


```

MM      MM      000000      MM      MM      MM      MM      AAAAAA      IIIIII      NN      NN
MM      MM      000000      MM      MM      MM      MM      AAAAAA      IIIIII      NN      NN
MMMM    MMMM    00          00    MMMM    MMMM    MMMM    MMMM    AA          AA      II      NN      NN
MMMM    MMMM    00          00    MMMM    MMMM    MMMM    MMMM    AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      00          00    MM      MM      MM      MM      AA          AA      II      NN      NN
MM      MM      000000      MM      MM      MM      MM      AA          AA      IIIIII      NN      NN
MM      MM      000000      MM      MM      MM      MM      AA          AA      IIIIII      NN      NN

```

```

LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SSSSSS
LL      II          SSSSSS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SS
LLLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIII      SSSSSSSS

```



```

1 0001 0 %TITLE 'Network Management Maintenance Operations main module'
2 0002 0 MODULE MOMMAIN (MAIN = MOM$MAIN,
3 0003 0 ADDRESSING_MODE (NONEXTERNAL=GENERAL),
4 0004 0 ADDRESSING_MODE (EXTERNAL=GENERAL),
5 0005 0 IDENT = 'V04-000') =
6 0006 0
7 0007 1 BEGIN
8 0008 1
9 0009 1
10 0010 1 *****
11 0011 1 *
12 0012 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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29 0029 1 *
30 0030 1 *
31 0031 1 *****
32 0032 1
33 0033 1
34 0034 1 **
35 0035 1 FACILITY: DECnet-VAX Network Management Maintenance Operations Module (MOM)
36 0036 1
37 0037 1 ABSTRACT:
38 0038 1 This is the main module for MOM.
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: 13-Jan-1983
45 0045 1
46 0046 1 MODIFIED BY:
47 0047 1 V03-002 MKP0002 Kathy Perko 11-April-1984
48 0048 1 Add NCP network management version number checking.
49 0049 1
50 0050 1 V03-001 MKP0001 Kathy Perko 21-July-1983
51 0051 1 Improve status returned by various routines. Add SERVICE
52 0052 1 NODE VERSION parameter. Clear CIBs at initialization time.
53 0053 1
54 0054 1 --
55 0055 1

```

MO
VO

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```

: 57 0056 1 %SBTTL 'Declarations'
: 58 0057 1
: 59 0058 1
: 60 0059 1 : TABLE OF CONTENTS:
: 61 0060 1
: 62 0061 1
: 63 0062 1 FORWARD ROUTINE
: 64 0063 1     mom$main           : NOVALUE,
: 65 0064 1     mom_getmode      : NOVALUE,
: 66 0065 1     mom_initialize   : NOVALUE,
: 67 0066 1     mom_init_logging : NOVALUE,
: 68 0067 1     mom_get_nice_msg,
: 69 0068 1     mom$send;
: 70 0069 1
: 71 0070 1
: 72 0071 1 : INCLUDE FILES:
: 73 0072 1
: 74 0073 1
: 75 0074 1 LIBRARY 'LIBS:MOMLIB';           ! Facility-wide definitions
: 76 0075 1 LIBRARY 'SHRLIB$:NMALIBRY';     ! NICE definitions
: 77 0076 1 LIBRARY 'SHRLIB$:NET';          ! NETACP QIO interface
: 78 0077 1 LIBRARY 'SYS$LIBRARY:STARLET';  ! VMS common definitions
: 79 0078 1
: 80 0079 1
: 81 0080 1
: 82 0081 1 : OWN STORAGE:
: 83 0082 1
: 84 0083 1 OWN
: 85 0084 1     mom$w_mbx_chan: WORD;
: 86 0085 1
: 87 0086 1
: 88 0087 1 : Externals
: 89 0088 1
: 90 0089 1 $MOM_EXTERNALS;
: 91 0090 1
: 92 0091 1 EXTERNAL
: 93 0092 1     mom$ab_nml_mailbox_buf er: BBLOCK,
: 94 0093 1     npa$gl_logmask;
: 95 0094 1
: 96 0095 1 EXTERNAL LITERAL
: 97 0096 1     mom$sk_nml_mbx_buf_len;
: 98 0097 1
: 99 0098 1 EXTERNAL ROUTINE
: 100 0099 1     mom$operservice,
: 101 0100 1     mom$autoservice,
: 102 0101 1     mom$trnlognum,
: 103 0102 1     mom$debug_msg;
: 104 0103 1

```

```

106 0104 1 %SBTTL 'MOMSMAIN Main routine'
107 0105 1 GLOBAL ROUTINE MOMSMAIN : NOVALUE =
108 0106 1
109 0107 1 :++
110 0108 1 : FUNCTIONAL DESCRIPTION:
111 0109 1 :
112 0110 1 :     This is the main routine for the DECnet-VAX Network Management
113 0111 1 :     Maintenance Operations Module (MOM). Maintenance operations
114 0112 1 :     include down line load, up line dump, trigger, and loop node,
115 0113 1 :     circuit and line.
116 0114 1 :
117 0115 1 :     STARTUP CRITERIA:
118 0116 1 :     MOM is started up in one of two ways:
119 0117 1 :     The Network Management Listener (NML) gets a NICE message
120 0118 1 :     from NCP requesting a maintenance operation. This is an
121 0119 1 :     operator requested maintenance operation.
122 0120 1 :
123 0121 1 :     A MOP message is received from another node which requests a
124 0122 1 :     maintenance operation. NETACP will start up MOM to perform
125 0123 1 :     the operation. This is an automatic maintenance operation.
126 0124 1 :
127 0125 1 :
128 0126 1 :     ROUTINE VALUE:
129 0127 1 :     COMPLETION CODES:
130 0128 1 :
131 0129 1 :     Always returns success.
132 0130 1 :
133 0131 1 : --
134 0132 1 :
135 0133 2 BEGIN
136 0134 2
137 0135 2 BUILTIN
138 0136 2     fp:
139 0137 2
140 0138 2 LOCAL
141 0139 2     status;
142 0140 2 :
143 0141 2 :     Determine if MOM was started up by a MOP message from another node
144 0142 2 :     (autoservice) or by NML to process a NICE service request (operservice).
145 0143 2 :
146 0144 2 mom_initialize ();
147 0145 2 mom_getmode ();
148 0146 2 IF NOT .mom$gl_service_flags [mom$v_autoservice] THEN
149 0147 2 :
150 0148 2 :     MOM was started by NML to process a NICE service message.
151 0149 2 :
152 0150 2     BEGIN
153 0151 2     status = mom_get_nice_msg ();
154 0152 2     IF .status THEN
155 0153 2         mom$operservice ();
156 0154 2     END
157 0155 2 ELSE
158 0156 2 :
159 0157 2 :     MOM was started by NETACP because a MOP message was received from
160 0158 2 :     another node. The MOP message can be a request for a down line
161 0159 2 :     load, an upline dump, a trigger, or a loop circuit or node.
162 0160 2

```

```

: 163      0161      3      BEGIN
: 164      0162      3      status = ss$.normal;
: 165      0163      3      mom$autoservice ();
: 166      0164      2      END;
: 167      0165      2      $EXIT (CODE = .status);
: 168      0166      2
: 169      0167      1      END;                ! End of MOM

```

```

.TITLE  MOMMAIN Network Management Maintenance Operatio
        ns main
.IDENT  \V04-000\
.PSECT  $OWNS,NOEXE,2

```

00000 MOM\$W_MBX CHAN:

```

.BLK  2
.EXTRN  MOM$GL_LOGMASK, MOM$GL_SVD_INDEX
.EXTRN  MOM$AB_SERVICE_DATA
.EXTRN  MOM$GB_FUNCTION
.EXTRN  MOM$GB_OPTION_BYTE
.EXTRN  MOM$GB_ENTITY_CODE
.EXTRN  MOM$AB_ENTITY_BUF
.EXTRN  MOM$GQ_ENTITY_BUF_DSC
.EXTRN  MOM$GL_SERVICE_FLAGS
.EXTRN  MOM$AB_NPARSE_BLK
.EXTRN  MOM$AB_NICE_RCV_BUF
.EXTRN  MOM$AB_NICE_XMIT_BUF
.EXTRN  MOM$GQ_NICE_RCV_BUF_DSC
.EXTRN  MOM$GL_NICE_RCV_MSG_LEN
.EXTRN  MOM$GQ_NICE_XMIT_BUF_DSC
.EXTRN  MOM$AB_MSGB[LOCK
.EXTRN  MOM$AB_ACPQIO_BUFFER
.EXTRN  MOM$GQ_ACPQIO_BUF_DSC
.EXTRN  MOM$AB_CIB, MOM$AB_LOOP_CIB
.EXTRN  MOM$AB_TRIGGER_CIB
.EXTRN  MOM$AB_MOP_XMIT_BUF
.EXTRN  MOM$GQ_MOP_XMIT_BUF_DSC
.EXTRN  MOM$AB_MOP_RCV_BUF
.EXTRN  MOM$GQ_MOP_RCV_BUF_DSC
.EXTRN  MOM$AB_MOP_MSG, MOM$GQ_MOP_MSG_DSC
.EXTRN  MOM$GW_EVT_CODE
.EXTRN  MOM$GB_EVT_POPR
.EXTRN  MOM$GB_EVT_PRSN
.EXTRN  MOM$GB_EVT_PSER
.EXTRN  SVD$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$GK_PCNO_SFTY
.EXTRN  SVD$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  MOM$AB_NML_MAILBOX_BUFFER
.EXTRN  NPASGL_LOGMASK, MOM$K_NML_MBX_BUF_LEN
.EXTRN  MOM$OPERSERVICE
.EXTRN  MOM$AUTOSERVICE
.EXTRN  MOM$STRNLOGNUM, MOM$DEBUG_MSG
.EXTRN  SYS$EXIT

```

.PSECT \$CODE\$,NOWRT,2

00000000V	00	0004	00000	.ENTRY	MOM\$MAIN, Save R2	:	0105
00000000V	00	00	FB 00002	CALLS	#0, MOM_INITIALIZE	:	0144
	16	00000000G	00 FB 00009	CALLS	#0, MOM_GETMODE	:	0145
00000000V	00		00 E8 00010	BLBS	MOM\$GL_SERVICE_FLAGS, 1\$:	0146
	52		00 FB 00017	CALLS	#0, MOM_GET_NICE_MSG	:	0151
	13		50 D0 0001E	MOVL	R0, STATUS	:	
00000000G	00		52 E9 00021	BLBC	STATUS, 2\$:	0152
	52		00 FB 00024	CALLS	#0, MOM\$OPERSERVICE	:	0153
	13		0A 11 0002B	BRB	2\$:	0146
00000000G	00		01 D0 0002D	MOVL	#1, STATUS	:	0162
	52		00 FB 00030	CALLS	#0, MOM\$AUTOSERVICE	:	0163
	13		52 DD 00037	PUSHL	STATUS	:	0165
00000000G	00		01 FB 00039	CALLS	#1, SYS\$EXIT	:	
	13		04 00040	RET		:	0167

; Routine Size: 65 bytes, Routine Base: \$CODE\$ + 0000

```

171 0168 1 %SBTTL 'MOM_GETMODE Determine the mode in MOM is running'
172 0169 1 ROUTINE MOM_GETMODE: NOVALUE =
173 0170 1
174 0171 1 !**
175 0172 1 FUNCTIONAL DESCRIPTION:
176 0173 1
177 0174 1 This routine determines the mode in which MOM is running by
178 0175 1 determining how the image was activated. MOM can be started
179 0176 1 up in two modes:
180 0177 1 Autoservice - a target node has sent a MOP message requesting
181 0178 1 a maintenance function (load, dump, loop, or trigger).
182 0179 1 Operservice - The maintenance function is being requested
183 0180 1 via a NICE message from NCP.
184 0181 1 MOM gets started up in one of three ways:
185 0182 1 By NMLSHR running as a sharable image with NCP and communicating
186 0183 1 with NCP via buffers.
187 0184 1 By NMLSHR running as a sharable image with NML and communicating
188 0185 1 with NCP via a logical link.
189 0186 1 By NETACP when it receives an autoservice request on a circuit.
190 0187 1
191 0188 1 IMPLICIT OUTPUTS:
192 0189 1
193 0190 1 If MOM was started up by an autoservice function,
194 0191 1 mom$gl_service_flags [mom$sv_autoservice] is set.
195 0192 1 Otherwise it is clear.
196 0193 1
197 0194 1 --
198 0195 1
199 0196 2 BEGIN
200 0197 2
201 0198 2 LOCAL
202 0199 2 bufdesc: VECTOR [2], ! Descriptor of above buffer
203 0200 2 status; ! Temporary status
204 0201 2
205 0202 2
206 0203 2 ! Translate SYSSNET to determine what mode MOM was started up in.
207 0204 2
208 0205 2 bufdesc [0] = mom$sk_nice_buf_len; ! Setup result buffer descriptor
209 0206 2 bufdesc [1] = mom$ab_nice_rcv_buf;
210 0207 2
211 P 0208 2 status = $TRNLOG (LOGNAM = %ASCII 'SYSSNET',
212 P 0209 2 RSLLEN = bufdesc [0],
213 0210 2 RSLBUF = bufdesc);
214 0211 2
215 0212 2 ! If SYSSNET translates, MOM was activated by an NML talking to NCP via
216 0213 2 a logical link (operservice), or by NETACP (autoservice). It
217 0214 2 was NML if the translation contains the "::" indicating a node name.
218 0215 2 If not, it is autoservice.
219 0216 2
220 0217 2 IF .status EQLU ss$normal AND
221 0218 2 CH$FAIL (CH$FIND_SUB (.bufdesc [0],
222 0219 2 mom$ab_nice_rcv_buf,
223 0220 2 2,
224 0221 2 UPLIT ('::'))) THEN
225 0222 2 BEGIN
226 0223 2 !
227 0224 2 ! MOM was activated by NETACP for an autoservice operation.

```



```

228 0225 3 | Sys$net translates to the name of the circuit over which the
229 0226 3 | autoservice MOP request was received. Save the circuit ID both
230 0227 3 | as an entity ID and in the Service Data Table.
231 0228 3 |
232 0229 3 | mom$gl_service_flags [mom$sv_autoservice] = true;
233 0230 3 | mom$gq_entity_buf_dsc [0] = .bufdesc [0];
234 0231 3 | mom$gq_entity_buf_dsc [1] = mom$ab_nice_rcv_buf;
235 0232 3 | mom$ab_service_data [svd$gk_pcno_sli, svd$b_string_len] = .bufdesc [0];
236 0233 3 | CH$MOVE (.bufdesc [0],
237 0234 3 | mom$ab_nice_rcv_buf,
238 0235 3 | mom$ab_service_data [svd$gk_pcno_sli, svd$b_string]);
239 0236 3 | mom$ab_service_data [svd$gk_pcno_sli, svd$sv_msg_param] = true;
240 0237 3 | END
241 0238 2 | ELSE
242 0239 2 |
243 0240 2 | NML activated MOM to process a NICE message requesting a maintenance
244 0241 2 | operation.
245 0242 2 |
246 0243 2 | mom$gl_service_flags [mom$sv_autoservice] = false;
247 0244 2 |
248 0245 1 | END;
! End of MOM_GETMODE
  
```

```

.PSECT $PL:TS,NOWRT,NOEXE,2
00 54 45 4E 24 53 59 53 00000 P.AAB: .ASCII \SYS$NET\<0>
010E0007 00008 P.AAA: .LONG 17694727
00000000' 0000C .ADDRESS P.AAB
00 00 3A 3A 00010 P.AAC: .ASCII \::\<0><0>
.EXTRN SYS$TRNLOG
.PSECT $CODE$,NOWRT,2
  
```

```

00FC 00000 MOM_GETMODE:
57 00000000G 00 9E 00002 .WORD Save R2,R3,R4,R5,R6,R7 : 0169
56 00000000G 00 9E 00009 MOVAB MOM$GL_SERVICE_FLAGS, R7
5E 04 C2 00010 SUBL2 #4, SP
7E C5 8F 9A 00013 MOVZBL #197, BUFDESC : 0205
04 AE 66 9E 00017 MOVAB MOM$AB_NICE_RCV_BUF, BUFDESC+4 : 0206
7E 7C 0001B CLRQ -(SP) : 0210
7E D4 0001D CLRL -(SP)
OC AE 9F 0001F PUSHAB BUFDESC
10 AE 9F 00022 PUSHAB BUFDESC
00000000' 00 9F 00025 PUSHAB P.AAA
00000000G 00 06 FB 0002B CALLS #6, SYS$TRNLOG
01 50 D1 00032 CMLP STATUS, #1 : 0217
6E 00000000' 00 3B 12 00035 BNEQ 2$
02 39 00037 MATCHC #2, P.AAC, BUFDESC, MOM$AB_NICE_RCV_BUF : 0221
03 13 00040 BEQL 1$
53 02 D0 00042 MOVL #2, R3
53 02 C2 00045 1$: SUBL2 #2, R3
28 12 00048 BNEQ 2$
01 88 0004A BISB2 #1, MOM$GL_SERVICE_FLAGS : 0229
00000000G 00 6E D0 0004D MOVL BUFDESC, MOM$GQ_ENTITY_BUF_DSC : 0230
  
```

MOMMAIN
V04-000

Network Management Maintenance Operations main L 1
MOM_GETMODE Determine the mode in MOM is runni 15-Sep-1984 01:58:54
14-Sep-1984 12:44:33

VAX-11 Bliss-32 V4.0-742 Page 8
DISK\$VMSMASTER:[MOM.SRC]MOMMAIN.B32;1 (4)

00000000G	00	66	9E	00054	MOVAB	MOM\$AB_NICE_RCV_BUF, -	:	0231
00000000*	00	6E	90	0005B	MOVAB	MOM\$GQ_ENTITY_BUF_DSC+4	:	0232
00000000*	00	6E	28	00062	MOVAB	BUFDESC, <<MOM\$AB_SERVICE_DATA+-	:	0235
					MOVAB	<SVD\$GK_PCNO_SLI*137>>+8>	:	0235
					MOVAB	BUFDESC, MOM\$AB_NICE_RCV_BUF, <-	:	0236
					MOVAB	<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_SLI*137>>-	:	0236
					MOVAB	+9>	:	0217
					MOVAB	#1, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_SLI*137>>+7>	:	0243
					MOVAB	137>>+7>	:	0245
					RET		:	0217
					BICB2	#1, MOM\$GL_SERVICE_FLAGS	:	0243
					RET		:	0245

; Routine Size: 118 bytes, Routine Base: \$CODE\$ + 0041

```
0246 1 %SBTTL 'MOM_INITIALIZE Initialization for MOM'
0247 1 ROUTINE MOM_INITIALIZE: NOVALUE =
0248 1
0249 1 |++
0250 1 |
0251 1 | This routine performs various initialization for MOM at the
0252 1 | beginning of each NICE command or autoservice function.
0253 1 | The most notable of these is to set the default values
0254 1 | for the service data in the Service Data table.
0255 1 |
0256 1 | Inputs:
0257 1 | none
0258 1 |
0259 1 | --
0260 1 |
0261 2 BEGIN
0262 2
0263 2 MAP
0264 2 mom$gl_service_flags;
0265 2
0266 2 mom$gl_service_flags = 0;
0267 2
0268 2 Initialize the Service Data Table to indicate that none of the parameter
0269 2 values currently in the table came from a NICE or MOP message. The
0270 2 svd$sv_msg_param field is used to make sure the NICE and MOP message
0271 2 parameter values are used over the parameter values from the volatile
0272 2 database.
0273 2
0274 2 INCR i FROM 0 TO svd$sc_entry_count DO
0275 2 BEGIN
0276 2 mom$ab_service_data [.i, svd$b_flags] = 0;
0277 2 mom$ab_service_data [.i, svd$b_string_len] = 0;
0278 2 mom$ab_service_data [.i, svd$l_param] = 0;
0279 2 END;
0280 2
0281 2 Default the line service timer to infinity.
0282 2
0283 2 mom$ab_service_data [svd$gk_pcli_sti, svd$l_param] = -1;
0284 2
0285 2 Just in case it's a loop command, default the loop message length,
0286 2 loop message data type, and number of messages looped.
0287 2
0288 2 mom$ab_service_data [svd$gk_pcno_lpl, svd$l_param] = nma$sc_loop_dsiz;
0289 2 mom$ab_service_data [svd$gk_pcno_lpd, svd$l_param] = nma$sc_loop_mix;
0290 2 mom$ab_service_data [svd$gk_pcno_lpc, svd$l_param] = nma$sc_loop_dcnt;
0291 2 mom$ab_service_data [svd$gk_pcno_lph, svd$l_param] = mom$sk_no_loop_help;
0292 2
0293 2 Just in case it's a load, default the first file loaded to the
0294 2 secondary loader and default the system file to be loaded to
0295 2 the operating system (as opposed to diagnostics) and Phase IV.
0296 2
0297 2 mom$ab_service_data [svd$gk_pcno_sty, svd$l_param] = nma$sc_soft_secl;
0298 2 mom$ab_service_data [svd$gk_pcno_sfty, svd$l_param] = mop$sc_sid_osy;
0299 2 mom$ab_service_data [svd$gk_pcno_snv, svd$l_param] = nma$sc_nodsnv_ph4;
0300 2
0301 2 (Clear the (Channel Information Blocks) CIBs - these blocks contain
0302 2 information about the I/O channel over which the service function
```

```

307 0303 2 ! is being performed.
308 0304 2
309 0305 2 CH$FILL (0, cib$c_ciblen, mom$ab_cib);
310 0306 2 CH$FILL (0, cib$c_ciblen, mom$ab_loop_cib);
311 0307 2 mom_init_logging ?);
312 0308 2
313 0309 2 ! Clear out the skip MOP message buffer. This buffer is used to save
314 0310 2 ! certain MOP messages that must be ignored if received more than once.
315 0311 2
316 0312 2 mom$gq_mop_msg_dsc [0] = 0;
317 0313 1 END;

```

! of MOM_INITIALIZE

007C 00000 MOM_INITIALIZE:

					.WORD	Save R2,R3,R4,R5,R6	0247			
	56	00000000G	00	9E	00002	MOVAB	MOM\$AB_SERVICE_DATA+7, R6	0266		
		00000000G	00	D4	00009	CLRL	MOM\$GL_SERVICE_FLAGS	0274		
	50		01	CE	0000F	MNEGL	#1, I	0276		
			15	11	00012	BRB	2\$			
51	50	00000089	8F	C5	00014	MULL3	#137, I, R1	0276		
			6641	94	0001C	CLRB	MOM\$AB_SERVICE_DATA+7[R1]			
			01	A641	94	0001F	CLRB	MOM\$AB_SERVICE_DATA+8[R1]	0277	
			02	A641	9F	00023	PUSHAB	MOM\$AB_SERVICE_DATA+9[R1]	0278	
			9E	D4	00027	CLRL	@(SP)+			
E3	50	00000000G	8F	F3	00029	AOBLEQ	#SVD\$C_ENTRY_COUNT, I, 1\$	0274		
	00000000*	00	01	CE	00031	MNEGL	#1, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCLI_STI*--	0283		
							137>>+9>			
	00000000*	00	28	D0	00038	MOVL	#40, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_LPL--	0288		
							*137>>+9>			
	00000000*	00	02	D0	0003F	MOVL	#2, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_LPD*--	0289		
							137>>+9>			
	00000000*	00	01	D0	00046	MOVL	#1, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_LPC*--	0290		
							137>>+9>			
	00000000*	00	01	CE	0004D	MNEGL	#1, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_LPH*--	0291		
							137>>+9>			
		00000000*	00	D4	00054	CLRL	<<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_STY*137>--	0297		
							>+9>			
	00000000*	00	FF	8F	9A	0005A	MOVZBL	#255, <<MOM\$AB_SERVICE_DATA+--	0298	
							<SVD\$GK_PCNO_SFTY*137>S+9>			
	00000000*	00	01	D0	00062	MOVL	#1, <<MOM\$AB_SERVICE_DATA+<SVD\$GK_PCNO_SNV*--	0299		
							137>>+9>			
004C	8F	00	6E	00000000G	00	2C	00069	MOVCS	#0, (SP), #0, #76, MOM\$AB_CIB	0305
							00070			
004C	8F	00	6E	00000000G	00	2C	00075	MOVCS	#0, (SP), #0, #76, MOM\$AB_LOOP_CIB	0306
							0007C			
		00000000V	00	00	FB	00081		CALLS	#0, MOM_INIT_LOGGING	0307
							00088	CLRL	MOM\$GQ_MOP_MSG_DSC	0312
							04	0008E	RET	0313

: Routine Size: 143 bytes, Routine Base: \$CODE\$ + 00B7

```

319 C314 1 %SBTTL 'MOM_INIT_LOGGING Initialization debug logging'
320 0315 1
321 0316 1 ROUTINE MOM_INIT_LOGGING: NOVALUE =
322 0317 1
323 0318 1 !++
324 0319 1
325 0320 1 This routine initializes the internal logging flags for MOM debugging.
326 0321 1 The logical name NML$LOG is translated to get the flag settings.
327 0322 1
328 0323 1 Inputs:
329 0324 1
330 0325 1 The logical name NML$LOG
331 0326 1
332 0327 1 !--
333 0328 1
334 0329 2 BEGIN
335 0330 2
336 0331 2
337 0332 2 Set internal logging flags if NML$LOG is defined.
338 0333 2
339 0334 2 mom$trnlognum ($ASCID ('NML$LOG'), mom$gl_logmask);
340 0335 2
341 0336 2
342 0337 2 If the NPARSE logging flag is set then set it in the NPARSE data area.
343 0338 2
344 0339 2
345 0340 2 IF .mom$gl_logmask [dbg$c_nparse]
346 0341 2 THEN
347 0342 2 npa$gl_logmask = i
348 0343 2 ELSE
349 0344 2 npa$gl_logmask = 0;
350 0345 2
351 0346 1 END;

```

! of MOM_INIT_LOGGING

.PSECT \$SPLITS,NOWRT,NOEXE,2

```

47 4F 4C 24 4C 4D 4E 00014 P.AAE: .ASCII \NML$LOG\
0001B .BLKB 1
00000007 0001C P.AAD: .LONG 7
00000000' 00020 .ADDRESS P.AAE

```

.PSECT \$CODE\$,NOWRT 2

```

000C 00000 MOM_INIT_LOGGING:
53 00000000G 00 9E 00002 .WORD Save R2,R3 : 0316
52 00000000G 00 9E 00009 MOVAB MOM$GL_LOGMASK, R3
53 DD 00010 MOVAB NPASGL_LOGMASK, R2
00000000' 00 9F 00012 PUSH R3 : 0334
04 00000000G 00 02 FB 00018 PUSHAB P.AAD
63 02 E1 0001F CALLS #2, MOM$TRNLOGNUM
62 01 D0 00023 BBC #2, MOM$GL_LOGMASK, 1$ : 0340
04 00026 RET #1, NPASGL_LOGMASK : 0342

```

MOMMAIN
V04-000

Network Management Maintenance Operations main 16-Sep-1984 01:58:54 VAX-11 Bliss-32 V4.0-742 Page 12
MOM_INIT_LOGGING Initialization debug logging 14-Sep-1984 12:44:33 DISK\$VMSMASTER:[MOM.SRC]MOMMAIN.B32;1 (6)

62 D4 00027 1\$: CLRL NPA\$GL_LOGMASK ; 0344
04 00029 RET ; 07 6

; Routine Size: 42 bytes, Routine Base: \$CODES + 0146

```

353 0347 1 %SBTTL 'MOM_GET_NICE_MSG Get the NICE service command message'
354 0348 1 ROUTINE MOM_GET_NICE_MSG =
355 0349 1
356 0350 1 |++
357 0351 1 | FUNCTIONAL DESCRIPTION:
358 0352 1 |
359 0353 1 | This routine is called by MOM$MAIN when MOM is processing a
360 0354 1 | maintenance operation which was requested via NCP. The routine
361 0355 1 | gets the NCP NICE message from the mailbox where it was put
362 0356 1 | by NML before it started MOM.
363 0357 1 |
364 0358 1 | IMPLICIT INPUTS:
365 0359 1 | NML$MOMMBX - translates to name of mailbox that NML wrote the
366 0360 1 | NICE message to before spawning MOM.
367 0361 1 |--
368 0362 2 BEGIN
369 0363 2
370 0364 2 LOCAL
371 0365 2 status ! Temporary status
372 0366 2 iosb: $iosb;
373 0367 2
374 0368 2 |
375 0369 2 | Assign a channel to NML$MOMMBX, and, if I got it, read NML's message
376 0370 2 | from it. The first 3 bytes of the message will contain the network
377 0371 2 | management version of the NCP originating the message.
378 0372 2 |
379 P 0373 2 status = $ASSIGN (DEVNAM = %ASCID 'NML$MOM_MBX',
380 0374 2 CHAN = mom$w_mbx_chan);
381 0375 2 IF .status THEN
382 0376 3 BEGIN
383 P 0377 3 status = $QIOW (
384 P 0378 3 FUNC = ios_readvblk, ! Read NML's mailbox
385 P 0379 3 CHAN = .mom$w_mbx_chan, ! Mailbox channel
386 P 0380 3 IOSB = iosb,
387 P 0381 3 P1 = mom$ab_nml_mailbox_buffer, ! Buffer for NML info
388 0382 3 P2 = mom$k_nml_mbx_buf_len); ! Length of mailbox buffer
389 0383 3 IF .status THEN
390 0384 3 status = .iosb [ios$w_status];
391 0385 3 |
392 0386 3 | If got the NICE message OK, save the length. Compensate for the 3
393 0387 3 | bytes of NCP management version at the beginning of the buffer.
394 0388 3 |
395 0389 3 IF .status THEN
396 0390 4 BEGIN
397 0391 4 mom$gl_nice_rcv_msg_len = .iosb [ios$w_count] - 3;
398 0392 4 mom$debug_msg (dbg$c_netio, ! Log message transmitted
399 0393 4 mom$ab_nice_rcv_buf,
400 0394 4 .mom$gl_nice_rcv_msg_len,
401 0395 4 %ASCID 'MOM NICE message received from NML');
402 0396 3 END;
403 0397 2 END;
404 0398 2 RETURN .status;
405 0399 1 END; ! of MOM_GET_NICE_MSG

```

```

00 58 42 4D 5F 4D 4F 4D 24 4C 4D 4E 00024 P.AAG: .ASCII \NML$MOM_MBX\<0>
                                010E000B C0030 P.AAF: .LONG 17694731
                                00000000' 00034 .ADDRESS P.AAG
67 61 73 73 65 6D 20 45 43 49 4E 20 4D 4F 4D 00038 P.AAI: .ASCII \MOM NICE message received from NML\<0>
6D 6F 72 66 20 64 65 76 69 65 63 65 72 20 65 00047
                                00 4C 4D 4E 20 00056
                                U0 0005B
                                010E0022 0005C P.AAH: .ASCII <0>
                                00000000' 00060 .LONG 17694754
                                .ADDRESS P.AAI

```

```

.EXTRN SYSS$ASSIGN, SYSS$QIOW
.PSECT $CODE$,NOWRT,2

```

001C 00000 MOM_GET_NICE MSG:

```

54 00000000' 00 9E 00002 .WORD Save R2,R3,R4 0348
53 00000000G 00 9E 00009 MOVAB MOM$W_MBX_CHAN, R4
5E 08 C2 00010 MOVAB MOM$GL_NICE_RCV_MSG_LEN, R3
7E 7C 00013 SUBL2 #8, SP
54 DD 00015 CLRQ -(SP) 0374
00000000' 00 9F 00017 PUSHL R4
00 04 FB 0001D PUSHAB P.AAF
52 50 D0 00024 CALLS #4, SYSS$ASSIGN
4D 52 E9 00027 MOVL R0, STATUS
7E 7C 0002A BLBC STATUS, 1$ 0375
7E 7C 0002C CLRQ -(SP) 0382
00000000G 8F DD 0002E PUSHL #MOM$K_NML_MBX_BUF_LEN
00000000G 00 9F 00034 PUSHAB MOM$AB_NML_MAILBOX_BUFFER
7E 7C 0003A CLRQ -(SP)
20 AE 9F 0003C PUSHAB IOSB
7E 31 DD 0003F PUSHL #49
00 64 3C 00041 MOVZWL MOM$W_MBX_CHAN, -(SP)
00000000G 00 0C FB 00046 CLRL -(SP)
52 50 D0 0004D CALLS #12, SYSS$QIOW
24 52 E9 00050 MOVL R0, STATUS 0383
52 6E 3C 00053 BLBC STATUS, 1$ 0384
1E 52 E9 00056 MOVZWL IOSB, STATUS 0389
63 02 AE 3C 00059 BLBC STATUS, 1$ 0391
63 03 C2 0005D MOVZWL IOSB+2, MOM$GL_NICE_RCV_MSG_LEN
00000000' 00 9F 00060 SUBL2 #3, MOM$GL_NICE_RCV_MSG_LEN
63 DD 00066 PUSHAB P.AAH 0394
00000000G 00 9F 00068 PUSHL MOM$GL_NICE_RCV_MSG_LEN
7E D4 0006E PUSHAB MOM$AB_NICE_RCV_BUF 0392
00000000G 00 04 FB 00070 CLRL -(SP)
50 52 D0 00077 1$: MOVL STATUS, R0 0398
04 0007A RET 0399

```

; Routine Size: 123 bytes, Routine Base: \$CODE\$ + 0170


```

407 0400 1 %SBTTL 'MOM$SEND Send NICE response to caller'
408 0401 1
409 0402 1 GLOBAL ROUTINE MOM$SEND (BUF_ADDRESS, BUF_LENGTH) =
410 0403 1
411 0404 1 !++
412 0405 1
413 0406 1 Function:
414 0407 1 The routine writes the NICE status messages back to NML's
415 0408 1 mailbox. NML will then read the mailbox and forward the response
416 0409 1 to NCP. The status messages give the completion status of the
417 0410 1 requested maintenance operation.
418 0411 1
419 0412 1 Inputs:
420 0413 1
421 0414 1 buf_address Address of the buffer to be transmitted.
422 0415 1 buf_length Length of the buffer in bytes.
423 0416 1
424 0417 1 Outputs:
425 0418 1
426 0419 1 Returns success. Errors are signalled.
427 0420 1 !--
428 0421 1
429 0422 2 BEGIN
430 0423 2
431 0424 2 LOCAL
432 0425 2 status,
433 0426 2 iosb: $iosb;
434 0427 2
435 0428 2 mom$debug_msg(dbg$c_netio, ! Log message transmitted
436 0429 2 .buf_address,
437 0430 2 .buf_length,
438 0431 2 %ASCII 'MOM NICE message sent to NML');
439 0432 2
440 0433 2 status = $QIOW (
441 0434 2 FUNC = io$_writevblk OR io$_now, ! Write to NML's mailbox
442 0435 2 CHAN = .mom$_w_mbx_chan, ! Mailbox channel
443 0436 2 IOSB = iosb,
444 0437 2 P1 = .buf_address, ! Buffer for NICE message
445 0438 2 P2 = .buf_length); ! Length of NICE buffer
446 0439 2
447 0440 2 ! If the QIO to the mailbox was successful then get look at the IOSB.
448 0441 2
449 0442 2
450 0443 2 IF .status THEN
451 0444 2 status = .iosb [ios$_w_status];
452 0445 2
453 0446 2
454 0447 2 ! If status is bad then signal the error.
455 0448 2
456 0449 2
457 0450 2 IF NOT .status THEN
458 0451 2 SIGNAL_STOP (.status);
459 0452 2
460 0453 2
461 0454 2 RETURN true; ! Return successful
462 0455 2
463 0456 1 END; ! of MOM$SEND

```

```

.PSECT $SPLITS,NOWRT,NOEXE,2
67 61 73 73 65 6D 20 45 43 49 4E 20 4D 4F 4D 00064 P.AAK: .ASCII \MOM NICE message sent to NML\
    4C 4D 4E 20 6F 74 20 74 6E 65 73 20 65 00073
    010E001C 00080 P.AAJ: .LONG 17694748
    00000000' 00084 .ADDRESS P.AAK

.PSECT $CODE$,NOWRT,2
    0000 00000 .ENTRY MOM$SEND, Save nothing
    SE 08 C2 00002 SUBL2 #8, SP
    00000000' 00 9F 00005 PUSHAB P.AAJ
    7E 04 AC 7D 0000B MOVQ BUF ADDRESS, -(SP)
    7E D4 0000F CLRL -(SP)
    00000000G 00 04 FB 00011 CALLS #4, MOM$DEBUG_MSG
    7E 7C 00018 CLRQ -(SP)
    7E 7C 0001A CLRQ -(SP)
    7E 04 AC 7D 0001C MOVQ BUF ADDRESS, -(SP)
    7E 7C 00020 CLRQ -(SP)
    7E 20 AE 9F 00022 PUSHAB IOSB
    7E 70 8F 9A 00025 MOVZBL #112, -(SP)
    7E 00000000' 00 3C 00029 MOVZWL MOM$W_MBX_CHAN, -(SP)
    7E D4 00030 CLRL -(SP)
    00000000G 00 0C FB 00032 CALLS #12, SYSSQIOW
    06 50 E9 00039 BLBC STATUS, 1$
    50 6E 3C 0003C MOVZWL IOSB, STATUS
    09 50 E8 0003F BLBS STATUS, 2$
    00000000G 00 50 DD 00042 1$: PUSHL STATUS
    01 FB 00044 CALLS #1, LIB$STOP
    50 01 D0 0004B 2$: MOVL #1, R0
    04 0004E RET

```

; Routine Size: 79 bytes, Routine Base: \$CODE\$ + 01EB

```

: 464 0457 1
: 465 0458 1 END
: 466 0459 1
: 467 0460 0 ELUDOM

```

.EXTRN LIB\$STOP

PSECT SUMMARY

Name	Bytes	Attributes
\$OWNS	2	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$CODE\$	570	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$SPLITS	136	NOVEC, NOWRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
-\$255\$DUA28:[MOM.OBJ]MOMLIB.L32:1	194	26	13	21	00:00.1
-\$255\$DUA28:[SHRLIB]NMALIBRY.L32:1	887	5	0	47	00:00.3
-\$255\$DUA28:[SHRLIB]NET.L32:1	1279	0	0	63	00:00.3
-\$255\$DUA28:[SYSLIB]STARLET.L32:1	9776	10	0	581	00:03.3

COMMAND QUALIFIERS

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

: Size: 570 code + 138 data bytes
: Run Time: 00:15.1
: Elapsed Time: 00:33.4
: Lines/CPU Min: 1829
: Lexemes/CPU-Min: 14457
: Memory Used: 99 pages
: Compilation Complete

