


```

SSSSSSSS  YY  YY  SSSSSSSS  SSSSSSSS  EEEEEEEEE  TTTTTTTTT  MM  MM  000000  DDDDDDDD
SSSSSSSS  YY  YY  SSSSSSSS  SSSSSSSS  EEEEEEEEE  TTTTTTTTT  MM  MM  000000  DDDDDDDD
SS  YY  YY  SS  SS  EE  TT  MMMM  MMMM  00  00  DD  DD
SS  YY  YY  SS  SS  EE  TT  MMMM  MMMM  00  00  DD  DD
SS  YY  YY  SS  SS  EE  TT  MM  MM  00  00  DD  DD
SS  YY  YY  SS  SS  EE  TT  MM  MM  00  00  DD  DD
SSSSSSS  YY  YY  SSSSSS  SSSSSS  EEEEEEE  TT  MM  MM  00  00  DD  DD
SSSSSSS  YY  YY  SSSSSS  SSSSSS  EEEEEEE  TT  MM  MM  00  00  DD  DD
SS  YY  YY  SS  SS  EE  TT  MM  MM  00  00  DD  DD
SS  YY  YY  SS  SS  EE  TT  MM  MM  00  00  DD  DD
SSSSSSSS  YY  SSSSSSSS  SSSSSSSS  EEEEEEEEE  TT  MM  MM  000000  DDDDDDDD
SSSSSSSS  YY  SSSSSSSS  SSSSSSSS  EEEEEEEEE  TT  MM  MM  000000  DDDDDDDD

```

```

LL  IIIII  SSSSSSSS
LL  IIIII  SSSSSSSS
LL  II  SS
LL  II  SS
LL  II  SS
LL  II  SSSSSS
LL  II  SSSSSS
LL  II  SS
LL  II  SS
LL  II  SS
LLLLLLLLLL  IIIII  SSSSSSSS
LLLLLLLLLL  IIIII  SSSSSSSS

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....
....
....

(1)	54	SFT RESOURCE WAIT MODE
(1)	85	SET SYSTEM SERVICE FAILURE EXCEPTION MODE
(1)	118	SET PROCESS SWAP MODE

```

0000 1      .TITLE  SYSSETMOD - SYSTEM SERVICES TO SET PROCESS MODES
0000 2      .IDENT  'V04-000'
0000 3
0000 4
0000 5
0000 6
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0000 28     D. N. CUTLER 17-AUG-76
0000 29
0000 30     SYSTEM SERVICES TO SET PROCESS MODES
0000 31
0000 32     SET RESOURCE WAIT MODE
0000 33     SET SYSTEM SERVICE FAILURE EXCEPTION MODE
0000 34     SET PROCESS SWAP MODE
0000 35
0000 36     MACRO LIBRARY CALLS
0000 37
0000 38
0000 39     $PCBDEF          ;DEFINE PCB OFFSETS
0000 40     $PRVDEF          ;DEFINE PRIVILEGE BITS
0000 41     $PSLDEF          ;DEFINE PROCESSOR STATUS FIELDS
0000 42     $SSDEF          ;DEFINE SYSTEM STATUS VALUES
0000 43
0000 44
0000 45     LOCAL SYMBOLS
0000 46
0000 47     ARGUMENT LIST OFFSET DEFINITIONS
0000 48
0000 49
00000004 0000 50 ENBFLG=4          ;FAILURE MODE INDICATOR
00000004 0000 51 SWPFLG=4         ;SWAP MODE INDICATOR
00000004 0000 52 WATFLG=4         ;WAIT MODE INDICATOR

```

```

0000 54 .SBTTL SET RESOURCE WAIT MODE
0000 55
0000 56 : EXE$SETRWM - SET RESOURCE WAIT MODE
0000 57
0000 58 : THIS SERVICE PROVIDES THE CAPABILITY TO CONTROL WHETHER IMPLICIT WAITS
0000 59 : ARE TO BE PERFORMED BY THE SYSTEM WHEN A REQUEST FOR A RESOURCE FAILS.
0000 60
0000 61 : INPUTS:
0000 62
0000 63 : WATFLG(AP) = WAIT MODE INDICATOR.
0000 64 : LOW BIT CLEAR TO ENABLE IMPLIED RESOURCE WAIT.
0000 65 : LOW BIT SET TO DISABLE IMPLIED RESOURCE WAIT.
0000 66
0000 67 : R4 = CURRENT PROCESS PCB ADDRESS.
0000 68
0000 69 : OUTPUTS:
0000 70
0000 71 : R0 LOW BIT SET INDICATES SUCCESSFUL COMPLETION.
0000 72
0000 73 : R0 = SSS WASCLR - NORMAL COMPLETION, RESOURCE WAIT WAS
0000 74 : PREVIOUSLY ENABLED.
0000 75
0000 76 : R0 = SSS WASSET - NORMAL COMPLETION, RESOURCE WAIT WAS
0000 77 : PREVIOUSLY DISABLED.
0000 78 :-
0000 79
00000000 80 .PSECT Y$EXEPAGED
0010 0000 81 .ENTRY EXE$SETRWM,*M<R4>
51 0A 9A 0002 82 MOVZBL #PCB$V_SSRWAIT,R1 ;SET RESOURCE WAIT BIT NUMBER
1C 11 0005 83 BRB SETMOD ;FINISH IN COMMON CODE
  
```

```

0007 85 .SBTTL SET SYSTEM SERVICE FAILURE EXCEPTION MODE
0007 86 :
0007 87 : * EXE$SET$FM - SET SYSTEM SERVICE FAILURE EXCEPTION MODE
0007 88 :
0007 89 : THIS SERVICE PROVIDES THE CAPABILITY TO CONTROL THE GENERATION OF SYSTEM
0007 90 : SERVICE FAILURE EXCEPTIONS WHEN A SERVICE RETURNS A STATUS VALUE WITH A
0007 91 : SEVERITY OF ERROR OR SEVERE ERROR.
0007 92 :
0007 93 : INPUTS:
0007 94 :
0007 95 : ENBFLG(AP) = FAILURE MODE INDICATOR.
0007 96 : LOW BIT CLEAR TO DISABLE FAILURE EXCEPTIONS.
0007 97 : LOW BIT SET TO ENABLE FAILURE EXCEPTIONS.
0007 98 :
0007 99 : R4 = CURRENT PROCESS PCB ADDRESS.
0007 100 :
0007 101 : OUTPUTS:
0007 102 :
0007 103 : R0 LOW BIT SET INDICATES SUCCESSFUL COMPLETION.
0007 104 :
0007 105 : R0 = $$$ WASCLR - NORMAL COMPLETION, FAILURE EXCEPTIONS
0007 106 : WERE PREVIOUSLY DISABLED.
0007 107 :
0007 108 : R0 = $$$ WASSET - NORMAL COMPLETION, FAILURE EXCEPTIONS
0007 109 : WERE PREVIOUSLY ENABLED.
0007 110 :
0007 111 :
0007 112 .ENTRY EXE$SET$FM, ^M<R4>
51 51 02 51 DC 00C7 113 MOVPSL R1 ;READ CURRENT PSL
0007 114 EXTZV #PSL$V_P$R$MOD, #PSL$S_P$R$MOD, R1, R1 ;EXTRACT PREVIOUS MODE
51 06 CO 0010 115 ADDL #PCB$V_S$F$EXC, R1 ;ADD BASE FAILURE ENABLE BIT NUMBER
0E 11 0013 116 BRB SETMOD ;FINISH IN COMMON CODE

```

```

0015 118 .SBTTL SET PROCESS SWAP MODE
0015 119 :+
0015 120 : EXE$SETSWM - SET PROCESS SWAP MODE
0015 121 :
0015 122 : THIS SERVICE PROVIDES THE CAPABILITY TO LOCK OR UNLOCK A PROCESS FROM
0015 123 : THE BALANCE SET. LOCKED IN THE BALANCE SET PREVENTS A PROCESS FROM BEING
0015 124 : SWAPPED OUT OF MEMORY.
0015 125 :
0015 126 : INPUTS:
0015 127 :
0015 128 : SWPFLG(AP) = PROCESS SWAP MODE INDICATOR.
0015 129 : LOW BIT CLEAR TO DISABLE PROCESS SWAPPING.
0015 130 : LOW BIT SET TO ENABLE PROCESS SWAPPING.
0015 131 :
0015 132 : R4 = CURRENT PROCESS PCB ADDRESS.
0015 133 :
0015 134 : OUTPUTS:
0015 135 :
0015 136 : R0 LOW BIT CLEAR INDICATES FAILURE TO SET PROCESS SWAP MODE.
0015 137 :
0015 138 : R0 = SSS NOPRIV - PROCESS DOES NOT HAVE PRIVILEGE TO
0015 139 : CHANGE ITS SWAP MODE.
0015 140 :
0015 141 : R0 LOW BIT SET INDICATES SUCCESSFUL COMPLETION.
0015 142 :
0015 143 : R0 = SSS WASCLR - NORMAL COMPLETION, PROCESS WAS PREVIOUSLY
0015 144 : NOT LOCKED IN BALANCE SET.
0015 145 :
0015 146 : R0 = SSS WASSET - NORMAL COMPLETION, PROCESS WAS PREVIOUSLY
0015 147 : LOCKED IN BALANCE SET.
0015 148 :-
0015 149 :-
0015 150 .ENABL LSB
0015 151 .ENTRY EXE$SETSWM,^M<R4>
0017 152 MOVZWL #SS$ NOPRIV,R0 ;ASSUME PROCESS CANNOT CHANGE SWAP MODE
001A 153 IFNPRIV PSWAPM,20$ ;PROCESS HAVE PRIVILEGE TO CHANGE SWAP MODE?
0020 154 MOVZBL #PCBSV PSWAPM,R1 ;SET PROCESS SWAP BIT NUMBER
0023 155 SETMOD: MOVZWL #SS$ WASSET,R0 ;ASSUME PREVIOUSLY SET
0026 156 BBS R1,PCBSL STS(R4),10$ ;IF SET, MODE CURRENTLY SET
002B 157 MOVZWL #SS$ WASCLR,R0 ;PREVIOUSLY CLEAR
24 A4 01 51 04 AC F0 002F 158 10$: INSV ENBF[AP],R1,#1,PCBSL STS(R4) ;SET NEW MODE
0035 159 20$: RET ;
0036 160 .DSABL LSB
0036 161
0036 162 .END

```

SYSSETMOD
Symbol table

- SYSTEM SERVICES TO SET PROCESS MODES

16-SEP-1984 02:32:27
5-SEP-1984 03:57:05

VAX/VMS Macro V04-00
[SYS.SRC]SYSSETMOD.MAR,1

Page 5
(1)

SYS
V04

```
ENBFLG          = 00000004
EXESSETRWM     = 00000000 RG    02
EXESSETSFM     = 00000007 RG    02
EXESSETSWM     = 00000015 RG    02
PCBSL_STS      = 00000024
PCBSQ_PRIV     = 00000084
PCBSV_PSWAPM   = 00000004
PCBSV_SSFEXC   = 00000006
PCBSV_SSRWAIT  = 0000000A
PRVSV_PSWAPM   = 0000000C
PSLSS_PRVMOD   = 00000002
PSLSV_PRVMOD   = 00000016
SETMOD         = 00000023 R    02
SSS_NOPRIV     = 00000024
SSS_WASCLR     = 00000001
SSS_WASSET     = 00000009
SWPFLG        = 00000004
WATFLG        = 00000004
```

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
YSEXEPAGED	00000036 (54.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	36	00:00:00.08	00:00:00.32
Command processing	131	00:00:00.56	00:00:01.32
Pass 1	237	00:00:05.79	00:00:12.86
Symbol table sort	0	00:00:01.04	00:00:02.06
Pass 2	47	00:00:01.05	00:00:02.59
Symbol table output	4	00:00:00.04	00:00:00.04
Psect synopsis output	1	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	458	00:00:08.58	00:00:19.21

The working set limit was 1350 pages.
32498 bytes (64 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 661 non-local and 2 local symbols.
162 source lines were read in Pass 1, producing 21 object records in Pass 2.
12 pages of virtual memory were used to define 11 macros.

! Macro library statistics .

Macro library name	Macros defined
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	2
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	6
TOTALS (all libraries)	8

739 GETS were required to define 8 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SYSSETMOD/OBJ=OBJ\$.SYSSETMOD MSRC\$:SYSSETMOD/UPDATE=(ENH\$:SYSSETMOD)+EXECMLS/LIB

0388 AH-BT13A-SE
VAX/VMS V4.0

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Grid of 100 terminal window screenshots showing various system utilities and diagnostic tools. Key titles visible include:

- SYSSETPRA LIS
- SYSSETIME LIS
- SYSSETPPM LIS
- SYSSETPRM LIS
- SYSSETPRV LIS
- SYSSETPRV LIS
- SYSSETSTK LIS
- SYSSETMOD LIS
- SYSSETEXU LIS
- SYSSETPRI LIS
- SYSSCHEUT LIS