

(1)	39	HISTORY	; DETAILED
(1)	56	DECLARATIONS	
(1)	78	EXESCLREF - CLEAR EVENT FLAG SERVICE	
(1)	128	SCH\$GETEFC - GET ADDRESS OF EVENT FLAG CLUSTER	
(1)	182	SCH\$CLREF - CLEAR EVENT FLAG (INTERNAL FORM)	
(1)	227	EXESREDEF - READ EVENT FLAG SYSTEM SERVICE	
(1)	271	EXESSETEF - SET EVENT FLAG SERVICE	

```

0000 1 .TITLE SYSEVTSRV - EVENT FLAG SERVICES
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 :*****
0000 6 :*
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0000 24 :*
0000 25 :*
0000 26 :*****
0000 27
0000 28 :++
0000 29 : FACILITY: EXECUTIVE, EVENT FLAG SERVICES
0000 30
0000 31 : ABSTRACT: SYSEVTSRV IMPLEMENTS THE CLEAR READ AND SET EVENT FLAG SYSTEM
0000 32 : SERVICES AND CONTAINS THE INTERNAL CLEAR EVENT FLAG ROUTINE.
0000 33
0000 34 :--
0000 35
0000 36 : VERSION:
0000 37
0000 38 : .PAGE
0000 39 : .SBTTL HISTORY ; DETAILED
0000 40
0000 41 : AUTHOR:
0000 42 : R. HUSTVEDT : VERSION
0000 43
0000 44 : MODIFIED BY:
0000 45
0000 46 : V02-005 SRB0036 Steve Beckhardt 27-Oct-1981
0000 47 : Changed SCH$GETEFC to always return via RSB. Changed
0000 48 : SCH$CLREF and SCH$READEF to do the RET on error. Added
0000 49 : alternate entry point SCH$CLREFR to always return via RSB.
0000 50
0000 51 : V02-004 LJK0024 Lawrence J. Kenah 14 May 1981
0000 52 : Only take fast exit path out of $SETEF if call to SCH$POSTEF
0000 53 : was successful. This insures that system service exceptions
0000 54 : work correctly. Introduce symbolic offset for saved FP.

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```
0000 56          .SBTTL  DECLARATIONS
0000 57
0000 58  :
0000 59  : INCLUDE FILES:
0000 60  :
0000 61
0000 62          $CEBDEF          ; COMMON EVENT BLOCK DEFINITIONS
0000 63          $DYNDEF          ; DYNAMIC DATA STRUCTURE TYPE DEFS
0000 64          $IPLDEF          ; IPL DEFINITIONS
0000 65          $PCBDEF          ; PCB DEFINITIONS
0000 66          $PRIDEF          ; PRIORITY INCREMENT DEFINITIONS
0000 67          $$SFDEF          ; Stack frame symbolic offsets
0000 68          $$SSDEF          ; STATUS CODE DEFINITIONS
0000 69  :
0000 70  : EQUATES:
0000 71  :
00000004 0000 72  EFN=4          ; DISPLACEMENT TO EVENT FLAG NUMBER ARG
00000008 0000 73  MASKP=8       ; DISPLACEMENT TO MASK POINTER
0000 74
00000000 0000 75          .PSECT  AEXENONPAGED, BYTE ; NONPAGED EXEC
0000 76
```

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0000 78      .SBTTL  EXESCLREF - CLEAR EVENT FLAG SERVICE
0000 79
0000 80 :++
0000 81 : FUNCTIONAL DESCRIPTION:
0000 82 : THE CLEAR EVENT FLAG SYSTEM SERVICE CLEARS THE SPECIFIED
0000 83 : EVENT FLAG. NO RESCHEDULING IS EVER NECESSARY AFTER CLEARING
0000 84 : AN EVENT FLAG.
0000 85 :
0000 86 :
0000 87 : CALLING SEQUENCE:
0000 88 : CALL  ARGLIST,EXESCLREF
0000 89 :
0000 90 :
0000 91 : INPUT PARAMETERS:
0000 92 : 04(AP) - EVENT FLAG NUMBER TO BE CLEARED
0000 93 : R4 - PCB ADDRESS OF CURRENT PROCESS
0000 94 :
0000 95 : IMPLICIT INPUTS:
0000 96 :
0000 97 : OUTPUT PARAMETERS:
0000 98 : R0 - COMPLETION STATUS CODE, ERROR IF BIT 0 IS SET.
0000 99 :
0000 100 :
0000 101 : IMPLICIT OUTPUTS:
0000 102 : THE EVENT FLAG SPECIFIED WITHIN THE CLUSTER SPECIFIED
0000 103 : IS CLEARED.
0000 104 :
0000 105 : COMPLETION CODES:
0000 106 : SSS_WASCLR - EVENT FLAG WAS ALREADY CLEAR
0000 107 : SSS_WASSET - EVENT FLAG WAS SET
0000 108 : SSS_ILLEFC - ILLEGAL CLUSTER NUMBER (I.E. 4 - 7)
0000 109 : SSS_UNASEFC - UNASSIGNED CLUSTER NUMBER
0000 110 :
0000 111 : SIDE EFFECTS:
0000 112 : NONE
0000 113 :
0000 114 :--
0000 115 :
0000 116 :
0000 117 :
0000 118 EXESCLREF::
0000 119      .WORD  ^M<R2,R3,R4>      ; CLEAR EVENT FLAG SERVICE
53  04 AC 001C 0000 120      MOVZBL  EFN(AP),R3      ; ENTRY MASK SAVING R2,R3,R4
0000 121      BSBB    S^H$CLREF      ; GET EVENT FLAG NUMBER
5D  0C AD D0 0006 122      MOVL   SF,SAVE_FP(FP),FP  ; CALL INTERNAL ROUTINE
SE  00' C0 000C 123      ADDL   S^#EXESC_CMSTKSZ,SP ; RESTORE FRAME POINTER
0000 124      REI                    ; CLEAN STACK BACK TO PC,PSL
0010 125
0010 126

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0010 128 .SBTTL SCH$GETEFC - GET ADDRESS OF EVENT FLAG CLUSTER
0010 129 :++
0010 130 : FUNCTION:
0010 131 : SCH$GETEFC COMPUTES THE ADDRESS OF THE EVENT FLAG CLUSTER
0010 132 : SELECTED BY THE EVENT FLAG NUMBER IN R3. THE EVENT FLAG CLUSTER
0010 133 : ADDRESS IS RETURNED IN R2.
0010 134 :
0010 135 : CALLING SEQUENCE:
0010 136 : BSBB/BSBW/JSB SCH$GETEFC
0010 137 :
0010 138 : INPUT PARAMETERS:
0010 139 : R3 - EVENT FLAG NUMBER
0010 140 : R4 - PCB ADDRESS
0010 141 :
0010 142 : OUTPUT PARAMETERS:
0010 143 : R0 - STATUS CODE
0010 144 : R1 - IF LOCAL CLUSTER, (0 OR -1)
0010 145 : IF COMMON CLUSTER, (2 OR 1)
0010 146 : R2 - ADDRESS OF EVENT FLAG CLUSTER
0010 147 : R3 - EVENT FLAG NUMBER WITHIN CLUSTER
0010 148 :
0010 149 : COMPLETION CODES:
0010 150 : SSS_NORMAL - NORMAL COMPLETION STATUS
0010 151 : SSS_ILLEFC - ILLEGAL CLUSTER NUMBER
0010 152 : SSS_UNASEFC - UNASSIGNED CLUSTER NUMBER
0010 153 :
0010 154 : --
0010 155 :
0010 156 SCH$GETEFC::
51 53 50 01 3C 0010 157 : GET ADDRESS OF EVENT FLAG CLUSTER
53 53 03 05 EE 0013 158 : ASSUME NORMAL COMPLETION
53 52 50 A441 DE 001A 159 : EXTRACT CLUSTER NUMBER
53 FFFFFFFE0 8F CA 001F 160 : ILLEGAL WITH 4,5,6,7
01 51 FS 0026 161 : GET ADDR OF EF VECTOR
52 62 10 C1 002A 162 : EXTRACT EVENT NUMBER WITHIN CLUSTER
FA A2 2D 91 0030 163 : BR IF COMMON
01 13 0034 164 10$: RSB : RETURN WITH SUCCESS
05 0036 165 : GET POINTER TO CEB EVENT MASK
0037 166 BGEQ 40$ : BR IF NOT ASSIGNED
0037 167 CMPB #DYN$C_SLAVCEB,<CEB$B_TYPE-CEB$EFC>(R2) : IS THIS A SLAVE CEB?
0037 168 BEQL 20$ : BR IF SLAVE, FIND MASTER CEB ADR
0037 169 RSB : RETURN WITH SUCCESS
0037 170 : COMPUTE ADDRESS OF MASTER CEB IN SHARED MEMORY.
52 30 A2 D0 0037 172 20$: MOVL <CEB$MASTER-CEB$EFC>(R2),R2 : GET ADR OF SH MEM MASTER CEB
52 52 10 C0 003B 173 : POINT TO EFC IN MASTER CEB
05 003E 174 RSB
003F 175
50 00EC 8F 3C 003F 176 30$: MOVZWL #SS$_ILLEFC,R0 : SET ERROR CODE FOR ILLEGAL EFC
05 0044 177 RSB : AND RETURN
0045 178
50 0234 8F 3C 0045 179 40$: MOVZWL #SS$_UNASEFC,R0 : SET ERROR CODE FOR UNASSIGNED
05 004A 180 RSB : AND RETURN

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004B 182 .SBTTL SCH$CLREF - CLEAR EVENT FLAG (INTERNAL FORM)
004B 183 :++
004B 184 : SCH$CLREF - CLEAR EVENT FLAG, INTERNAL FORM
004B 185 :
004B 186 : CALLING SEQUENCE:
004B 187 : JSB/BSB SCH$CLREF
004B 188 :
004B 189 : SCH$CLREF WILL RETURN VIA RET RATHER THAN THE NORMAL RSB ON ERROR
004B 190 : CONDITIONS
004B 191 : SCH$CLREFR IS AN ALTERNATE ENTRY POINT THAT ALWAYS RETURNS VIA RSB.
004B 192 :
004B 193 : INPUT:
004B 194 : R3 - EVENT FLAG NUMBER, ZERO FILLED.
004B 195 : R4 - PCB ADDRESS
004B 196 :
004B 197 : OUTPUT:
004B 198 : R0 - COMPLETION STATUS, ERROR IF BIT 0 CLEAR.
004B 199 :
004B 200 : COMPLETION CODES:
004B 201 : $$$_WASCLR - EVENT FLAG WAS ALREADY CLEAR
004B 202 : $$$_WASSET - EVENT FLAG WAS SET
004B 203 : $$$_ILLEFC - ILLEGAL CLUSTER NUMBER
004B 204 : $$$_UNASEFC - UNASSIGNED CLUSTER NUMBER
004B 205 : --
004B 206 :
004B 207 .ENABL LSB
004B 208
004B 209 SCH$CLREFR:: : CLEAR EVENT FLAG (AND RETURN TO CALLER)
06 50 C3 10 004B 210 BSBB SCH$GETEFC : GET ADDRESS OF EVENT FLAG CLUSTER
06 50 E8 004D 211 BLBS R0,5$ : ON SUCCESS JOIN COMMON CODE
05 0050 212 RSB : RETURN ON FAILURE
0051 213
0051 214 SCH$CLREF:: : CLEAR EVENT FLAG INTERNAL
08 50 BD 10 0051 215 BSBB SCH$GETEFC : GET ADDRESS OF EVENT FLAG CLUSTER
08 50 E9 0053 216 BLBC R0,20$ : BRANCH IF ERROR
0056 217 ASSUME $$$_WASCLR EQ $$$_NORMAL
0056 218
03 62 53 E7 0056 219 5$: BBCCI R3,(R2),10$ : $$$_NORMAL RETURNED BY SCH$GETEFC
50 09 D0 005A 220 MOVL #$$$_WASSET,R0 : CLEAR AND TEST FLAG
05 005D 221 10$: RSB : REPORT STATUS
005E 222 : RETURN TO CALLER
04 005E 223 20$: RET : EXIT SERVICE IF ERROR
005F 224
005F 225 .DSABL LSB

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005F 227      .SBTTL EXES$READEF - READ EVENT FLAG SYSTEM SERVICE
005F 228      :++
005F 229      : FUNCTIONAL DESCRIPTION:
005F 230      : EXES$READEF IMPLEMENTS THE READ EVENT FLAG SYSTEM SERVICE WHICH
005F 231      : RETURNS THE STATE OF THE EVENT FLAG CLUSTER SELECTED BY THE
005F 232      : SPECIFIED EVENT FLAG NUMBER.
005F 233      :
005F 234      : CALLING SEQUENCE:
005F 235      : CALLG  ARGLIST,EXES$READEF
005F 236      :
005F 237      : INPUT PARAMETERS:
005F 238      : 04(AP) - EVENT FLAG NUMBER TO SELECT PROPER CLUSTER
005F 239      : 08(AP) - ADDRESS TO STORE STATE OF EVENT FLAG CLUSTER
005F 240      : R4 - PCB ADDRESS OF CURRENT PROCESS
005F 241      :
005F 242      : OUTPUT PARAMETERS:
005F 243      : R0 - COMPLETION STATUS CODE
005F 244      : @08(AP) - STATE OF 32 EVENTS IN SPECIFIED CLUSTER
005F 245      :
005F 246      : COMPLETION CODES:
005F 247      : SSS_WASSET - SPECIFIC EVENT FLAG IS CURRENTLY SET
005F 248      : SSS_WASCLR - SPECIFIC EVENT FLAG IS CURRENTLY CLEAR
005F 249      : SSS_ILLEFC - ILLEGAL EVENT FLAG CLUSTER NUMBER
005F 250      : SSS_UNASEFC - UNASSIGNED EVENT FLAG CLUSTER
005F 251      : SSS_ACCVIO - ACCESS VIOLATION ON WRITE DESTINATION
005F 252      :
005F 253      :--
005F 254      :
005F 255      EXES$READEF::      : READ EVENT FLAG SYSTEM SERVICE
005F 256      .WORD  ^M<R2,R3,R4>      : ENTRY MASK SAVING R2,R3,R4
53  04 AC 001C 0061 257      MOVZBL  EFN(AP),R3      : GET EVENT FLAG NUMBER
      18 50 E9 0065 258      BSBB   SCH$GETEFC      : GET EFC ADDRESS AND CONTENT
      006A 259      BLBC   R0,20$      : BRANCH ON ERROR
51  08 AC D0 006A 260      ASSUME  SSS_WASCLR EQ SSS_NORMAL
      006A 261      MOVL   MASKP(AP),R1      : GET ADDRESS OF DESTINATION
07  61 62 D0 006E 262      IFNOWRT #4,(R1),10$      : TEST FOR WRITABLE
      0074 263      MOVL   (R2),(R1)      : STORE EVENT FLAG BIT VECTOR
      0077 264      BBC    R3,(R1),20$      : EXIT IF CLEAR
      50 09 3C 007B 265      MOVZWL #SS$_WASSET,R0      : RETURN SET STATUS CODE
      007E 266      RET      : AND RETURN
      50 0C 3C 007F 267 10$: MOVZWL #SS$_ACCVIO,R0      : SET ACCESS VIOLATION
      0082 268 20$: RET      : AND RETURN
0083 269
    
```

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0083 271      .SBTTL EXESSETEF - SET EVENT FLAG SERVICE
0083 272      :++
0083 273      : FUNCTIONAL DESCRIPTION:
0083 274      : EXESSETEF IMPLEMENTS THE SET EVENT FLAG SERVICE WHICH SETS
0083 275      : THE SPECIFIED EVENT FLAG AND CAUSES ANY APPROPRIATE RESCHEDULING.
0083 276      :
0083 277      : CALLING SEQUENCE:
0083 278      : CALLG EXESSETEF
0083 279      :
0083 280      : INPUT PARAMETERS:
0083 281      : 04(AP) - EVENT FLAG NUMBER
0083 282      : R4 - PCB ADDRESS OF CURRENT PROCESS
0083 283      :
0083 284      : IMPLICIT INPUTS:
0083 285      : CURRENT PCB LOCATED VIA SCH$GL_CURPCB
0083 286      :
0083 287      : OUTPUT PARAMETERS:
0083 288      : R0 - COMPLETION STATUS CODE
0083 289      :
0083 290      : COMPLETION CODES:
0083 291      : SSS_WASCLR - SPECIFIED EVENT WAS CLEAR INITIALLY
0083 292      : SSS_WASSET - SPECIFIED EVENT WAS SET INITIALLY
0083 293      : SSS_ILLEFC - ILLEGAL CLUSTER NUMBER
0083 294      : SSS_UNASEFC - UNASSIGNED EVENT FLAG CLUSTER NUMBER
0083 295      : SSS_BADQUEUEHDR - UNABLE TO MAKE PROCESSOR REQUEST TO UPDATE SLAVE CEB
0083 296      :
0083 297      :--
0083 298
0083 299 EXESSETEF::
0083 300      .WORD ^M<R2,R3,R4,R5> ; SET EVENT FLAG SYSTEM SERVICE
0083 301      MOVZBL EFN(AP),R3 ; ENTRY MASK SAVING R2,R3,R4,R5
0083 302      MOVL PCB$P_PID(R4),R1 ; GET EVENT FLAG NUMBER
0083 303      MOVL #PRI$-IOCOM,R2 ; GET PROCESS ID (PID)
0083 304      BSBW SCH$POSTEF ; SET PRIORITY INCREMENT CLASS
0083 305      BLBC R0,10$ ; POST EVENT FLAG
0083 306      MOVL SF$L_SAVE_FP(FP),FP ; DON'T USE FAST EXIT IF ERROR
0083 307      ADDL S^#EXESC_UMSTKSZ,SP ; RESTORE FRAME POINTER
0083 308      REI ; CLEAN STACK BACK TO PC,PSL
0083 309      ; AND RETURN
0083 310 10$: RET ; EXIT THROUGH CHANGE MODE DISPATCHER
0083 311 ; COMMON EXIT PATH IF ERROR
0083 312
0083 313      .END

```

```

003C 0083 300
S3 04 AC 9A 0085 301
S1 60 A4 D0 0089 302
   S2 01 D0 008D 303
   FF6D' 30 0090 304
   08 50 E9 0093 305
SD 0C AD D0 0096 306
   SE 00' C0 009A 307
   02 009D 308
   009E 309
   04 009E 310
   009F 311
   009F 312
   009F 313

```

SYSEVTSRV
Symbol table

- EVENT FLAG SERVICES

I 6

16-SEP-1984 02:04:29
5-SEP-1984 03:53:06

VAX/VMS Macro V04-00
[SYS.SRC]SYSEVTSRV.MAR;1

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SY
VO

```

CEBSB_TYPE      = 0000000A
CEBSL_EFC       = 00000010
CEBSL_MASTER    = 00000040
DYN$C_SLAVCEB   = 0000002D
EFN             = 00000004
EXE$CLREF       00000000  RG    02
EXE$C_CMSTKSZ   ***** X    02
EXE$REDEF       0000005F  RG    02
EXE$SETEF       00000083  RG    02
MASKP          = 00000008
PCBSL_EFCS      = 00000050
PCBSL_PID       = 00000060
PRIS_TOCOM      = 00000001
SCH$CLREF       00000051  RG    02
SCH$CLREFR      0000004B  RG    02
SCH$GETEFC      00000010  RG    02
SCH$POSTEF      ***** X    02
SFSL_SAVE_FP    = 0000000C
SS$_ACCVID      = 0000000C
SS$_ILLEFC      = 000000EC
SS$_NORMAL      = 00000001
SS$_UNASEFC     = 00000234
SS$_WASCLR      = 00000001
SS$_WASSET      = 00000009
  
```

! 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
AEXENONPAGED	0000009F (159.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.08	00:00:01.21
Command processing	106	00:00:00.58	00:00:05.47
Pass 1	266	00:00:07.23	00:00:28.11
Symbol table sort	0	00:00:01.10	00:00:03.18
Pass 2	68	00:00:01.42	00:00:03.41
Symbol table output	4	00:00:00.05	00:00:00.49
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	477	00:00:10.48	00:00:41.89

The working set limit was 1350 pages.
40900 bytes (80 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 780 non-local and 10 local symbols.
313 source lines were read in Pass 1, producing 13 object records in Pass 2.
16 pages of virtual memory were used to define 15 macros.

! Macro library statistics !

Macro library name	Macros defined
-----	-----
-\$255SDUA28:[SYS.OBJ]LIB.MLB;1	6
-\$255SDUA28:[SYSLIB]STARLET.MLB;2	6
TOTALS (all libraries)	12

866 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SYSEVTSRV/OBJ=OBJ\$:SYSEVTSRV MSRC\$:SYSEVTSRV/UPDATE=(ENHS:SYSEVTSRV)+EXECMLS/LIB

