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DECLARATIONS
EXE\$SETSTK - SET STACK LIMITS

```

0000 1 .TITLE SYSSETSTK - SET STACK LIMITS
0000 2 .IDENT 'V04-000'
0000 3
0000 4 :*****
0000 5 :*
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0000 23 :*
0000 24 :*
0000 25 :*****
0000 26
0000 27 :++
0000 28 : FACILITY: EXECUTIVE, SYSTEM SERVICES
0000 29
0000 30 : ABSTRACT:
0000 31 : This module implements the service to set the stack limits for
0000 32 : any mode. Actually, USER mode is a nop since it requires no
0000 33 : system service to change and is virtually infinite. (Groan!!!)
0000 34
0000 35 : ENVIRONMENT: VAX/VMS
0000 36
0000 37 : AUTHOR: Kerbey T. Altmann, CREATION DATE: 05-Jun-1981
0000 38
0000 39 : MODIFIED BY:
0000 40
0000 41 :--

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0000 43 .SBTTL DECLARATIONS
0000 44 :
0000 45 : INCLUDE FILES:
0000 46 :
0000 47 $PSLDEF
0000 48 $SSDEF
0000 49
0000 50 :
0000 51 : LOCAL SYMBOLS:
0000 52 :
00000004 0000 53 INADR= 4 ; Address of input array
00000008 0000 54 RETADR= 8 ; Address of output array
0000000C 0000 55 ACMODE= 12 ; The stack mode to set
0000 56
```

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0000 58      .SBTTL  EXESSETSTK - SET STACK LIMITS
0000 59
0000 60      :++
0000 61      : FUNCTIONAL DESCRIPTION:
0000 62      :
0000 63      : The SETSTK system service allows one to change the values in
0000 64      : the stack limit and base arrays held in per-process P1 space.
0000 65      : These arrays are used by EXCEPTION and BUGCHECK to validate
0000 66      : stack address during error processing. The first longword
0000 67      : is the setting for the low memory (limit or top) address of
0000 68      : the stack - the check for validity would be less than or
0000 69      : equal to this value. The second longword is the setting for
0000 70      : the high memory (base) address of the stack - the check for
0000 71      : validity would be greater than this value.
0000 72
0000 73      : INPUTS:
0000 74      :
0000 75      : INADR(AP)      Pointer to a 2 longword array specifying the
0000 76      :                      new contents of the stack arrays.
0000 77      : RETADR(AP)     Pointer to a 2 longword array to receive the
0000 78      :                      contents of the former settings.
0000 79      : ACMODE(AP)    A longword containing the value of the access
0000 80      :                      mode for whose stack the settings are to be
0000 81      :                      changed (maximized with the current mode).
0000 82
0000 83      : OUTPUTS:
0000 84      :
0000 85      : R0              Status code
0000 86
0000 87      :--
0000 88
0000 89      .PSECT  YEXEPAGED
0000 90      .ENTRY  EXESSETSTK, ^M<R2,R3,R4>
0002 91
50  OC AC  02  00  EF 0002 92  EXTZV  #0,#2,ACMODE(AP),R0      : Get specified access mode
      FFF5' 30 0008 93  BSBW    EXES$MAXACMODE      : Maximize access mode
51  50  DO 000B 94  MOVL    R0, R1              : Hold for later
50  03  D1 000E 95  CMPL    #PSL$C_USER, R0      : Is it USER mode?
      3B 13 0011 96  BEQL    20$              : Yes, just make it a no-op
50  0C  3C 0013 97  MOVZWL  #SS$ ACCVIO, R0      : Assume access violation
52  04 AC  D0 0016 98  MOVL    INADR(AP), R2      : Pick up pointer to input range
      35 13 001A 99  BEQL    30$              : No range specified is ACCVIO
      001C 100 IFNORD  #8, (R2), 30$      : Check accessibility
53  08 AC  D0 0022 101 MOVL    RETADR(AP), R3      : Pick up pointer to output range
      16 13 0026 102 BEQL    10$              : None specified
      0028 103 IFNOWRT #8, (R3), 30$      : Check accessibility
83  00000000'9F41 D0 002E 104 MOVL    @#CTLSAL_STACKLIM[R1],- : Return the Lo-address (limit)
      0036 105 (R3)+
63  00000000'9F41 D0 0036 106 MOVL    @#CTLSAL_STACK[R1], (R3); : Return the Hi-address (base)
00000000'9F41 82 D0 003E 107 10$: MOVL    (R2)+, -
      0046 108 @#CTLSAL_STACKLIM[R1] : Set the Lo-address (limit)
00000000'9F41 62 D0 0046 109 20$: MOVL    (R2), @#CTLSAL_STACK[R1]; : Set the Hi-address (base)
      50 01 3C 004E 110 30$: MOVZWL  #SS$_NORMAL, R0      : Success
      04 0051 111 RET
      0052 112
      0052 113 .END

```

SYSSETSTK
Symbol table

- SET STACK LIMITS

M 10

16-SEP-1984 02:34:44 VAX/VMS Macro V04-00
5-SEP-1984 03:57:33 [SYS.SRC]SYSSETSTK.MAR;1

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| | | | |
|-----------------|------------|----|----|
| ACMODE | = 0000000C | | |
| CTLSAL_STACK | ***** | X | 02 |
| CTLSAL_STACKLIM | ***** | X | 02 |
| EXESMAXACMODE | ***** | X | 02 |
| EXESSETSTK | 00000000 | RG | 02 |
| INADR | = 00000004 | | |
| PSL\$C_USER | = 00000003 | | |
| RETADR | = 00000008 | | |
| SS\$_ACCVIO | = 0000000C | | |
| SS\$_NORMAL | = 00000001 | | |

! Psect synopsis !

| PSECT name | Allocation | PSECT No. | Attributes | | | | | | | | | | | | | | |
|------------|-----------------|-----------|------------|-----|-----|-----|-------|-------|------|-------|-------|------|--|--|--|--|--|
| . ABS . | 00000000 (0.) | 00 (0.) | NOPIC USR | CON | ABS | LCL | NOSHR | NOEXE | NORD | NOWRT | NOVEC | BYTE | | | | | |
| \$AB\$\$ | 00000000 (0.) | 01 (1.) | NOPIC USR | CON | ABS | LCL | NOSHR | EXE | RD | WRT | NOVEC | BYTE | | | | | |
| YEXEPAGED | 00000052 (82.) | 02 (2.) | NOPIC USR | CON | REL | LCL | NOSHR | EXE | RD | WRT | NOVEC | BYTE | | | | | |

! Performance indicators !

| Phase | Page faults | CPU Time | Elapsed Time |
|------------------------|-------------|-------------|--------------|
| Initialization | 30 | 00:00:00.10 | 00:00:00.27 |
| Command processing | 107 | 00:00:00.56 | 00:00:01.28 |
| Pass 1 | 207 | 00:00:04.05 | 00:00:05.27 |
| Symbol table sort | 0 | 00:00:00.66 | 00:00:00.73 |
| Pass 2 | 38 | 00:00:00.75 | 00:00:00.91 |
| Symbol table output | 2 | 00:00:00.02 | 00:00:00.02 |
| Psect synopsis output | 2 | 00:00:00.03 | 00:00:00.03 |
| Cross-reference output | 0 | 00:00:00.00 | 00:00:00.00 |
| Assembler run totals | 388 | 00:00:06.17 | 00:00:08.53 |

The working set limit was 1200 pages.
 22191 bytes (44 pages) of virtual memory were used to buffer the intermediate code.
 There were 30 pages of symbol table space allocated to hold 453 non-local and 3 local symbols.
 113 source lines were read in Pass 1, producing 16 object records in Pass 2.
 11 pages of virtual memory were used to define 10 macros.

! Macro library statistics !

| Macro library name | Macros defined |
|-------------------------------------|----------------|
| _\$255\$DUA28:[SYS.OBJ]LIB.MLB;1 | 2 |
| -\$255\$DUA28:[SYSLIB]STARLET.MLB;2 | 5 |
| TOTALS (all libraries) | 7 |

520 GETS were required to define 7 macros.

There were no errors, warnings or information messages.

SYS
V04

SYSSETSTK
VAX-11 Macro Run Statistics

- SET STACK LIMITS

N 10

16-SEP-1984 02:34:44 VAX/VMS Macro V04-00
5-SEP-1984 03:57:33 [SYS.SRC]SYSSETSTK.MAR;1

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

SYS
V04

