```
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO    TTTTTTTTTTTTTTT     SSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO    TTTTTTTTTTTTTTT     SSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO    TTTTTTTTTTTTTTT     SSSSSSSSSSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT         SSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO       TTT            SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO       TTT            SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO       TTT            SSSSSSSSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBB         BBB  OOO         OOO  OOO         OOO       TTT                     SSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO         TTT         SSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO         TTT         SSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO         TTT         SSSSSSSSSSS
```

FILEID**STACONFIG

```
  SSSSSSSS  TTTTTTTTTT    AAAAAA      CCCCCCCC    000000    NN      NN  FFFFFFFFFF    IIIIII      GGGGGGGG
  SSSSSSSS  TTTTTTTTTT    AAAAAA      CCCCCCCC    000000    NN      NN  FFFFFFFFFF    IIIIII      GGGGGGGG
SS              TT       AA    AA    CC          00    00  NN      NN  FF              II      GG
SS              TT       AA    AA    CC          00    00  NN      NN  FF              II      GG
SS              TT       AA    AA    CC          00    00  NNNN    NN  FF              II      GG
SS              TT       AA    AA    CC          00    00  NNNN    NN  FF              II      GG
  SSSSSS        TT       AA    AA    CC          00    00  NN  NN  NN  FFFFFFF         II      GG
  SSSSSS        TT       AA    AA    CC          00    00  NN  NN  NN  FFFFFFF         II      GG
        SS      TT       AAAAAAAAAA  CC          00    00  NN    NNNN  FF              II      GG  GGGGGG
        SS      TT       AAAAAAAAAA  CC          00    00  NN    NNNN  FF              II      GG  GGGGGG
        SS      TT       AA    AA    CC          00    00  NN      NN  FF              II      GG      GG      ....
        SS      TT       AA    AA    CC          00    00  NN      NN  FF              II      GG      GG      ....
SSSSSSSS        TT       AA    AA      CCCCCCCC    000000    NN      NN  FF          IIIIII      GGGGGG        ....
SSSSSSSS        TT       AA    AA      CCCCCCCC    000000    NN      NN  FF          IIIIII      GGGGGG        ....

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
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

Table of contents

```
0000     1          .TITLE  STACONFIG - MAIN PROGRAM FOR STANDALONE CONFIGURE
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 ;++
0000    30 ; FACILITY:     STANDALONE CONFIGURE
0000    31 ;
0000    32 ; ABSTRACT:
0000    33 ;       THIS ROUTINE IS THE MAIN PROGRAM AND SUBROUTINES FOR
0000    34 ;       STANDALONE CONFIGURE.  THIS PROCESS IS USED TO CONFIGURE ALL
0000    35 ;       DISK AND PORT DRIVERS (CO-INCIDENTALLY, PAPER TAPE AS WELL) FROM
0000    36 ;       SYSINIT.  ALL MSCP- AND HSC-SERVED DEVICES ARE CONFIGURED AS WELL,
0000    37 ;       IF A QUORUM DISK IS NEEDED.
0000    38 ;
0000    39 ; ENVIRONMENT:  USER, EXEC, AND KERNEL MODE
0000    40 ;
0000    41 ; AUTHOR.  MARYANN HINDEN,      CREATION DATE:  18-SEP-1979
0000    42 ;          (ADAPTED FROM STASYSGEN)
0000    43 ;
0000    44 ; MODIFIED BY:
0000    45 ;
0000    46 ;       V03-005 RSH0075         R. Scott Hanna  14-oct-1983
0000    47 ;               Change the call to the ast routine AST_REC to cause
0000    48 ;               it to execute in exec mode.
0000    49 ;
0000    50 ;       V03-004 RSH0073         R. Scott Hanna  10-Oct-1983
0000    51 ;               Change the call to the ast routine AST_REC to cause
0000    52 ;               it to execute in kernel mode.
0000    53 ;
0000    54 ;       V03-003 WMC0003         Wayne Cardoza   09-Aug-1983
0000    55 ;               Put D devices back.
0000    56 ;
0000    57 ;       V03-002 WMC0002         Wayne Cardoza   05-Aug-1983
```

```
0000     58 ;                  Add lbr$output_help.
0000     59 ;                  Disable autoconfigure of D devices until this module is made
0000     60 ;                  to deal with noncontigous drivers.
0000     61 ;
0000     62 ;       V03-001 WMC0001         Wayne Cardoza   01-Aug-1983
0000     63 ;                  Add BOO$EXEOPEN, BOO$FILCLOSE, BOO$UFOOPEN, EXE$LOAD_CODE
0000     64 ;
0000     65 ;--
```

```
                                        0000     67          .SBTTL  DECLARATIONS
                                        0000     68 ;
                                        0000     69 ; INCLUDE FILES:
                                        0000     70 ;
                                        0000     71          $CLUBDEF                        ; Define cluster symbols
                                        0000     72
                                        0000     73 ;
                                        0000     74 ; MACROS:
                                        0000     75 ;
                                        0000     76
                                        0000     77 ;
                                        0000     78 ; EQUATED SYMBOLS:
                                        0000     79 ;
                                        0000     80
                                        0000     81 ;
                                        0000     82 ; OWN STORAGE:
                                        0000     83 ;
                                        0000     84
                                    00000000     85          .PSECT  BOO$SYSGEN,WRT
                                        0000     86
                                    00000000     87 BOO$GL_CMDOPT:: .LONG 0                  ; Options longword
                                        0004     88
                                        0004     89 SELECT_LIST:                             ; Select list for AUTOCONFIGURE ALL
                                     44 00'     0004     90          .ASCIC  /D/                     ; All disks
                                        01      0004
                                     50 00'     0006     91          .ASCIC  /P/                     ; All port drivers (and paper tape!)
                                        01      0006
                                        00      0008     92          .BYTE   0                       ; End of list
                                                0009     93
30 3A 30 30 20 30 00000011'010E0000'    0009     94 ASCII_TIME:      .ASCID  /0 00:00:05.00/
                  30 30 2E 35 30 3A 30  0017
                                    00000026    001E     95 BIN_TIME:        .BLKQ   1
20 20 20 20 20 20 20 20 20 20 20 20     0026     96 BLANKS:          .ASCII  /                /      ; 16 blanks
                                 20 20 20 20    0032
                                                0036     97
```

```
                        0036    99          .SBTTL  BOO$STACONFIG - main program
                        0036   100 ;++
                        0036   101 ; FUNCTIONAL DESCRIPTION:
                        0036   102 ;       This is the main program for standalone CONFIGURE.  It does the
                        0036   103 ;       following:
                        0036   104 ;
                        0036   105 ;               1)  Locks the entire image into the working set.
                        0036   106 ;               2)  Autoconfigures disks ard port devices.
                        0036   107 ;               3)  If we are not using a quorum disk in order to
                        0036   108 ;                   form a cluster, the image exits.
                        0036   109 ;               4)  Sets a timer. Every 5 seconds, a check is made
                        0036   110 ;                   to see if we are in a cluster yet.  If so, w*
                        0036   111 ;                   exit; else we reset the timer.
                        0036   112 ;               5)  Call BOO$CONFIGURE, which will configure all MSCP-
                        0036   113 ;                   and HSC-served devices.  At some point the disk which
                        0036   114 ;                   is needed to form the cluster will be configured, the
                        0036   115 ;                   cluster will form, and the image will exit.
                        0036   116 ;
                        0036   117 ;       Note that no determination is made about which specific disk is to
                        0036   118 ;       be the quorum disk - they are simply all configured.
                        0036   119 ;
                        0036   120 ; CALLING SEQUENCE:
                        0036   121 ;
                        0036   122 ;       Called by SYSINIT (via the image activator)
                        0036   123 ;
                        0036   124 ; INPUT PARAMETERS:
                        0036   125 ;
                        0036   126 ;       NONE
                        0036   127 ;
                        0036   128 ; OUTPUT PARAMETERS:
                        0036   129 ;
                        0036   130 ;       NONE
                        0036   131 ;
                        0036   132 ; ERROR INDICATIONS:
                        0036   133 ;
                        0036   134 ;       Various errors printed on the system console
                        0036   135 ;
                        0036   136 ;--
                        0036   137
                  000C  0036   138          .ENTRY  BOO$STACONFIG,^M<R2,R3>
                        0038   139          $LKWSET_S -                     ; Lock entire image in working set
                        0038   140                  ;NADR=BOO$GQ_LIMITS, -  ;
                        0038   141                  RETADR=BOO$GQ_RETADR    ;
                        004D   142
                        004D   143 ;
                        004D   144 ; Get current values for local copy of SYSPARAM
                        004D   145 ;
    00000000'EF    00   FB  004D   146          CALLS   #0,BOO$USEACT
                        0054   147
                        0054   148 ;
                        0054   149 ; Autoconfigure disks and port devices.
                        0054   150 ;
00000000'EF    AD   AF   9E  0054   151          MOVAB   SELECT_LIST,BOO$GL_SELECT ; Use builtin select list
   00000000'EF    00   FB  005C   152          CALLS   #0,BOO$CONFIGALL        ; Autoconfigure all adapters
                        0063   153
                        0063   154 ;
                        0063   155 ; If the quorum disk system parameter is non-blank, then we configure
```

```
                                0063   156 ; all "served" devices in case one of them is the quorum disk; else
                                0063   157 ; the image exits.
                                0063   158 ;
      BA AF   00000000'GF   10  29 0063   159         CMPC3   #4*4,G^CLU$GB_QDISK,BLANKS
                            23  13 006C   160         BEQL    10$
                                006E   161
                                006E   162 ;
                                006E   163 ; Get binary equivalent of 5 secords to set timer.
                                006E   164 ;
                                006E   165         $BINTIM_S       timbuf = ASCII_TIME,-
                                006E   166                         timadr = BIN_TIME
                                007B   167         $CMEXEC_S       AST_REC                 ; Check if we are a cluster member
                                008A   168
                                008A   169 ;
                                008A   170 ; Start threads which will configure MSCP- and HSC-served disks.
                                008A   171 ;
            00000000'EF   00    FB 008A   172         CALLS   #0,BOO$CONFIGURE
                                0091   173
                                04 0091   174 10$:     RET
                                0092   175
                              0004 0092   176 AST_REC:        .WORD ^M<R2>
                                0094   177
            52  00000000'GF     D0 0094   178         MOVL    G^CLU$GL_CLUB,R2                ; Get cluster info block
                            00  E1 009B   179         BBC     #CLUB$V_CLUSTER,-               ; Br if we are not a cluster member
                      0A 1C A2       009D   180                 CLUB$L_FLAGS(R2),10$
                                00A0   181
                                00A0   182 ;
                                00A0   183 ; Cluster has been formed - exit
                                00A0   184 ;
                                00A0   185         $EXIT_S
                                04 00A9   186         RET
                                00AA   187
                                00AA   188 ;
                                00AA   189 ; Cluster not yet formed
                                00AA   190 ;
                                00AA   191 10$:     $SETIMR_S       efn     = #3,-          ; Reset timer
                                00AA   192                         daytim = B_N_TIME,-
                                00AA   193                         astadr = A_T_REC
                                04 00BC   194         RET                                     ; Dismiss AST
                                00BD   195
```

```
                                                D 6
                     00BD   197          .SBTTL  Dummy entry points
                     00BD   198
                     00BD   199 ;
                     00BD   200 ; These entry points are need to resolve references to routines
                     00BD   201 ; not linked with the standalone version of CONFIG.
                     00BD   202 ;
                     00BD   203
                     00BD   204 EXE$LOAD_CODE::
                     00BD   205 LBR$OUTPUT_HELP::
                0000 00BD   206          .WORD   0                       ; ENTRY MASK
           50    D4 00BF   207          CLRL    R0
                 04 00C1   208          RET
                     00C2   209
                     00C2   210 BOO$READFILE::
                     00C2   211 BOO$FILCLOSE::
                     00C2   212 BOO$UFOOPEN::
                     00C2   213 BOO$EXEOPEN::
           50    D4 00C2   214          CLRL    R0
                 05 00C4   215          RSB
                     00C5   216
                     00C5   217
                     00C5   218          .END    BOO$STACONFIG
```

```
$$T1                    = 00000000
ASCII_TIME                00000009 R      02
AST_REC                   00000092 R      02
BIN_TIME                  0000001E R      02
BLANKS                    00000026 R      02
BOO$CONFIGALL             ********   X    02
BOO$CONFIGURE             ********   X    02
BOO$EXEOPEN               000000C2 RG     02
BOO$FILCLOSE              000000C2 RG     02
BOO$GL_CMDOPT             00000000 RG     02
BOO$GL_SELECT             ********   X    02
BOO$GQ_LIMITS             ********   X    02
BOO$GQ_RETADR             ********   X    02
BOO$READFILE              000000C2 RG     02
BOO$STACONFIG             00000036 RG     02
BOO$UFOOPEN               000000C2 RG     02
BOO$USEACT                ********   X    02
CLU$GB_QDISK              ********   X    02
CLU$GL_CLUB               ********   X    02
CLUB$L_FLAGS            = 0000001C
CLUB$V_CLUSTER          = 00000000
EXE$LOAD_CODE             000000BD RG     02
LBR$OUTPUT_HELP           000000BD RG     02
SELECT_LIST               00000004 R      02
SYS$BINTIM                ********  GX    02
SYS$CMEXEC                ********  GX    02
SYS$EXIT                  ********  GX    02
SYS$LKWSET                ********  GX    02
SYS$SETIMR                ********  GX    02
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
ABS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
BOO$SYSGEN	000000C5 (197.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	37	00:00:00.09	00:00:00.26
Command processing	142	00:00:00.71	00:00:04.12
Pass 1	164	00:00:02.46	00:00:07.24
Symbol table sort	0	00:00:00.21	00:00:00.26
Pass 2	54	00:00:00.64	00:00:01.59
Symbol table output	5	00:00:00.04	00:00:00.27
Psect synopsis output	0	00:00:00.02	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	404	00:00:04.17	00:00:13.77

The working set limit was 1200 pages.

11071 bytes (22 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 184 non-local and 2 local symbols.
218 source lines were read in Pass 1, producing 16 object records in Pass 2.
16 pages of virtual memory were used to define 15 macros.

+----------------------------+
! Macro library statistics !
+----------------------------+

Macro library name	Macros defined
_255DUA28:[BOOTS.OBJ]BOOTS.MLB;1	0
_255DUA28:[SYS.OBJ]LIB.MLB;1	1
_255DUA28:[SYSLIB]STARLET.MLB;2	11
TOTALS (all libraries)	12

281 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:STACONFIG/OBJ=OBJ$:STACONFIG MSRC$:STACONFIG/UPDATE=(ENH$:STACONFIG)+EXECML$/LIB+LIB$:BOOTS.MLB/LIB
```

SYSBOOCMD
LIS

SHOWADAP
LIS

STANDCONF
LIS

SHODEV
LIS

STAPUTERR
LIS

STALOCK
LIS

STASGNMSG
LIS

STACONFIG
LIS

STASYSGEN
LIS

SYSBOOT
LIS

STARDBRIV
LIS