

B D E F G H I J K L M N B C D E F G H I J K L M N B C D E F G H I

FILEID**MOMACPIO

6 4

MM MM 000000 MM MM AAAAAA CCCCCCCC PPPPPP
MM MM 000000 MM MM AAAAAA CCCCCCCC PPPPPP
MM MM 00 00 MMMM MMMM AA AA CC PP PP
MM MM 00 00 MMMM MMMM AA AA CC PP PP
MM MM 00 00 MM MM AA AA CC PP PP
MM MM 00 00 MM MM AA AA CC PPPPPP
MM MM 00 00 MM AA AA CC PPPPPP
MM MM 00 00 MM MM AAAAAAAA CC PP
MM MM 00 00 MM MM AAAAAAAA CC PP
MM MM 00 00 MM AA AA CC PP
MM MM 00 00 MM AA AA CC PP
MM MM 000000 MM MM AA AA CCCCCCCC PP
MM MM 000000 MM MM AA AA CCCCCCCC PP
000000 000000 000000 000000
000000 000000 000000 000000

LL IIIII SSSSSSS
LL IIIII SSSSSSS
LL II SS
LLLLLLLL LLLL IIIII SSSSSSS
LLLLLLLL LLLL IIIII SSSSSSS

```
1 0001 0 XTITLE 'MOM Network I/O module'
2 0002 0 MODULE MOMACPIO (
3   LANGUAGE (BLISS32),
4   ADDRESSING_MODE (NONEXTERNAL=GENERAL),
5   ADDRESSING_MODE (EXTERNAL=GENERAL),
6   IDENT = 'V04-000'
7   ) =
8 0008 1 BEGIN
9 0009 1 ****
10 0010 1 *
11 0011 1 *
12 0012 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
13 0013 1 * DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
14 0014 1 * ALL RIGHTS RESERVED.
15 0015 1 *
16 0016 1 * THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
17 0017 1 * ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
18 0018 1 * INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
19 0019 1 * COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
20 0020 1 * OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
21 0021 1 * TRANSFERRED.
22 0022 1 *
23 0023 1 * THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
24 0024 1 * AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
25 0025 1 * CORPORATION.
26 0026 1 *
27 0027 1 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
28 0028 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
29 0029 1 *
30 0030 1 *
31 0031 1 ****
32 0032 1 *
33 0033 1 ++
34 0034 1 FACILITY: DECnet-VAX Network Management Maintenance Operations Module (MOM)
35 0035 1 *
36 0036 1 ABSTRACT:
37 0037 1 This module contains routines to handle all network I/O
38 0038 1 with NETACP (NETDRIVER).
39 0039 1 *
40 0040 1 ENVIRONMENT: VAX/VMS Operating System
41 0041 1 *
42 0042 1 AUTHOR: Kathy Perko
43 0043 1 *
44 0044 1 CREATION DATE: 11-Jan-1983
45 0045 1 *
46 0046 1 MODIFIED BY:
47 0047 1 V03-001 MKP0001 Kathy Perko 2-June-1983
48 0048 1 Fix code that maps parameter IDs from NETUSR values
49 0049 1 to NICE values.
50 0050 1 *
51 0051 1 --
52 0052 1 --
```

```
54      0053 1 %SBTTL 'Declarations'  
55      0054 1  
56      0055 1 |  
57      0056 1 | TABLE OF CONTENTS:  
58      0057 1 |  
59      0058 1 | FORWARD ROUTINE  
60      0059 1 | mom$build_p2: NOVALUE,  
61      0060 1 | mom$netacp_qio,  
62      0061 1 | mom$mapqioerror,  
63      0062 1 | mom_mapentity,  
64      0063 1 | mom_mapparamid;  
65      0064 1 |  
66      0065 1 |  
67      0066 1 | INCLUDE FILES:  
68      0067 1 |  
69      0068 1 |  
70      0069 1 |  
71      0070 1 | LIBRARY 'LIB$:MOMLIB';           | Facility-wide definitions  
72      0071 1 | LIBRARY 'SHRLIBS:NMALIBRY';       | NICE definitions  
73      0072 1 | LIBRARY 'SHRLIBS:NET';          | NETACP QIO interface  
74      0073 1 | LIBRARY 'SYSSLIBRARY:STARLET';    | VMS common definitions  
75      0074 1 |  
76      0075 1 | OWN STORAGE:  
77      0076 1 |  
78      0077 1 |  
79      0078 1 |  
80      0079 1 |  
81      0080 1 | EXTERNAL REFERENCES:  
82      0081 1 |  
83      0082 1 |  
84      0083 1 $mom_externals;  
85      0084 1  
86      0085 1 EXTERNAL  
87      0086 1   mom$gq_netnamdsc,  
88      0087 1   mom$gw_acp_chan;  
89      0088 1  
90      0089 1 EXTERNAL LITERAL  
91      0090 1   mom$qiobfov;  
92      0091 1  
93      0092 1 EXTERNAL ROUTINE  
94      0093 1   mom$debug_qio,  
95      0094 1   mom$bld_reply;  
96      0095 1
```

```
98    0096 1 %SBTTL 'mom$build_p2      Build P2 buffer and descriptor'
99    0097 1 GLOBAL ROUTINE mom$build_p2 (len1, adr1, len2, adr2, p2dsc, resdsc) : NOVALUE =
100   0098 1
101   0099 1 ++
102   0100 1 |++ FUNCTIONAL DESCRIPTION:
103   0101 1
104   0102 1 This routine builds the P2 buffer and descriptor for operations to
105   0103 1 NETACP. The buffer contains one or two search key values. These
106   0104 1 values are compared to fields in NETACP's database entries (the database
107   0105 1 and the fields (search keys) are specified in the NFB buffer). When
108   0106 1 an entry is found in which the specified field(s) match the search
109   0107 1 key value(s), NETACP performs the operation requested by the rest of
110   0108 1 the NFB (set, show, etc.)
111   0109 1
112   0110 1 FORMAL PARAMETERS:
113   0111 1
114   0112 1 LEN1      First search key length. If LEN1 is:
115   0113 1     - zero then ADR1 contains a longword search key.
116   0114 1     - >0 it contains the length of a string which
117   0115 1           ADR1 points to.
118   0116 1     - -1 then search key ID is a wildcard, and nothing
119   0117 1           needs to be put into the P2 buffer for it.
120   0118 1     - -2 then ADR1 contains a word search key.
121   0119 1 ADR1      First search key address. If LEN1 is zero then this
122   0120 1           is the longword value of the search key. If LEN1 is -1 then
123   0121 1           the search key is omitted.
124   0122 1 LEN2      Second search key length. Same rules apply as for
125   0123 1 LEN1.
126   0124 1 ADR2      Second search key address. Same rules apply as for
127   0125 1 ADR1.
128   0126 1 P2DSC     Address of P2 descriptor. This routine assumes that
129   0127 1           the buffer is large enough to handle the result.
130   0128 1           The maximum P2 buffer required by NML is 36 bytes.
131   0129 1 RESDSC    Address of descriptor to hold resulting P2.
132   0130 1
133   0131 1 IMPLICIT OUTPUTS:
134   0132 1 The buffer described by P2DSC contains the search key and
135   0133 1 start key information.
136   0134 1 --
137   0135 1
138   0136 1
139   0137 2 BEGIN
140   0138 2
141   0139 2 MAP
142   0140 2     p2dsc : REF VECTOR,
143   0141 2     resdsc : REF VECTOR;
144   0142 2
145   0143 2 OWN
146   0144 2     collate_start_value: VECTOR [nfb$C_CTX_SIZE, BYTE]
147   0145 2           INITIAL (REP nfb$C_CTX_SIZE OF BYTE (0));
148   0146 2
149   0147 2 LOCAL
150   0148 2     msgsize,
151   0149 2     count,
152   0150 2     ptr;
153   0151 2
154   0152 2 !
```

```
155      0153 2 ! Calculate the length of the resulting P2 buffer, and signal if
156      0154 2 the buffer supplied isn't big enough.
157      0155 2
158      0156 2 count = 4;                                ! Account for count at beginning of buffer.
159      0157 2 SELECTONE .len1 OF
160      0158 2     SET
161      0159 2     [-2]: count = .count + 2;           ! It's a word
162      0160 2     [0]: count = .count + 4;            ! It's a longword
163      0161 2     [1 to 255]: count = .count + .len1 + 2 ! It's a string.
164      0162 2     TES;
165      0163 2
166      0164 2 SELECTONE .len2 OF
167      0165 2     SET
168      0166 2     [-2]: count = .count + 2;           ! It's a word
169      0167 2     [0]: count = .count + 4;            ! It's a longword
170      0168 2     [1 to 255]: count = .count + .len2 + 2 ! It's a string.
171      0169 2     TES;
172      0170 2
173      0171 2 count = .count + nfb$c_cxt_size;
174      0172 2 IF .count GTR .p2dsc [0] THEN
175      0173 2
176      0174 2     The P2 buffer will overflow. Signal a MOM error.
177      0175 2
178      0176 3 BEGIN
179      0177 3     mom$ab_msblock [msb$l_flags] = msb$m_msg_fld;    ! Set message text flag.
180      0178 3     mom$ab_msblock [msb$b_code] = nma$c_sts_mpr;
181      0179 3     mom$ab_msblock [msb$l_text] = mom$_qiobfovf;
182      0180 3     mom$bld_reply (mom$ab_msblock, msgsize);       ! Build message
183      0181 3     $signal_msg (mom$ab_nice_xmit_buf, .msgsize);   ! Signal it.
184      0182 2 END;
185      0183 2
186      0184 2 ptr = .p2dsc [1] + 4; ! Skip over return count
187      0185 2
188      0186 2
189      0187 2 ! Add first search key value to the P2 buffer.
190      0188 2
191      0189 2 SELECTONE .len1 OF
192      0190 2     SET
193      0191 2     [-2]: ptr = CH$MOVE (2, adr1, .ptr);        ! It's a word
194      0192 2     [0]: ptr = CH$MOVE (4, adr1, .ptr);        ! It's a longword
195      0193 2     [1 TO 255]:
196      0194 3     BEGIN
197      0195 3     CH$WCHAR_A (.len1<0,8>, ptr);
198      0196 3     CH$WCHAR_A (.len1<8,8>, ptr);
199      0197 3     ptr = CH$MOVE (.len1, .adr1, .ptr);
200      0198 3     END
201      0199 2     TES;
202      0200 2
203      0201 2
204      0202 2 ! Add search key two to buffer.
205      0203 2
206      0204 2 SELECTONE .len2 OF
207      0205 2     SET
208      0206 2     [-2]: ptr = CH$MOVE (2, adr2, .ptr);        ! It's a word
209      0207 2     [0]: ptr = CH$MOVE (4, adr2, .ptr);        ! It's a longword
210      0208 2     [1 TO 255]:
211      0209 3     BEGIN
```

```

212      0210 3      CHSWCHAR_A (.len2<0,8>, .ptr);
213      0211 3      CHSWCHAR_A (.len2<8,8>, .ptr);
214      0212 3      ptr = CHSMOVE (.len2, .adr2, .ptr);
215      0213 3      END
216      0214 2      TES:
217      0215 2
218      0216 2
219      0217 2      Set up a context area of a string of nulls. NETACP will
220      0218 2      replace the null string with a start value of the last database
221      0219 2      entry matched by the search key.
222      0220 2
223      0221 2      ptr = CHSMOVE ( nfb$c_ctx_size, collate_start_value, .ptr);
224      0222 2
225      0223 2      Set up resulting descriptor for return.
226      0224 2
227      0225 2      resdsc [0] = .ptr - .p2dsc [1];
228      0226 2      resdsc [1] = .p2dsc [1];
229      0227 2
230      0228 1      END;                                ! End of mom$build_p2

```

```

.TITLE MOMACPIO MOM Network I/O module
.IDENT \V04-000\
.PSECT SOWNS,NOEXE,2
00# 00000 COLLATE_START_VALUE:
.BYTE 0[64]

```

```

.EXTRN M0M$GL_LOGMASK, M0M$GL_SVD_INDEX
.EXTRN M0M$AB_SERVICE_DATA
.EXTRN M0M$GB_FUNCTION
.EXTRN M0M$GB_OPTION_BYTE
.EXTRN M0M$GB_ENTITY_CODE
.EXTRN M0M$AB_ENTITY_BUF
.EXTRN M0M$GQ_ENTITY_BUF_DSC
.EXTRN M0M$GL_SERVICE_FLAGS
.EXTRN M0M$AB_NPARSE_BLK
.EXTRN M0M$AB_NICE_RCV_BUF
.EXTRN M0M$AB_NICE_XMIT_BUF
.EXTRN M0M$GQ_NICE_RCV_BUF_DSC
.EXTRN M0M$GL_NICE_RCV_MSG_LEN
.EXTRN M0M$GQ_NICE_XMIT_BUF_DSC
.EXTRN M0M$AB_MSGBLOCK
.EXTRN M0M$AB_ACPQIO_BUFFER
.EXTRN M0M$GQ_ACPQIO_BUF_DSC
.EXTRN M0M$AB_CIB, M0M$AB_LOOP_CIB
.EXTRN M0M$AB_TRIGGER_CIB
.EXTRN M0M$AB_MOP_XMIT_BUF
.EXTRN M0M$GQ_MOP_XMIT_BUF_DSC
.EXTRN M0M$AB_MOP_RCV_BUF
.EXTRN M0M$GQ_MOP_RCV_BUF_DSC
.EXTRN M0M$AB_MOP_MSG, M0M$GQ_MOP_MSG_DSC
.EXTRN M0M$GW_EVT_CODE
.EXTRN M0M$GB_EVT_POPR
.EXTRN M0M$GB_EVT_PRSN
.EXTRN M0M$GB_EVT_PSER

```

• EXTRN SVD\$GK_PCNO_ADD
• EXTRN SVD\$GK_PCNO_SDV
• EXTRN SVD\$GK_PCNO_CPU
• EXTRN SVD\$GK_PCNO_STY
• EXTRN SVD\$GK_PCNO_DAD
• EXTRN SVD\$GK_PCNO_DCT
• EXTRN SVD\$GK_PCNO_IHO
• EXTRN SVD\$GK_PCNO_NNA
• EXTRN SVD\$GK_PCNO_SLI
• EXTRN SVD\$GK_PCNO_SPA
• EXTRN SVD\$GK_PCNO_HWA
• EXTRN SVD\$GK_PCNO_SNV
• EXTRN SVD\$GK_PCNO_LOA
• EXTRN SVD\$GK_PCNO_SLO
• EXTRN SVD\$GK_PCNO_TLO
• EXTRN SVD\$GK_PCNO_DFL
• EXTRN SVD\$GK_PCNO_SID
• EXTRN SVD\$GK_PCNO_DUM
• EXTRN SVD\$GK_PCNO_SDU
• EXTRN SVD\$GK_PCNO_SHNA
• EXTRN SVD\$GK_PCNO_SHHW
• EXTRN SVD\$GK_PCNO_SF TY
• EXTRN SVD\$GK_PCNO_PHA
• EXTRN SVD\$GK_PCNO_SDA
• EXTRN SVD\$GK_PCNO_LPC
• EXTRN SVD\$GK_PCNO_LPL
• EXTRN SVD\$GK_PCNO_LPD
• EXTRN SVD\$GK_PCNO_LPH
• EXTRN SVD\$GK_PCNO_LPA
• EXTRN SVD\$GK_PCNO_LPN
• EXTRN SVD\$GK_PCNO_SLNA
• EXTRN SVD\$GK_PCNO_SLNH
• EXTRN SVD\$GK_PCNO_LAN
• EXTRN SVD\$GK_PCNO_SLNN
• EXTRN SVD\$GK_PCNO_SLAH
• EXTRN SVD\$GK_PCLI_STI
• EXTRN SVD\$C_ENTRY_COUNT
• EXTRN MOMSGQ_NETNAME\$DSC
• EXTRN MOMSGW_ACP_CHAN
• EXTRN MOMS_QIOBF0VF, MOMSDEBUG_QIO
• EXTRN MOMSBLD_REPLY

MOM Network I/O module		Build P2 buffer and descripto		16-Sep-1984 01:59:39		VAX-11 Bliss-32 V4.0-742		Page 7	
mom\$build_p2				14-Sep-1984 12:44:29		DISK\$VMSMASTER:[MOM.SRC]MOMACPIO.B32;1		(3)	
000000FF	8F	OE	15	0002A	2\$: BLEQ	3\$			0161
		52	D1	0002C	CMPL	R2, #255			
		05	14	00033	BGTR	3\$			
		50	02	A240	MOVAB	2(R2)[COUNT], COUNT			
		57	OC	AC	MOVL	LEN2, R7			0164
FFFFFE	8F	57	D1	0003E	CMPL	R7, #-2			0166
		05	12	00045	BNEQ	4\$			
		50	02	C0	ADDL2	#2, COUNT			
		19	11	0004A	BRB	6\$			0167
		57	D5	0004C	4\$: TSTL	R7			
		05	12	0004E	BNEQ	5\$			
000000FF	8F	50	04	C0	ADDL2	#4, COUNT			
		10	11	00050	BRB	6\$			
		0E	15	00055	BLEQ	6\$			0168
		57	D1	00057	CMPL	R7, #255			
		05	14	0005E	BGTR	6\$			
		50	02	A740	MOVAB	2(R7)[COUNT], COUNT			
		50	40	A0	MOVAB	64(R0), COUNT			0171
		56	14	AC	MOVL	P2DSC, R6			0172
		66	50	D1	COUNT, (R6)	(R6)			
		2F	15	00070	BLEQ	7\$			
		68	04	DO	MOVL	#4, MOM\$AB_MSGBLOCK			0177
		A8	05	8E	MNEGB	#5, MOM\$AB_MSGBLOCK+4			0178
04	A8	DC	00000000G	4100	MOVAB	#^MOM\$ QIOBFOVF, MOM\$AB_MSGBLOCK+12			0179
00000000G	00	00	02	FB	PUSHR	#^M<R8,SP>			0180
			6E	DD	CALLS	#2, MOM\$BLD_REPLY			
			00000000G	00	PUSHL	MSGSIZE			0181
			02070000	9F	PUSHAB	MOM\$AB_NICE_XMIT_BUF			
53	00000000G	00	03	FB	PUSHL	#34013T84			
	04	A6	04	C1	CALLS	#3, LIB\$SIGNAL			
FFFFFE	8F		52	D1	ADDL3	#4, 4(R6), PTR			0184
			06	12	CMPL	R2, #-2			0191
		83	08	AC	BNEQ	8\$			
			1E	11	MOVW	ADR1, (PTR)+			
			52	D5	BRB	10\$			
			06	12	8\$: TSTL	R2			0192
		83	08	AC	BNEQ	9\$			
			14	11	MOVL	ADR1, (PTR)+			
			12	15	BRB	10\$			
000000FF	8F		52	D1	BLEQ	10\$			0193
			09	14	CMPL	R2, #255			
		83	04	AC	B0	10\$, (PTR)+			
63	08	BC	52	80	MOVW	LEN1, (PTR)+			0195
FFFFFE	8F		57	D1	0000CA	R2, @ADR1, (PTR)			0197
			06	28	MOVC3	R7, #-2			0206
		83	10	AC	B0	11\$, (PTR)+			
			1E	11	CMPL	13\$			
			57	D5	BNEQ	ADR2, (PTR)+			
			06	12	MOVW	13\$			
		83	10	AC	BRB	13\$			0207
			14	11	11\$: TSTL	R7			
			57	D5	BNEQ	12\$			
		83	10	AC	MOVL	ADR2, (PTR)+			
			14	11	BRB	13\$			
000000FF	8F		12	15	BLEQ	13\$			0208
			57	D1	CMPL	R7, #255			
			09	14	BGTR	13\$			
		83	0C	AC	MOVW	LEN2, (PTR)+			0210
63	10	BC	57	28	MOVW	R7, @ADR2, (PTR)			0212

MOMACPIO
V04-000

MOM Network I/O module
momsbuild_p2

Build P2 buffer and descripto

B 5

16-Sep-1984 01:59:39

14-Sep-1984 12:44:29

VAX-11 Bliss-32 V4.0-742

DISKSVMMASTER:[MOM.SRC]MOMACPIO.B32;1

Page 8
(3)

63 00000000'	00	0040	8F	28	00100	13\$:	MOVC3	#64, COLLATE_START_VALUE, (PTR)	: 0221
60	50	18	AC	D0	0010A		MOVL	RESDESC, R0	: 0225
	53	04	A6	C3	0010E		SUBL3	4(R6), PTR, (R0)	: 0226
	04	A0	04	A6	D0	00113	MOVL	4(R6), 4(R0)	: 0228
						04 00118	RET		

; Routine Size: 281 bytes, Routine Base: \$CODE\$ + 0000

```
: 232      0229 1 %SBTTL 'mom$netacp_qio General network QIO routine'
: 233      0230 1 GLOBAL ROUTINE mom$netacp_qio (nfbdesc, p2, p3, bufdesc) =
: 234      0231 1
: 235      0232 1 ++
: 236      0233 1 | FUNCTIONAL DESCRIPTION:
: 237      0234 1 | This routine issues QIO function requests to NETACP to perform
: 238      0235 1 | volatile data base operations.
: 239      0236 1
: 240      0237 1
: 241      0238 1 | FORMAL PARAMETERS:
: 242      0239 1
: 243      0240 1   NFBDESC     Descriptor of NFB data.
: 244      0241 1   P2          Descriptor of P2 data.
: 245      0242 1   P3          Address of word to contain resulting length.
: 246      0243 1   BUFDSC      Descriptor of data buffer
: 247      0244 1
: 248      0245 1 | IMPLICIT INPUTS:
: 249      0246 1
: 250      0247 1   MOM$GW_ACP_CHAN Channel assigned to the command process link.
: 251      0248 1
: 252      0249 1 | IMPLICIT OUTPUTS:
: 253      0250 1
: 254      0251 1   NONE
: 255      0252 1
: 256      0253 1 | ROUTINE VALUE:
: 257      0254 1 | COMPLETION CODES:
: 258      0255 1
: 259      0256 1   This routine returns an MOM status code that has been mapped from
: 260      0257 1   the QIO status code.
: 261      0258 1
: 262      0259 1 | SIDE EFFECTS:
: 263      0260 1
: 264      0261 1   NONE
: 265      0262 1
: 266      0263 1   --
: 267      0264 1
: 268      0265 2 | BEGIN
: 269      0266 2
: 270      0267 2 | MAP
: 271      0268 2   nfbdesc : REF VECTOR,
: 272      0269 2   bufdesc : REF VECTOR;
: 273      0270 2
: 274      0271 2 | LOCAL
: 275      0272 2   iosb    : $iosb,           | I/O status block
: 276      0273 2   database,          | Database ID
: 277      0274 2   status;            | Temporary return status
: 278      0275 2
: 279      0276 2 | If it hasn't already been done, establish channel to NETACP for QIO control
: 280      0277 2 | functions. The channel is to NET:, the pseudo device to which volatile
: 281      0278 2 | database commands are issued. Doing the assing here allows NCP commands to
: 282      0279 2 | the permanent data base to be processed even if NETACP is not mounted.
: 283      0280 2
: 284      0281 2   status = ss$_normal;
: 285      0282 2 | IF .mom$gw_acp_chan EQL 0 THEN
: 286      0283 2   status = $ASSIGN(DEVNAM = mom$gg_netnamdesc,
: 287      0284 2           CHAN = mom$gw_acp_chan);
: 288      0285 2 | IF .status THEN
```

```

: 289    0286 3      BEGIN
: 290    0287 3
: 291    0288 3      | Issue the QIO.
: 292    0289 3
: 293    P 0290 3      status = $QIOW (CHAN = .mom$gw_acp_chan,      | Channel
: 294    P 0291 3          FUNC = ios$ acpcontrol,           | Function
: 295    P 0292 3          IOSB = iosb,                   | I/O status block
: 296    P 0293 3          P1 = .nfbdesc,                | P1 descriptor (NFB)
: 297    P 0294 3          P2 = .p2,                     | P2 descriptor (component id)
: 298    P 0295 3          P3 = .p3,                     | Address for resulting length
: 299    P 0296 3          P4 = .bufdesc);            | P4 (data buffer) descriptor
: 300    0297 3
: 301    0298 3      | Log the QIO function.
: 302    0299 3
: 303    0300 3      mom$debug_qio (dbg$c_acpqio,
: 304    0301 3          .status,                      | Log type code
: 305    0302 3          .iosb,                       | QIO status value
: 306    0303 3          .nfbdesc,                    | Address of I/O status block
: 307    0304 3          .p2,                         | NFB descriptor
: 308    0305 3          .p3,                         | P2 descriptor
: 309    0306 3          .bufdesc,                    | Address of P3 word
: 310    0307 3          $ASCID('SET, SHOW, or CLEAR NETACPs database'));
: 311    0308 3
: 312    0309 3      | Map the operation status into an MOM code.
: 313    0310 3
: 314    0311 3      database = .bblock [.nfbdesc [1], nfb$database];
: 315    0312 2      END;
: 316    0313 2      status = mom$mapqioerror (.database, .status, iosb);
: 317    0314 2
: 318    0315 2      Return the mapped status code.
: 319    0316 2
: 320    0317 2      RETURN .status
: 321    0318 2
: 322    0319 1      END;                                ! End of mom$netqio

```

```

43 20 72 6F 20 2C 57 4F 48 53 20 2C 54 45 53 00000 P.AAB: .ASCII \SET, SHOW, or CLEAR NETACPs database\
61 64 20 73 50 43 41 54 45 4E 20 52 41 45 4C 0000F
65 73 61 62 61 74 0001E
00000024 00024 P.AAA: .LONG 36
00000000 00028 .ADDRESS P.AAB

```

.PSECT SPLIT\$,NOWRT,NOEXE,2

```

.PSECT SPLIT$,NOWRT,NOEXE,2
43 20 72 6F 20 2C 57 4F 48 53 20 2C 54 45 53 00000 P.AAB: .ASCII \SET, SHOW, or CLEAR NETACPs database\
61 64 20 73 50 43 41 54 45 4E 20 52 41 45 4C 0000F
65 73 61 62 61 74 0001E
00000024 00024 P.AAA: .LONG 36
00000000 00028 .ADDRESS P.AAB

```

.EXTRN SY\$ASSIGN, SY\$QIOW

.PSECT SCODE\$,NOWRT,2

54 00000000G	00 9E 00002	.ENTRY M0MSNETACP_QIO, Save R2,R3,R4	: 0230
5E	08 C2 00009	MOVAB M0MSGW_ACP_CHAN, R4	
53	01 D0 0000C	SUBL2 #8, SP	
	64 D5 0000F	MOVL #1, STATUS	: 0281
	14 12 00011	TSTL M0MSGW_ACP_CHAN	: 0282
	7E 7C 00013	BNEQ 1S	
	54 DD 00015	CLRQ -(SP)	
		PUSHL R4	: 0284

00000000G	00	0000000G	00	9F	00017	PUSHAB	MOM\$GQ_NETNAMDSC	
	04		04	FB	0001D	CALLS	#4, SYS\$ASSIGN	
	53		50	DO	00024	MOVL	R0, STATUS	
	49		53	E9	00027	1\$: BLBC	STATUS, 2\$	
	7E		7E	7C	0002A	CLRQ	-(SP)	0285
	0C		08	AC	0002C	MOVQ	P3, -(SP)	0296
	52		04	AC	00030	PUSHL	P2	
				DD	00033	MOVL	NFBDESC, R2	
				52	00037	PUSHL	R2	
			20	AE	00039	CLRQ	-(SP)	
				38	0003B	PUSHAB	I0SB	
				64	0003E	PUSHL	#56	
				7E	00040	PUSHL	MOM\$GW_ACP_CHAN	
	00		00	D4	00042	CLRL	-(SP)	
	53		0C	FB	00044	CALLS	#12, SYS\$QIOW	
			50	DO	00048	MOVL	R0, STATUS	
		00000000'	00	9F	0004E	PUSHAB	P.AAA	0307
	7E		0C	AC	00054	MOVQ	P3, -(SP)	0305
			08	AC	00058	PUSHL	P2	0304
				52	0005B	PUSHL	R2	0303
			14	AE	0005D	PUSHAB	I0SB	0300
				53	00060	PUSHL	STATUS	0301
	00		04	DD	00062	PUSHL	#4	0300
	50		08	FB	00064	CALLS	#8, MOM\$DEBUG_QIO	
			50	A2	0006B	MOVL	4(R2), R0	0311
			02	A0	9A 0006F	MOVZBL	2(R0), DATABASE	
	00000000V	4009	03	FB	00077	PUSHR	#^M<R0,R3,SP>	0313
			53	50	0007E	CALLS	#3, MOM\$MAPQIOERROR	
				04	00081	MOVL	R0, STATUS	
						RET		0319

; Routine Size: 130 bytes, Routine Base: \$CODE\$ + 0119

```
: 324    0320 1 %SBTTL 'mom$mapqioerror'      Map QIO error to MOM error'
: 325    0321 1 GLOBAL ROUTINE mom$mapqioerror (database, qiosstatus, iosb) =
: 326    0322 1
: 327    0323 1 ++
: 328    0324 1     FUNCTIONAL DESCRIPTION:
: 329    0325 1         This routine translates QIO errors into network management
: 330    0326 1         errors and makes the appropriate entries in the message
: 331    0327 1         block.
: 332    0328 1
: 333    0329 1
: 334    0330 1     FORMAL PARAMETERS:
: 335    0331 1
: 336    0332 1         DATABASE          Database ID
: 337    0333 1         QIOSTATUS        QIO status return.
: 338    0334 1         IOSB              Address of I/O status block.
: 339    0335 1
: 340    0336 1     IMPLICIT INPUTS:
: 341    0337 1         NONE
: 342    0338 1
: 343    0339 1
: 344    0340 1     IMPLICIT OUTPUTS:
: 345    0341 1         MOM$AB_MSGBLOCK contains the appropriate error code and detail
: 346    0342 1         if applicable.
: 347    0343 1
: 348    0344 1
: 349    0345 1     ROUTINE VALUE:
: 350    0346 1     COMPLETION CODES:
: 351    0347 1
: 352    0348 1         The return status is the MOM error that corresponds to the QIO error.
: 353    0349 1
: 354    0350 1     SIDE EFFECTS:
: 355    0351 1
: 356    0352 1         NONE
: 357    0353 1
: 358    0354 1         --
: 359    0355 1
: 360    0356 2     BEGIN
: 361    0357 2
: 362    0358 2     MAP
: 363    0359 2         iosb : REF $iosb;
: 364    0360 2
: 365    0361 2     LOCAL
: 366    0362 2         code   : BYTE,           ! NICE status code
: 367    0363 2         detail : WORD,          ! NICE detail code
: 368    0364 2         flags,             Message flags
: 369    0365 2         status,            Return status
: 370    0366 2         text;              ! Optional text code
: 371    0367 2
: 372    0368 2         Set up the default message information.
: 373    0369 2
: 374    0370 2         code = nma$C_STS_OPE;    ! Management program error
: 375    0371 2         detail = -1;          ! No detail
: 376    0372 2         flags = msb$M_DET_FLD; ! Detail flag
: 377    0373 2
: 378    0374 2         Check the QIO status and the I/O status block.
: 379    0375 2
: 380    0376 2         IF NOT .qiosstatus THEN
```

```
381      0377 3   BEGIN
382      0378 3
383      0379 3   | The QIO was in error. This indicates a program or a system error.
384      0380 3
385      0381 3   | text = .qiostatus;
386      0382 3   | flags = .flags OR
387      0383 3   |     msb$M_msg_fld;
388      0384 3   | status = failure;
389      0385 3
390      0386 3   END
391      0387 3 ELSE BEGIN
392      0388 3
393      0389 3
394      0390 3   | The QIO status was successful so check the I/O status block.
395      0391 3   | If it indicates success the just return. Otherwise, attempt to map
396      0392 3   | the error code to an MOM error code.
397      0393 3
398      0394 3 IF .iosb [ios$w_status] THEN
399      0395 3   RETURN success;
400      0396 3
401      0397 3 SELECTONE .iosb [ios$w_status] OF
402      0398 3   SET
403      0399 3   | [ss$_insfarg]:                                ! Missing parameter
404      0400 3   BEGIN
405      0401 3   | code = nma$c_sts_pms;
406      0402 3   | detail = mom_mapparamid (.iosb [ios$l_info]);
407      0403 3   | status = failure;
408      0404 3   END;
409      0405 3
410      0406 3   | [ss$_badparam,                               ! Parameter value error
411      0407 3   ss$_devactive]:
412      0408 3   BEGIN
413      0409 3   | code = nma$c_sts_pva;
414      0410 3   | detail = mom_mapparamid (.iosb [ios$l_info]);
415      0411 3   | status = failure;
416      0412 3   END;
417      0413 3
418      0414 3   | [ss$_writelck]:                            ! Component in wrong state
419      0415 3   BEGIN
420      0416 3   | code = nma$c_sts_sta;
421      0417 3   | detail = mom_mapentity (.database);
422      0418 3   | status = failure;
423      0419 3   END;
424      0420 3
425      0421 3   | [ss$_insfmem]:                           ! No room for new entry
426      0422 3   BEGIN
427      0423 3   | code = nma$c_sts_roo;
428      0424 3   | status = failure;
429      0425 3   END;
430      0426 3
431      0427 3   | [ss$_endoffile]:                         ! Unrecognized component
432      0428 3   BEGIN
433      0429 3   | code = nma$c_sts_cmp;
434      0430 3   | detail = mom_mapentity (.database);
435      0431 3   | status = nma$c_sts_cmp;
436      0432 3   END;
437      0433 3
```

```
: 438      0434 3      [ss$_nopriv]:                                ! Privilege violation
: 439      0435 4      BEGIN
: 440      0436 4      code = nma$c_sts_pri;
: 441      0437 4      status = failure;
: 442      0438 3      END;
: 443      0439 3
: 444      0440 3      [ss$_nosuchdev]:                                ! No such device
: 445      0441 4      BEGIN
: 446      0442 4      code = nma$c_sts_cmp;
: 447      0443 4      detail = mom_mapentity (.database);
: 448      0444 4      text = .iosb [ios$w_status];
: 449      0445 4      flags = .flags OR msb$w_msg_fld;
: 450      0446 4      status = failure;
: 451      0447 3      END;
: 452      0448 3
: 453      0449 3      [ss$_devinact]:                                ! Device inactive
: 454      0450 4      BEGIN
: 455      0451 4      code = nma$c_sts_sta;
: 456      0452 4      detail = mom_mapparamid (.iosb [ios$l_info]);
: 457      0453 4      text = .iosb [ios$w_status];
: 458      0454 4      flags = .flags OR msb$w_msg_fld;
: 459      0455 4      status = failure;
: 460      0456 3      END;
: 461      0457 3
: 462      0458 3      [ss$_ivdevnam]:                                ! Invalid device name.
: 463      0459 4      BEGIN
: 464      0460 4      code = nma$c_sts_ide;
: 465      0461 4      detail = mom_mapentity (.database);
: 466      0462 4      text = .iosb [ios$w_status];
: 467      0463 4      flags = .flags OR msb$w_msg_fld;
: 468      0464 4      status = failure;
: 469      0465 3      END;
: 470      0466 3
: 471      0467 3      [ss$_nolicense]:                                ! Customer doesn't have a
: 472      0468 4      BEGIN
: 473      0469 4      code = nma$c_sts_ope;
: 474      0470 4      text = .iosb [ios$w_status];
: 475      0471 4      flags = .flags OR msb$w_msg_fld;
: 476      0472 4      status = failure;
: 477      0473 3      END;
: 478      0474 3
: 479      0475 3      [OTHERWISE]:                                ! Operation failure
: 480      0476 4      BEGIN
: 481      0477 4      code = nma$c_sts_ope;
: 482      0478 4      detail = .iosb [ios$l_info];
: 483      0479 4      text = .iosb [ios$w_status];
: 484      0480 4      flags = .flags OR
: 485      0481 4          msb$w_msg_fld;
: 486      0482 4      status = failure;
: 487      0483 3      END;
: 488      0484 3
: 489      0485 3      TES:
: 490      0486 2      END;
: 491      0487 2      Set up the message information.
: 492      0488 2
: 493      0489 2
: 494      0490 2      mom$ab_msgblock [msb$l_flags] = .flags;
```

```

495      0491 2 mom$ab_msgblock [msb$b_code] = .code;
496      0492 2 mom$ab_msgblock [msb$b_detail] = .detail;
497      0493 2 mom$ab_msgblock [msb$b_text] = .text;
498      0494 2
499      0495 2 ; Return the mapped status.
500      0496 2
501      0497 2 RETURN .status
502      0498 2
503      0499 1 END;                                ! End of mom$mapqioerror

```

			07FC 00000	.ENTRY	MOM\$MAPQIOERROR, Save R2,R3,R4,R5,R6,R7,R8,-: 0321
	5A	00000000V	00 9E 00002	MOVAB	MOM_MAPPARAMID, R10
	59	00000000V	00 9E 00009	MOVAB	MOM_MAPENTITY, R9
	58	00000000G	00 9E 00010	MOVAB	MOM\$AB_MSGBLOCK, R8
	54		19 8E 00017	MNEG B	#25, CODE
	57		01 AE 0001A	MNEG W	#1, DETAIL
	55		02 D0 0001D	MOVL	#2, FLAGS
	07	08	AC E8 00020	BLBS	QIOSTATUS, 1\$
	56	08	AC D0 00024	MOVL	QIOSTATUS, TEXT
		00BA	31 00028	BRW	19\$
	52	0C	AC D0 0002B	1\$: MOVL	IOSB, R2
	04		62 E9 0002F	BLBC	(R2), 2\$
	50		01 D0 00032	MOVL	#1, R0
			04 00035	RET	
0114	8F		62 B1 00036	2\$: CMPW	(R2), #276
			05 12 00038	BNEQ	3\$
	54		1D 8E 0003D	MNEG B	#29, CODE
			0F 11 00040	BRB	5\$
	14		62 B1 00042	3\$: CMPW	(R2), #20
			07 13 00045	BEQL	4\$
02C4	8F		62 B1 00047	CMPW	(R2), #708
			0B 12 0004C	BNEQ	6\$
	54		10 8E 0004E	4\$: MNEG B	#16, CODE
		04	A2 DD 00051	5\$: PUSH L	4(R2)
	6A		01 FB 00054	CALLS	#1, MOM_MAPPARAMID
			10 11 00057	BRB	7\$
025C	8F		62 B1 00059	6\$: CMPW	(R2), #604
			0E 12 0005E	BNEQ	8\$
	54		0B 8E 00060	MNEG B	#11, CODE
		04	AC DD 00063	PUSH L	DATABASE
	69		01 FB 00066	CALLS	#1, MOM_MAPENTITY
	57		50 B0 00069	7\$: MOVW	R0, DETAIL
0124	8F		7A 11 0006C	BRB	20\$
			62 B1 0006E	8\$: CMPW	(R2), #292
	54		05 12 00073	BNEQ	9\$
			14 8E 00075	MNEG B	#20, CODE
0870	8F		6E 11 00078	BRB	20\$
			62 B1 0007A	9\$: CMPW	(R2), #2160
	54		11 12 0007F	BNEQ	10\$
		04	08 8E 00081	MNEG B	#8, CODE
	69		AC DD 00084	PUSH L	DATABASE
			01 FB 00087	CALLS	#1, MOM_MAPENTITY

57	50	B0	0008A	MOVW	R0, DETAIL			
53	08	CE	0008D	MNEG L	#8 STATUS	0431		
	58	11	00090	BRB	21\$	0397		
24	62	B1	00092	10\$:	CMPW (R2), #36	0434		
	05	12	00095	BNEQ	11\$			
54	03	8E	00097	MNEG B	#3 CODE	0436		
0908	8F	62	B1	0009C	11\$:	CMPW (R2), #2312	0437	
	05	12	000A1	BNEQ	12\$	0440		
54	08	8E	000A3	MNEG B	#8 CODE	0442		
20D4	8F	1C	11	000A6	BRB	14\$	0443	
	62	B1	000A8	12\$:	CMPW (R2), #8404	0449		
	0B	12	000AD	BNEQ	13\$			
54	0B	8E	000AF	MNEG B	#11 CODE	0451		
	A2	DD	000B2	PUSHL	4(R2)	0452		
6A	01	FB	000B5	CALLS	#1, MOM_MAPPARAMID			
	10	11	000B8	BRB	15\$			
0144	8F	62	B1	000BA	13\$:	CMPW (R2), #324	0458	
	0E	12	000BF	BNEQ	16\$			
54	09	8E	000C1	MNEG B	#9, CODE	0460		
	AC	DD	000C4	14\$:	PUSHL	DATABASE	0461	
69	01	FB	000C7	CALLS	#1, MOM_MAPENTITY			
57	50	B0	000CA	15\$:	MOVW	R0, DETAIL		
	13	11	000CD	BRB	18\$			
2194	8F	62	B1	000CF	16\$:	CMPW (R2), #8596	0462	
	05	12	000D4	BNEQ	17\$	0467		
54	19	8E	000D6	MNEG B	#25, CODE	0469		
	07	11	000D9	BRB	18\$	0470		
54	19	8E	000DB	17\$:	MNEG B	#25, CODE	0477	
57	04	A2	B0	000DE	MOVW	4(R2), DETAIL	0478	
56	62	3C	000E2	18\$:	MOVZWL	(R2), TEXT	0479	
55	04	88	000E5	19\$:	BISB2	#4, FLAGS	0480	
	53	D4	000E8	20\$:	CLRL	STATUS	0482	
04	68	55	D0	000EA	21\$:	MOVL	FLAGS, MOMSAB_MSGBLOCK	0490
A8	54	90	000ED	MOVB	CODE, MOMSAB_MSGBLOCK+4	0491		
08	A8	57	B0	000F1	MOVW	DETAIL, MOMSAB_MSGBLOCK+8	0492	
0C	A8	56	D0	000F5	MOVL	TEXT, MOMSAB_MSGBLOCK+12	0493	
50	53	D0	000F9	MOVL	STATUS, R0	0497		
		04	000FC	RET		: 0499		

; Routine Size: 253 bytes. Routine Base: \$CODE\$ + 019B

```

505      0500 1 %SBTTL 'mom_mapentity      Map NETACP database ID into entity type'
506      0501 1 ROUTINE mom_mapentity (database) =
507      0502 1
508      0503 1 ++
509      0504 1     FUNCTIONAL DESCRIPTION:
510      0505 1
511      0506 1     This routine translates the QIO database ID into a network
512      0507 1     management entity detail code.
513      0508 1
514      0509 1     INPUTS:
515      0510 1
516      0511 1         DATABASE          NETACP database ID
517      0512 1
518      0513 1     OUTPUTS:
519      0514 1
520      0515 1         The return value is the detail code.
521      0516 1         --
522      0517 1
523      0518 2 BEGIN
524      0519 2
525      0520 2 LOCAL
526      0521 2     detail : WORD;
527      0522 2
528      0523 3 detail = (
529      0524 3     SELECTONE .database OF
530      0525 3     SET
531      0526 3     [nfb$C_db_pli]: nma$C_ent_lin;
532      0527 3
533      0528 3     [nfb$C_db_lni,
534      0529 3     nfb$C_db_ndi]: nma$C_ent_nod;
535      0530 3
536      0531 3
537      0532 3     [nfb$C_db_cri]: nma$C_ent_cir;
538      0533 3
539      0534 3     [nfb$C_db_aji]: nma$C_ent_nod;
540      0535 3
541      0536 3     [OTHERWISE]: -1;
542      0537 3
543      0538 2     TES);
544      0539 2
545      0540 2 RETURN .detail
546      0541 2
547      0542 1 END;                                ! End of mom_mapentity

```

0000 00000 MOM_MAPENTITY:

50	04	AC	D0	00002	.WORD	Save nothing	0501
05		50	D1	00006	MOVL	DATABASE, R0	0524
		05	12	00009	CMPL	R0, #5	0526
50		01	D0	0000B	BNEQ	1\$	
		1F	11	0000E	MOVL	#1, R0	
		50	D5	00010	BRB	6\$	
		05	15	00012	TSTL	R0	
					BLEQ	2\$	0528

MOMACPIO
V04-000

MOM Network I/O module
mom_mapentity

L 5
16-Sep-1984 01:59:39 VAX-11 Bliss-32 V4.0-742
Map NETACP database ID into 14-Sep-1984 12:44:29 DISKSVMMASTER:[MOM.SRC]MOMACPIO.B32;1 Page 18
(6)

02	50 D1 00014	CMPL R0, #2	
04	0F 15 00017	BLEQ 4S	0532
	50 D1 00019 2\$:	CMPL R0, #4	
50	05 12 0001C	BNEQ 3S	
	03 D0 0001E	MOVL #3, R0	
13	0C 11 00021	BRB 6S	
	50 D1 00023 3\$:	CMPL R0, #19	0534
	04 12 00026	BNEQ 5S	
	50 D4 00028 4\$:	CLRL R0	
	03 11 0002A	BRB 6S	
50	01 CE 0002C 5\$:	MNEG L #1, R0	0536
51	50 B0 0002F 6\$:	MOVW R0, DETAIL	0523
50	51 3C 00032	MOVZWL DETAIL, R0	0540
	04 00035	RET	0542

: Routine Size: 54 bytes, Routine Base: \$CODE\$ + 0298

0000 00000 MOM MAPPARAMID:

50 000000089 8F C5 00007 1\$: MULL3 #137, SVD_INDEX, R1
50 00000000G0041 9F 0000F PUSHAB MOMSAB_SERVICE_DATA[R1]
04 AC 9E D1 00016 CMPL @(SP)+, NETACP_PARAM_ID
0B 00000000G0041 9F 0001C PUSHAB MOMSAB_SERVICE_DATA+4[R1]
50 9E 3C 00023 MOVZWL @(SP)+, R0
04 00026 RET
D8 50 00000000G 8F F3 00027 2\$: AOBLEQ #SVDSC_ENTRY_COUNT, SVD_INDEX, 1\$
50 01 CE 0002F MNEGL #1, R0
04 00032 RET

MOMACPIO
V04-000

MOM Network I/O module
mom_mapparamid Map QIO parameter ID into m

N 5

16-Sep-1984 01:59:39

14-Sep-1984 12:44:29

VAX-11 Bliss-32 V4.0-742

DISK\$VMSMASTER:[MOM.SRC]MOMACPIO.B32;1

Page 20
(?)

; Routine Size: 51 bytes, Routine Base: \$CODE\$ + 02CE

MOMACPIO
V04-000

MOM Network I/O module
mom_mapparamid

B 6

16-Sep-1984 01:59:39

14-Sep-1984 12:44:29

VAX-11 Bliss-32 V4.0-742

DISK\$VMSMASTER:[MOM.SRC]MOMACPIO.B32;1

Page 21
(8)

: 588 0581 1 END
: 589 0582 1
: 590 0583 0 ELUDOM

: ! End of module

.EXTRN LIB\$SIGNAL

PSECT SUMMARY

Name	Bytes	Attributes
\$OWNS	64 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)	
\$CODES	769 NOVEC,NOWRT, RD ,EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)	
\$SPLITS	44 NOVEC,NOWRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)	

Library Statistics

File	----- Symbols -----			Pages Mapped	Processing Time
	Total	Loaded	Percent		
-\$255\$DUA28:[MOM.OBJ]MOMLIB.L32;1	194	25	12	21	00:00.1
-\$255\$DUA28:[SHRLIB]NMALIBRY.L32;1	887	12	1	47	00:00.2
-\$255\$DUA28:[SHRLIB]NET.L32;1	1279	7	0	63	00:00.3
-\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	17	0	581	00:03.1

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:MOMACPIO/OBJ=OBJ\$:MOMACPIO MSRC\$:\$:MOMACPIO/UPDATE=(ENHS:\$:MOMACPIO)

: Size: 769 code + 108 data bytes
: Run Time: 00:18.6
: Elapsed Time: 00:45.1
: Lines/CPU Min: 1878
: Lexemes/CPU-Min: 10881
: Memory Used: 157 pages
: Compilation Complete

0237 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY

