster controllers, or terminals. Nodes can vary in routing and other functional capabilities. See *boundary node*, *host node*, *peripheral node*, and *subarea node*. (2) In VTAM, a point in a network defined by a symbolic name. See *major node* and *minor node*.

node initialization block (NIB). In VTAM, a control block associated with a particular node or session that contains information used by the application program to identify the node or session and to indicate how communication requests on a session are to be handled by VTAM.

node name. In VTAM, the symbolic name assigned to a specific major or minor node during network definition.

node type. In SNA, a designation of a node according to the protocols it supports and the network addressable units (NAUs) that it can contain. Five types are defined: 1, 2.0, 2.1, 4, and 5. Type 1, type 2.0, and type 2.1 nodes are peripheral nodes; type 4 and type 5 nodes are subarea nodes. See also *type 2.1 node*.

nonswitched line. A telecommunication line on which connections do not have to be established by dialing. Contrast with *switched line*.

notify. A network services request that is sent by an SSCP to a logical unit (LU) to inform the LU of the status of a procedure requested by the LU.

NPDA. Network Problem Determination Application.

NPSI. X.25 NCP Packet Switching Interface.

NS. Network services.

NTO. Network Terminal Option.

OLU. Origin logical unit.

open. (1) In the IBM Token-Ring Network, to make an adapter ready for use. (2) A break in an electrical circuit.

operand. (1) (ISO) An entity on which an operation is performed. (2) * That which is operated upon. An operand is usually identified by an address part of an instruction. (3) Information entered with a command name to define the data on which a command processor operates and to control the execution of the command processor. (4) An expression to whose value an operator is applied. See also *definition statement*, *keyword*, *keyword parameter*, and *parameter*.

operator. (1) In a language statement, the lexical entity that indicates the action to be performed on operands. See also *definition statement*. (2) A person who operates a machine. See *network operator*. (3) A person or program responsible for managing activities controlled by a given piece of software such as MVS, the NetView program, or IMS. See *logged-on operator* and *network operator* See also *autotask* and *operator station task*.

operator station task (OST). The NetView task that establishes and maintains the online session with the network operator. There is one operator station task for each network operator who logs on to the NetView program. See *NetView-NetView task*.

origin logical unit (OLU). The logical unit from which data is sent. Contrast with *destination logical unit (DLU)*.

PAB. Process anchor block.

pacing. In SNA, a technique by which a receiving component controls the rate of transmission of a sending component to prevent overrun or congestion. See *session-level pacing*, *send pacing*, and *virtual route (VR) pacing*. See also *flow control*.

packet. (ISO) A sequence of binary digits, including data and control signals, that is transmitted and switched as a composite whole. The data, control signals, and possibly error control information are arranged in a specific format. See *call-accepted packet*, *call-connected packet*, *call request packet*, *call supervision packets*, *clear indication packet*, *clear request packet*, *data packet*, *DCE clear confirmation packet*, *discarded packet*, *incoming call packet*, *permit packet*, and *reset packet*.

packet major node. In VTAM, a set of minor nodes representing resources, such as switched virtual circuits and permanent virtual circuits, attached through an X.25 port. See *major node*.

packet mode operation. Synonym for *packet switching*.

packet switching. (1) (ISO) The process of routing and transferring data by means of addressed packets so that a channel is occupied only during the transmission of a packet. On completion of the transmission, the channel is made available for the transfer of other packets. (2) Synonymous with *packet mode operation*. See also *circuit switching*.

page. (1) The portion of a panel that is shown on a display surface at one time. (2) To move back and forth among the pages of a multiple-page panel. See also *scroll*. (3) (ISO) In a virtual storage system, a fixed-length block that has a virtual address and that can be transferred between real storage and auxiliary

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storage. (4) To transfer instructions, data, or both between real storage and external page or auxiliary storage.

panel. (1) A formatted display of information that appears on a terminal screen. See *help panel* and *task panel*. Contrast with *screen*. (2) In computer graphics, a display image that defines the locations and characteristics of display fields on a display surface.

parameter. (1) (ISO) A variable that is given a constant value for a specified application and that may denote the application. (2) An item in a menu for which the user specifies a value or for which the system provides a value when the menu is interpreted. (3) Data passed to a program or procedure by a user or another program, namely as an operand in a language statement, as an item in a menu, or as a shared data structure. See also *keyword*, *keyword parameter*, and *operand*.

partitioned emulation program (PEP) extension. A function of a network control program that enables a communication controller to operate some telecommunication lines in network control mode while simultaneously operating others in emulation mode.

path. (1) In SNA, the series of path control network components (path control and data link control) that are traversed by the information exchanged between two network addressable units (NAUs). See also *explicit route (ER)*, *route extension*, and *virtual route (VR)*. (2) In VTAM when defining a switched major node, a potential dial-out port that can be used to reach that node. (3) In the NetView/PC program, a complete line in a configuration that contains all of the resources in the service point command service (SPCS) query link configuration request list.

path control (PC). The function that routes message units between network addressable units (NAUs) in the network and provides the paths between them. It converts the BIUs from transmission control (possibly segmenting them) into path information units (PIUs) and exchanges basic transmission units (BTUs) and one or more PIUs with data link control. Path control differs for peripheral nodes, which use local addresses for routing, and subarea nodes, which use network addresses for routing. See *peripheral path control* and *subarea path control*. See also *link*, *peripheral node*, and *subarea node*.

path control (PC) layer. In SNA, the layer that manages the sharing of link resources of the SNA network and routes basic information units (BIUs) through it. See also *BIU segment*, *blocking of PIUs*, *data link control layer*, and *transmission control layer*.

path control (PC) network. In SNA, the part of the SNA network that includes the data link control and path control layers. See *SNA network* and *user application network*. See also *boundary function*.

path information unit (PIU). In SNA, a message unit consisting of a transmission header (TH) alone, or of a TH followed by a basic information unit (BIU) or a BIU segment. See also *transmission header*.

PC. (1) Path control. (2) Personal Computer. Its full name is the IBM Personal Computer.

PCID. Procedure-correlation identifier.

PEP. Partitioned emulation program.

peripheral host node. A node that provides an application program interface (API) for running application programs but does not provide SSCP functions and is not aware of the network configuration. The peripheral host node does not provide subarea node services. It has boundary function provided by its adjacent subarea. See *boundary node*, *host node*, *node*, *peripheral node*, *subarea host node*, and *subarea node*. See also *boundary function* and *node type*.

peripheral LU. In SNA, a logical unit representing a peripheral node.

peripheral node. In SNA, a node that uses local addresses for routing and therefore is not affected by changes in network addresses. A peripheral node requires boundary-function assistance from an adjacent subarea node. A peripheral node is a physical unit (PU) type 1, 2.0, or 2.1 node connected to a subarea node with boundary function within a subarea. See *boundary node*, *host node*, *node*, *peripheral host node*, *subarea host node*, and *subarea node*. See also *boundary function* and *node type*.

peripheral path control. The function in a peripheral node that routes message units between units with local addresses and provides the paths between them. See *path control* and *subarea path control*. See also *boundary function*, *peripheral node*, and *subarea node*.

peripheral PU. In SNA, a physical unit representing a peripheral node.

permit packet. At the interface between a data terminal equipment (DTE) and a data circuit-terminating equipment (DCE), a packet used to transmit permits over a virtual circuit.

Personal Computer (PC). The IBM Personal Computer line of products including the 5150 and subsequent models.

physical connection. In VTAM, a point-to-point connection or multipoint connection. Synonymous with *connection*.

physical unit (PU). In SNA, a type of network addressable unit (NAU). A physical unit (PU) manages and monitors the resources (such as attached links) of a node, as requested by a system services control point (SSCP) through an SSCP-PU session. An SSCP activates a session with the physical unit in order to indirectly manage, through the PU, resources of the node such as attached links. See also *peripheral PU* and *subarea PU*.

physical unit (PU) services. In SNA, the components within a physical unit (PU) that provide configuration services and maintenance services for SSCP-PU sessions. See also *logical unit (LU) services*.

physical unit type. In SNA, the classification of a physical unit (PU) according to the type of node in which it resides. The physical unit type is the same as its node type; that is, a type 1 physical unit resides in a type 1 node, and so forth.

PIU. Path information unit.

PLU. Primary logical unit.

positional operand. An operand in a language statement that has a fixed position. See also *definition statement*. Contrast with *keyword operand*.

positive response. A response indicating that a request was received and processed. Contrast with *negative response*.

POST. Power-on self test. A series of diagnostic tests that are run each time the computer's power is turned on.

PPO. Primary program operator application program.

primary half-session. In SNA, the half-session that sends the session activation request. See also *primary logical unit*. Contrast with *secondary half-session*.

primary logical unit (PLU). In SNA, the logical unit (LU) that contains the primary half-session for a particular LU-LU session. Each session must have a PLU and secondary logical unit (SLU). The PLU is the unit responsible for the bind and is the controlling LU for the session. A particular LU may contain both primary and secondary half-sessions for different active LU-LU sessions. Contrast with *secondary logical unit (SLU)*.

primary program operator application program (PPO). A program operator application program that is authorized to receive unsolicited messages. When the PPO is active, all unsolicited messages will go to the PPO. Conversely, when the PPO is inactive, unsolicited messages will go to the system console. There can be only one PPO in any domain.

problem determination. The process of identifying the source of a problem; for example, a program component, a machine failure, telecommunication facilities, user or contractor-installed programs or equipment, an environment failure such as a power loss, or a user error.

procedure-correlation identifier (PCID). In SNA, a value used by a control point to correlate requests and replies.

process anchor block (PAB). In VTAM, a process scheduling services dispatch point.

protection key. An indicator that appears in the current program status word whenever an associated task has control of the system. This indicator must match the storage keys of all main storage locks that the task is to use.

PU. Physical unit.

PU type. Physical unit type.

PU-PU flow. In SNA, the exchange between physical units (PUs) of network control requests and responses.

public network. A network established and operated by communication common carriers or telecommunication Administrations for the specific purpose of providing circuit-switched, packet switched, and leased-circuit services to the public. Contrast with *user-application network*.

quiesce. (1) * To bring a system or a device to a halt by rejecting new requests for work. (2) In a VTAM application program, for one node to stop another node from sending synchronous-flow messages.

RDT. Resource definition table.

real name. The name by which a logical unit (LU), logon mode table, or class-of-service (COS) table is known within the SNA network in which it resides.

receive pacing. In SNA, the pacing of message units that the component is receiving. See also *send pacing*.

Recommendation X.21 (Geneva 1980). A Consultative Committee on International Telegraph and Telephone (CCITT) recommendation for a general purpose interface between data terminal equipment and data circuit equipment for synchronous operations on a public data network.

Recommendation X.25 (Geneva 1980). A Consultative Committee on International Telegraph and Telephone (CCITT) recommendation for the interface between data terminal equipment and packet-switched data networks. See also *packet switching*.

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record. (1) (ISO) In programming languages, an aggregate that consists of data objects, possibly with different attributes, that usually have identifiers attached to them. In some programming languages, records are called structures. (2) (TC97) A set of data treated as a unit. (3) A set of one or more related data items grouped for processing. (4) In VTAM, the unit of data transmission for record mode. A record represents whatever amount of data the transmitting node chooses to send.

recording filter. In the NetView program, the function that determines which events, statistics, and alerts are stored on a data base.

release. For VTAM, to relinquish control of resources (communication controllers or physical units). See also *resource takeover*. Contrast with *acquire (2)*.

remote. Concerning the peripheral parts of a network not centrally linked to the host processor and generally using telecommunication lines with public right-of-way.

remove. In the IBM Token-Ring Network, to take an attaching device off the ring.

request parameter list (RPL). In VTAM, a control block that contains the parameters necessary for processing a request for data transfer, for establishing or terminating a session, or for some other operation.

request unit (RU). In SNA, a message unit that contains control information, end-user data, or both.

request/response unit (RU). In SNA, a generic term for a request unit or a response unit. See also *request unit (RU)* and *response unit*.

reset. On a virtual circuit, reinitialization of data flow control. At reset, all data in transit are eliminated.

reset packet. A packet used to reset a virtual circuit at the interface between the data terminal equipment (DTE) and the data circuit-terminating equipment (DCE).

resource. (1) Any facility of the computing system or operating system required by a job or task, and including main storage, input/output devices, the processing unit, data sets, and control or processing programs. (2) In the NetView program, any hardware or software that provides function to the network.

resource definition table (RDT). In VTAM, a table that describes the characteristics of each node available to VTAM and associates each node with a network address. This is the main VTAM network configuration table.

resource takeover. In VTAM, action initiated by a network operator to transfer control of resources from one domain to another. See also *acquire (2)* and *release*. See *takeover*.

resource types. In the NetView program, a concept to describe the organization of panels. Resource types are defined as central processing unit, channel, control unit, and I/O device for one category; and communication controller, adapter, link, cluster controller, and terminal for another category. Resource types are combined with data types and display types to describe display organization. See also *data types* and *display types*.

response. A reply represented in the control field of a response frame. It advises the primary or combined station of the action taken by the secondary or other combined station to one or more commands. See also *command*.

response unit (RU). In SNA, a message unit that acknowledges a request unit; it may contain prefix information received in a request unit. If positive, the response unit may contain additional information (such as session parameters in response to Bind Session), or if negative, contains sense data defining the exception condition.

return code. * A code [returned from a program] used to influence the execution of succeeding instructions.

ring. A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path.

route. See *explicit route* and *virtual route*.

route extension (REX). In SNA, the path control network components, including a peripheral link, that make up the portion of a path between a subarea node and a network addressable unit (NAU) in an adjacent peripheral node. See also *path, explicit route (ER)* and *virtual route (VR)*.

routing. The assignment of the path by which a message will reach its destination.

RPL. Request parameter list.

RPL exit routine. In VTAM, an application program exit routine whose address has been placed in the EXIT field of a request parameter list (RPL). VTAM invokes the routine to indicate that an asynchronous request has been completed. See *EXLST exit routine*.

RU. Request/response unit.

RU chain. In SNA, a set of related request/response units (RUs) that are consecutively transmitted on a particular normal or expedited data flow. The request RU chain is the unit of recovery: if one of the RUs in the chain cannot be processed, the entire chain is

discarded. Each RU belongs to only one chain, which has a beginning and an end indicated by means of control bits in request/response headers within the RU chain. Each RU can be designated as first-in-chain (FIC), last-in-chain (LIC), middle-in-chain (MIC), or only-in-chain (OIC). Response units and expedited-flow request units are always sent as only-in-chain.

same-domain. Refers to communication between entities in the same SNA domain. Contrast with *cross-domain*. See also *single-domain network*.

SAW data. Synonym for *session awareness (SAW) data*.

scanner interface trace (SIT). A record of the activity within the communication scanner processor (CSP) for a specified data link between a 3725 Communication Controller and a resource.

SCIP exit. Session control in-bound processing exit.

screen. An illuminated display surface; for example, the display surface of a CRT or plasma panel. Contrast with *panel*.

scroll. To move all or part of the display image vertically to display data that cannot be observed within a single display image. See also *page (2)*.

SDLC. Synchronous Data Link Control.

secondary half-session. In SNA, the half-session that receives the session-activation request. See also *secondary logical unit (SLU)*. Contrast with *primary half-session*.

secondary logical unit (SLU). In SNA, the logical unit (LU) that contains the secondary half-session for a particular LU-LU session. An LU may contain secondary and primary half-sessions for different active LU-LU sessions. Contrast with *primary logical unit (PLU)*.

secondary logical unit (SLU) key. A key-encrypting key used to protect a session cryptography key during its transmission to the secondary half-session.

secondary program operator application program (SPO). A program operator application program that is not authorized to receive unsolicited messages. An SPO can receive only the messages generated by commands it issued. There can be more than one SPO in a domain in addition to a primary program operator application program (PPO). Contrast with *primary program operator application program*.

segment. (1) In the IBM Token-Ring Network, a section of cable between components or devices on the network. A segment may consist of a single patch cable, multiple patch cables connected together, or a combination of building cable and patch cables connected together. (2) See *link connection segment*.

send pacing. In SNA, pacing of message units that a component is sending. See also *receive pacing*.

sequence number. A number assigned to a particular frame or packet to control the transmission flow and receipt of data.

service point (SP). An entry point that supports applications that provide network management for resources not under the direct control of itself as an entry point. Each resource is either under the direct control of another entry point or not under the direct control of any entry point. A service point accessing these resources is not required to use SNA sessions (unlike a focal point). A service point is needed when entry point support is not yet available for some network management function.

session. In SNA, a logical connection between two network addressable units (NAUs) that can be activated, tailored to provide various protocols, and deactivated, as requested. Each session is uniquely identified in a transmission header (TH) by a pair of network addresses, identifying the origin and destination NAUs of any transmissions exchanged during the session. See *half-session*, *LU-LU session*, *SSCP-LU session*, *SSCP-PU session*, and *SSCP-SSCP session*. See also *LU-LU session type* and *PU-PU flow*.

session activation request. In SNA, a request that activates a session between two network addressable units (NAUs) and specifies session parameters that control various protocols during session activity; for example, BIND and ACTPU. Contrast with *session deactivation request*.

session awareness (SAW) data. Data collected by the NetView program about a session that includes the session type, the names of session partners, and information about the session activation status. It is collected for LU-LU, SSCP-LU, SSCP-PU, and SSCP-SSCP sessions and for non-SNA terminals not supported by NTO. It can be displayed in various forms, such as most recent sessions lists.

session control (SC). In SNA, (1) One of the components of transmission control. Session control is used to purge data flowing in a session after an unrecoverable error occurs, to resynchronize the data flow after such an error, and to perform cryptographic verification. (2) A request unit (RU) category used for requests and responses exchanged between the session control components of a session and for session activation and deactivation requests and responses.

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session control in-bound processing exit (SCIP). A user exit that receives control when certain request units (RUs) are received by VTAM.

session deactivation request. In SNA, a request that deactivates a session between two network addressable units (NAUs); for example, UNBIND and DACTPU. Synonymous with *generic unbind*. Contrast with *session activation request*.

session information block (SIB). A control block that contains information about a particular SNA session.

session parameters. In SNA, the parameters that specify or constrain the protocols (such as bracket protocol and pacing) for a session between two network addressable units. See also *logon mode*.

session partner. In SNA, one of the two network addressable units (NAUs) having an active session.

session services. In SNA, one of the types of network services in the control point (CP) and in the logical unit (LU). These services provide facilities for an LU or a network operator to request that the SSCP initiate or terminate sessions between logical units. See *configuration services*, *maintenance services*, and *management services*.

session-establishment request. In VTAM, a request to an LU to establish a session. For the primary logical unit (PLU) of the requested session, the session-establishment request is the CINIT sent from the system services control point (SSCP) to the PLU. For the secondary logical unit (SLU) of the requested session, the session-establishment request is the BIND sent from the PLU to the SLU.

session-initiation request. In SNA, an initiate or logon request from a logical unit (LU) to a control point (CP) that an LU-LU session be activated.

session-level pacing. In SNA, a flow control technique that permits a receiver to control the data transfer rate (the rate at which it receives request units) on the normal flow. It is used to prevent overloading a receiver with unprocessed requests when the sender can generate requests faster than the receiver can process them. See also *pacing* and *virtual route pacing*.

session-termination request. In VTAM, a request that an LU-LU session be terminated.

shadow resource. In VTAM, an alternate representation of a network resource that is retained as a definition for possible future use.

shared. Pertaining to the availability of a resource to more than one use at the same time.

shutdown. To stop or quiesce the NetView/PC program or a NetView/PC application program.

SIB. Session information block.

sift-down effect. The copying of a value from a higher-level resource to a lower-level resource. The sift-down effect applies to many of the keywords and operands in NCP and VTAM definition statements. If an operand is coded on a macroinstruction or generation statement for a higher-level resource, it need not be coded for lower-level resources for which the same value is desired. The value "sifts down," that is, becomes the default for all lower-level resources.

simulated logon. A session-initiation request generated when a VTAM application program issues a SIMLOGON macroinstruction. The request specifies a logical unit (LU) with which the application program wants a session in which the requesting application program will act as the primary logical unit (PLU).

single-domain network. In SNA, a network with one system services control point (SSCP). Contrast with *multiple-domain network*.

SIT. Scanner interface trace.

SLU. Secondary logical unit.

SMP. System Modification Program.

SNA. Systems Network Architecture.

SNA network. The part of a user-application network that conforms to the formats and protocols of Systems Network Architecture. It enables reliable transfer of data among end users and provides protocols for controlling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

SNA network interconnection. The connection, by gateways, of two or more independent SNA networks to allow communication between logical units in those networks. The individual SNA networks retain their independence.

SP. Service point.

span. In the NetView program, a user-defined group of network resources within a single domain. Each major or minor node is defined as belonging to one or more spans. See also *span of control*.

span of control. The total network resources over which a particular network operator has control. All the network resources listed in spans associated through profile definition with a particular network operator are within that operator's span of control.

SPO. Secondary program operator application program.

SSCP. System services control point.

SSCP-LU session. In SNA, a session between a system services control point (SSCP) and a logical unit (LU); the session enables the LU to request the SSCP to help initiate LU-LU sessions.

SSCP-PU session. In SNA, a session between a system services control point (SSCP) and a physical unit (PU); SSCP-PU sessions allow SSCPs to send requests to and receive status information from individual nodes in order to control the network configuration.

SSCP-SSCP session. In SNA, a session between the system services control point (SSCP) in one domain and the SSCP in another domain. An SSCP-SSCP session is used to initiate and terminate cross-domain LU-LU sessions.

SSP. System Support Programs (IBM licensed program). Its full name is Advanced Communications Function for System Support Programs. Synonymous with *ACF/SSP*.

start option. In VTAM, a user-specified or IBM-supplied option that determines certain conditions that are to exist during the time a VTAM system is operating. Start options can be predefined or specified when VTAM is started.

statement. A language syntactic unit consisting of an operator, or other statement identifier, followed by one or more operands. See *definition statement*.

station. (1) One of the input or output points of a network that uses communication facilities; for example, the telephone set in the telephone system or the point where the business machine interfaces with the channel on a leased private line. (2) One or more computers, terminals, or devices at a particular location.

status code. In VTAM, information on the status of a resource as shown in a 10-character state code; for example, STATEACTIV for active.

status modifier. (1) In a System/370 status code, an indicator of the input/output (I/O) status. (2) In VTAM, a specific character appearing in specific positions of the status code; for example, B in the 10th position indicates a backup.

subarea. A portion of the SNA network consisting of a subarea node, any attached peripheral nodes, and their associated resources. Within a subarea node, all network addressable units, links, and adjacent link stations (in attached peripheral or subarea nodes) that are addressable within the subarea share a common subarea address and have distinct element addresses.

subarea address. In SNA, a value in the subarea field of the network address that identifies a particular subarea. See also *element address*.

subarea host node. A host node that provides both subarea function and an application program interface (API) for running application programs. It provides system services control point (SSCP) functions, subarea node services, and is aware of the network configuration. See *boundary node*, *communication management configuration host node*, *data host node*, *host node*, *node*, *peripheral node*, and *subarea node*. See also *boundary function* and *node type*.

subarea link. In SNA, a link that connects two subarea nodes. See *channel link* and *link*.

subarea node. In SNA, a node that uses network addresses for routing and whose routing tables are therefore affected by changes in the configuration of the network. Subarea nodes can provide gateway function, and boundary function support for peripheral nodes. Type 4 and type 5 nodes are subarea nodes. See *boundary node*, *host node*, *node*, *peripheral node*, and *subarea host node*. See also *boundary function* and *node type*.

subarea path control. The function in a subarea node that routes message units between network addressable units (NAUs) and provides the paths between them. See *path control* and *peripheral path control*. See also *boundary function*, *peripheral node*, and *subarea node*.

subarea PU. In SNA, a physical unit (PU) in a subarea node.

subsystem. A secondary or subordinate system, usually capable of operating independent of, or asynchronously with, a controlling system.

supervisor. The part of a control program that coordinates the use of resources and maintains the flow of processing unit operations.

supervisor call (SVC). A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system from inappropriate user entry. All operating system requests must be handled by SVCs.

supervisor call (SVC) instruction. An instruction that interrupts the program being executed and passes control to the supervisor so that it can perform a specific service indicated by the instruction.

SVC. (1) Supervisor call. (2) Switched virtual circuit.

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switched line. A communication line in which the connection between the communication controller and a remote link station is established by dialing.

switched major node. In VTAM, a major node whose minor nodes are physical units and logical units attached by switched SDLC links.

switched virtual circuit (SVC). An X.25 circuit that is dynamically established when needed. The X.25 equivalent of a switched line.

SYNAD exit routine. A synchronous EXLST exit routine that is entered when a physical error is detected.

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

System Modification Program (SMP). An operating system component that facilitates the process of installing and servicing an MVS system. See also *System Modification Program Extended.*

System Modification Program Extended (SMP/E). An IBM licensed program that facilitates the process of installing and servicing an MVS system. See also *System Modification Program.*

system services control point (SSCP). In SNA, a central location point within an SNA network for managing the configuration, coordinating network operator and problem determination requests, and providing directory support and other session services for end users of the network. Multiple SSCPs, cooperating as peers, can divide the network into domains of control, with each SSCP having a hierarchical control relationship to the physical units and logical units within its domain.

system services control point (SSCP) domain. The system services control point and the physical units (PUs), logical units (LUs), links, link stations and all the resources that the SSCP has the ability to control by means of activation requests and deactivation requests.

System Support Programs (SSP). An IBM licensed program, made up of a collection of utilities and small programs, that supports the operation of the NCP.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through and controlling the configuration and operation of networks.

takeover. The process by which the failing active subsystem is released from its extended recovery facility (XRF) sessions with terminal users and replaced by an alternate subsystem. See *resource takeover.*

task. A basic unit of work to be accomplished by a computer. The task is usually specified to a control program in a multiprogramming or multiprocessing environment.

task panel. Online display from which you communicate with the program in order to accomplish the program's function, either by selecting an option provided on the panel or by entering an explicit command. See *help panel.*

TCAS. Terminal control address space.

telecommunication line. Any physical medium such as a wire or microwave beam, that is used to transmit data. Synonymous with *transmission line.*

terminal. A device that is capable of sending and receiving information over a link; it is usually equipped with a keyboard and some kind of display, such as a screen or a printer.

terminal control address space (TCAS). The part of TSO/VTAM that provides logon services for TSO/VTAM users.

TERMINATE. In SNA, a request unit that is sent by a logical unit (LU) to its system services control point (SSCP) to cause the SSCP to start a procedure to end one or more designated LU-LU sessions.

TG. Transmission group.

time sharing option (TSO). An optional configuration of the operating system that provides conversational time sharing from remote stations.

time sharing option for VTAM (TSO/VTAM). An optional configuration of the operating system that provides conversational time sharing from remote stations in a network using VTAM.

token. A sequence of bits passed from one device to another along the token ring. When the token has data appended to it, it becomes a frame.

token ring. A network with a ring topology that passes tokens from one attaching device to another. For example, the IBM Token-Ring Network.

transmission control (TC) layer. In SNA, the layer within a half-session that synchronizes and paces session-level data traffic, checks session sequence numbers of requests, and enciphers and deciphers end-user data. Transmission control has two components: the connection point manager and session control. See also *half-session*.

transmission group (TG). In SNA, a group of links between adjacent subarea nodes, appearing as a single logical link for routing of messages. A transmission group may consist of one or more SDLC links (parallel links) or of a single System/370 channel.

transmission header (TH). In SNA, control information, optionally followed by a basic information unit (BIU) or a BIU segment, that is created and used by path control to route message units and to control their flow within the network. See also *path information unit*.

transmission line. Synonym for *telecommunication line*.

transmission priority. In SNA, a rank assigned to a path information unit (PIU) that determines its precedence for being selected by the transmission group control component of path control for forwarding to the next subarea node of the route used by the PIU.

TSO. Time sharing option.

TSO/VTAM. Time sharing option for VTAM.

type 2.1 node (T2.1 node). A node that can attach to an SNA network as a peripheral node using the same protocols as type 2.0 nodes. Type 2.1 nodes can be directly attached to one another using peer-to-peer protocols. See *end node*, *node*, and *subarea node*. See also *node type*.

type 2.1 node (T2.1 node) control point domain. The CP, its logical units (LUs), links, link stations, and all resources that it activates and deactivates.

UNBIND. In SNA, a request to deactivate a session between two logical units (LUs). See also *session deactivation request*. Contrast with *BIND*.

unformatted. In VTAM, pertaining to commands (such as LOGON or LOGOFF) entered by an end user and sent by a logical unit in character form. The character-coded command must be in the syntax defined in the user's unformatted system services definition table. Synonymous with *character-coded*. Contrast with *field-formatted*.

unformatted system services (USS). In SNA products, a system services control point (SSCP) facility that translates a character-coded request, such as a logon or logoff request into a field-formatted request for processing by formatted system services and translates field-formatted replies and responses into character-coded requests for processing by a logical unit. Contrast with *formatted system services*. See also *converted command*.

uninterpreted name. In SNA, a character string that a system services control point (SSCP) is able to convert into the network name of a logical unit (LU). Typically, an uninterpreted name is used in a logon or Initiate request from a secondary logical unit (SLU) to identify the primary logical unit (PLU) with which the session is requested.

user. Anyone who requires the services of a computing system.

user exit. A point in an IBM-supplied program at which a user routine may be given control.

user exit routine. A user-written routine that receives control at predefined user exit points. User exit routines can be written in assembler or a high-level language (HLL).

user-application network. A configuration of data processing products, such as processors, controllers, and terminals, established and operated by users for the purpose of data processing or information exchange, which may use services offered by communication common carriers or telecommunication Administrations. Contrast with *public network*.

USERVAR. Contains an application name used to route a session-establishment request to the currently active application subsystem.

USS. Unformatted system services.

value. (1) (TC97) A specific occurrence of an attribute, for example, "blue" for the attribute "color." (2) A quantity assigned to a constant, a variable, a parameter, or a symbol.

variable. In the NetView command list language, a character string beginning with & that is coded in a command list and is assigned a value during execution of the command list.

vector. The MAC frame information field.

viewing filter. In the NetView program, the function that allows a user to select the data to be displayed on a terminal. All other stored data is blocked.

Virtual Machine (VM). A licensed program whose full name is the Virtual Machine/System Product (VM/SP). It is a software operating system that manages the resources of a real processor to provide virtual machines to end users. As a time-sharing system control program, it consists of the virtual machine control program (CP), the conversational monitor

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system (CMS), the group control system (GCS), and the interactive problem control system (IPCS).

virtual route (VR). In SNA, a logical connection (1) between two subarea nodes that is physically realized as a particular explicit route, or (2) that is contained wholly within a subarea node for intranode sessions. A virtual route between distinct subarea nodes imposes a transmission priority on the underlying explicit route, provides flow control through virtual-route pacing, and provides data integrity through sequence numbering of path information units (PIUs). See also *explicit route (ER)*, *path*, and *route extension*.

virtual route (VR) pacing. In SNA, a flow control technique used by the virtual route control component of path control at each end of a virtual route to control the rate at which path information units (PIUs) flow over the virtual route. VR pacing can be adjusted according to traffic congestion in any of the nodes along the route. See also *pacing* and *session-level pacing*.

virtual route selection exit routine. In VTAM, an optional installation exit routine that modifies the list of virtual routes associated with a particular class of service before a route is selected for a requested LU-LU session.

Virtual Storage Extended (VSE). An IBM licensed program whose full name is the Virtual Storage Extended/Advanced Function. It is a software operating system controlling the execution of programs.

Virtual Telecommunications Access Method (VTAM). An IBM licensed program that controls communication and the flow of data in an SNA network. It provides single-domain, multiple-domain, and interconnected network capability.

VM. Virtual Machine. Its full name is Virtual Machine/System Product. Synonymous with *VM/SP*.

VM/ESA. Virtual Machine/Enterprise Systems Architecture.

VM/SNA console support (VSCS). A VTAM component for the VM environment that provides Systems Network Architecture (SNA) support. It allows SNA terminals to be virtual machine consoles.

VM/SP. Virtual Machine/System Product. Synonym for *VM*.

VR. Virtual route.

VSCS. VM/SNA console support.

VSE. Virtual Storage Extended. Synonymous with *VSE/Advanced Functions*.

VSE/Advanced Functions. The basic operating system support needed for a VSE-controlled installation. Synonym for *VSE*.

VSE/ESA. Virtual Storage Extended/Enterprise Systems Architecture.

VTAM. Virtual Telecommunications Access Method (IBM licensed program). Its full name is Advanced Communications Function for the Virtual Telecommunications Access Method. Synonymous with *ACF/VTAM*.

VTAM definition. The process of defining the user application network to VTAM and modifying IBM-defined characteristics to suit the needs of the user.

VTAM operator. A person or program authorized to issue VTAM operator commands. See *domain operator*, *program operator*, and *network operator (2)*.

VTAM operator command. A command used to monitor or control a VTAM domain. See also *definition statement*.

VTAM Terminal I/O Coordinator (VTIOC). The part of TSO/VTAM that converts TSO TGET, TPUT, TPG, and terminal control macroinstructions into SNA request units.

VTIOC. VTAM Terminal I/O Coordinator.

wide area network. A network that provides data communication capability in geographic areas larger than those serviced by local area networks. Wide area networks may extend across public rights-of-way. Contrast with *local area network*.

X.21. See *Recommendation X.21 (Geneva 1980)*.

X.25. See *Recommendation X.25 (Geneva 1980)*.

X.25 NCP Packet Switching Interface (NPSI). The X.25 Network Control Program Packet Switching Interface, which is an IBM licensed program that allows SNA users to communicate over packet-switched data networks that have interfaces complying with Recommendation X.25 (Geneva 1980) of the International Telegraph and Telephone Consultative Committee (CCITT). It allows SNA programs to communicate with SNA equipment or with non-SNA equipment over such networks. In addition, this product may be used to attach native X.25 equipment to SNA host systems without a packet network. See also *Recommendation X.25 (Geneva 1980)*.

XA. Extended architecture.

XID. Exchange identification.

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XRF. Extended recovery facility.

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Bibliography

VTAM Publications

VTAM V3R3 Publications

The following paragraphs describe the library for VTAM V3R3 running under MVS, VM, and VSE.

VTAM Directory of Migration Information (GC31-6429)

This manual contains an overview of the new functions in VTAM V3R3. For each function, it includes a brief description and references to the manuals which contain new information related to the function.

VTAM Network Implementation Guide (SC31-6404)

This manual contains information about how to install VTAM, how to define a network to VTAM, how to test your network definitions, and how to tune VTAM. Use this manual in conjunction with *VTAM Resource Definition Reference*.

VTAM Resource Definition Reference (SC31-6412)

This manual contains the VTAM definition statements and start options. It also has information on the operands of NCP definition statements that affect VTAM. To assist VM users, this book contains an appendix describing VSCS start options. Use this book in conjunction with the *VTAM Network Implementation Guide*.

VTAM Storage Estimates (SK2T-2010, a diskette)

This diskette helps you estimate the storage requirements for VTAM. It contains an interactive program that guides you step-by-step through the process for estimating storage.

VTAM Customization (LY43-0046)

This manual enables a system programmer to customize VTAM. It discusses VTAM, VSCS, and TSO/VTAM installation exit routines, the replaceable constants module, and the communication network management (CNM) routing table.

VTAM Operation (SC31-6408)

This manual enables a system programmer to prepare a "run book" for a VTAM network. This book also serves as a reference manual to programmers and operators requiring detailed information about specific operator commands.

VTAM Messages and Codes (SC31-6405)

This manual contains, in alphanumerical order, all messages and codes issued by VTAM. These messages include VTAM messages for network operators, TSO/VTAM messages for network operators, TSO/VTAM messages for terminal users, USS messages for terminal users, and VSCS messages. This manual can be inserted into the operating system messages manual, if desired, or used as a stand-alone manual.

VTAM Programming (SC31-6409)

This manual describes how to use VTAM macroinstructions to send data to and receive data from (1) a terminal in either the same or a different domain, or (2) another application program in either the same or a different domain. Also included is a dictionary of VTAM macroinstructions.

VTAM Programming for LU 6.2 (SC31-6410)

This manual describes the VTAM LU 6.2 programming interface for host application programs. This manual applies to programs that use only LU 6.2 sessions or that use LU 6.2 sessions along with other session types. (Only LU 6.2 sessions are covered in this manual, however.)

VTAM Diagnosis (LY43-0042)

This manual assists system programmers in identifying a VTAM problem, classifying it, and collecting information about the problem in preparation for calling the IBM Support Center. The information collected includes traces, dumps, and other problem documentation.

VTAM Data Areas for MVS (LY43-0043)

VTAM Data Areas for VM (LY43-0045)

VTAM Data Areas for VSE (LY43-0053)

These manuals describe VTAM data areas and can be used to read a VTAM dump. They are intended for IBM programming service representatives and customer personnel who are diagnosing problems with VTAM.

VTAM Reference Summary (LY43-0047)

This manual is designed as a quick reference for system programmers. This manual contains selected reference information that includes VTAM and VSCS commands, VTAM definition statements, VTAM start

options, VTAM macroinstructions, and VTAM and VSCS trace formats.

Planning and Reference for NetView, NCP, and VTAM (SC31-6092)

This manual describes how to plan for NetView V2R1, NCP V5R3, SSP V3R5, and VTAM V3R3. It explains the functions available with NetView, NCP, and VTAM, the advantages of using them in different situations, and how to plan for the functions readers want to use. The reference part of the manual contains cross-product or cross-task reference information, which may or may not be related to planning. The manual also contains NCP storage estimates.

Bibliography and Master Index for NetView, NCP, and VTAM (GC31-6430) (when available)

This book contains a list of manuals that might be useful to someone planning, installing, or using a network that contains NetView V1R3, NCP V5R3, SSP V3R5, and VTAM V3R3. It also contains an index of topics discussed in the products' libraries. Each entry in the index is followed by the titles of the manuals discussing that topic.

VTAM V3R2 Publications

You may order additional copies of the VTAM V3R2 publications by the following order numbers.

Note: Several of these manuals also contain information about VTAM V3R1.2 for VM and VSE, V3R1.1 for MVS and VM, and V3R1 for VSE.

VTAM Installation and Resource Definition (SC23-0111)

VTAM Customization (LY30-5614)

VTAM Directory of Programming Interfaces for Customers (GC31-6403)

VTAM Operation (SC23-0113)

VTAM Messages and Codes (SC23-0114)

VTAM Programming (SC23-0115)

VTAM Programming for LU 6.2 (SC30-3400)

VTAM Diagnosis (LY30-5601)

VTAM Data Areas for MVS (LY30-5592)

VTAM Data Areas for VM (LY30-5593)

VTAM Data Areas for VSE (LY30-5594)

VTAM Reference Summary (LY30-5600)

VTAM V3R2 Enhancements (LD35-0270)

VTAM Version 3 for VM/9370 (SD35-0271)

VTAM V3R1.2 Publications

You may order additional copies of the VTAM V3R1.2 publications by the following order numbers:

VTAM Expanded Network Capabilities Support (LD21-0019)

VTAM Directory of Programming Interfaces for Customers (GC31-6402)

VTAM V3R1.1 Publications

You may order additional copies of the VTAM V3R1.1 publications by the following order numbers:

VTAM Installation and Resource Definition (SC23-0111)

VTAM Customization (SC23-0112)

VTAM Operation (SC23-0113)

VTAM Messages and Codes (ST23-0114)

VTAM Programming (SC23-0115)

VTAM Diagnosis Guide (SC23-0116)

VTAM Diagnosis Reference (LY30-5582)

VTAM Data Areas for MVS (LY30-5584)

VTAM Data Areas for VM (LY30-5583)

VTAM Reference Summary (SC23-0135)

VTAM V3R1 Publications

You may order additional copies of the VTAM V3R1 publications by using the following pseudonumbers:

VTAM Installation and Resource Definition (ST23-0110)

VTAM Customization (ST23-0112)

VTAM Operation (ST23-0113)

VTAM Programming (ST23-0115)

VTAM Diagnosis Reference (LT70-5582)

VTAM Messages and Codes (ST23-0114)

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The following VTAM V3R1 publications are still orderable by their original order numbers:

VTAM Messages and Codes for VM (SC30-3275)

VTAM Data Areas for MVS (LY30-5581)

VTAM Data Areas for VM (LY30-5580)

VTAM Data Areas for VSE (LY30-5579)

VTAM Library Supplement for X.21 SHM/MPS (SD21-0010)

Related Publications

NetView Release 3 Publications

The following list shows the publications associated with Release 3 of the NetView program.

Learning About NetView: Operator Training (SK2T-0292)

NetView Installation and Administration Guide (SC31-6018)

NetView Administration Reference (SC31-6014)

NetView Tuning Guide (SC31-6079)

NetView Customization Guide (SC31-6016)

NetView Customization: Using PL/I and C (SC31-6037)

NetView Customization: Using Assembler (SC31-6078)

NetView Customization: Writing Command Lists (SC31-6015)

NetView Operation Primer (SC31-6020)

NetView Operation (SC31-6019)

NetView Command Summary (SX75-0026)

NetView Problem Determination and Diagnosis (LY43-0001)

NetView Problem Determination Supplement for Management Services Major Vectors 0001 and 0025 (LD21-0023)

NetView Resource Alerts Reference (SC31-6024)

NetView Storage Estimates (SK2T-1988, a diskette)

Console Automation Using NetView: Planning (SC31-6058)

NCP Version 4 Publications

The following list shows the publications for NCP Version 4.

NCP, SSP, and EP Generation and Loading Guide (SC30-3348)

NCP Migration Guide (SC30-3252)

NCP, SSP, and EP Resource Definition Guide (SC30-3349)

NCP, SSP, and EP Resource Definition Reference (SC30-3254)

NCP Customization Guide (LY30-5571)

NCP Customization Reference (LY30-5612)

SSP Customization (LY43-0021)

NCP, SSP, and EP Messages and Codes (SC30-3169)

NCP, SSP, and EP Diagnosis Guide (LY30-5591)

NCP and EP Reference (LY30-5569)

NCP and EP Reference Summary and Data Areas (LY30-5570)

NCP Version 5 Publications

The following list shows the publications for NCP Version 5.

NCP, SSP, and EP Generation and Loading Guide (SC30-3348)

NCP Migration Guide (SC30-3440)

NCP, SSP, and EP Resource Definition Guide (SC30-3447)

NCP, SSP, and EP Resource Definition Reference (SC30-3448)

NCP Customization Guide (LY30-5606)

NCP Customization Reference (LY30-5607)

SSP Customization (LY43-0021)

NCP, SSP, and EP Messages and Codes (SC30-3169)

NCP, SSP, and EP Diagnosis Guide (LY30-5591)

NCP and EP Reference (LY30-5605)

NCP and EP Reference Summary and Data Areas (LY30-5603)

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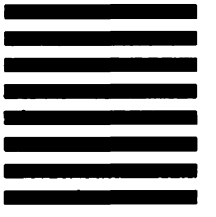

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