

UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	3333333333	2222222222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	3333333333	2222222222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	3333333333	2222222222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUU	UUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLL	333	222
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLLLLLLLLLLLLLLL	3333333333	22222222222222
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLLLLLLLLLLLLLLL	3333333333	22222222222222
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	TTTTTTTTTTTTTTTT	IIIIIIIIII	LLLLLLLLLLLLLLLL	3333333333	22222222222222

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(2) 52
(3) 74

DECLARATIONS
GET_DEVICE_INFO - Collect device information

```
0000 1 .TITLE GET_DEVICE_INFO - Get device information
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: Performance Monitoring
0000 30
0000 31 : ABSTRACT:
0000 32 : Collects device information for performance
0000 33 : monitoring and returns same in supplied buffer.
0000 34
0000 35 : ENVIRONMENT:
0000 36 : MODE = KERNEL
0000 37
0000 38 : AUTHOR: S. S. AMWAY, CREATION DATE: 24-Oct-83
0000 39
0000 40 : MODIFIED BY:
0000 41
0000 42 : V03-002 SSA0024 Stan Amway 9-Apr-1984
0000 43 : Ignore disk UCB's with CDP bit set in UCBSL_DEVCHAR2.
0000 44 : (No I/O can ever take place to these units.)
0000 45
0000 46 : V03-001 SSA0006 Stan Amway 1-Feb-1984
0000 47 : Call IOCSCVT_DEVNAM requesting allocation
0000 48 : class format of device name.
0000 49
0000 50 :--
```

```
0000 52          .SBTTL  DECLARATIONS
0000 53
0000 54  :
0000 55  : INCLUDE FILES:
0000 56  :
0000 57
0000 58          $DCDEF
0000 59          $DEVDEF
0000 60          $SSDEF
0000 61          $UCBDEF
0000 62
0000 63  :
0000 64  : EQUATED SYMBOLS:
0000 65  :
0000 66
00000004 0000 67  BUFADDR=4
00000008 0000 68  BUFLLEN=8
0000000C 0000 69  DCLASS=12
00000010 0000 70  DEVTYPE=16
00000014 0000 71  DEVCOUNT=20
0000 72
```

```

0000 74      .SBTTL  GET_DEVICE_INFO - Collect device information
0000 75
0000 76      :++
0000 77      : FUNCTIONAL DESCRIPTION:
0000 78      : Collects device information for specified device classes & types.
0000 79
0000 80      : CALLING SEQUENCE:
0000 81      : CALLS/CALLG GET_DEVICE_INFO
0000 82
0000 83      : INPUT PARAMETERS:
0000 84      : 4(AP)=Buffer address
0000 85      : 8(AP)=Buffer length
0000 86      : 12(AP)=Device class
0000 87      : 16(AP)=Device type
0000 88
0000 89      : IMPLICIT INPUTS:
0000 90      : NONE
0000 91
0000 92      : OUTPUT PARAMETERS:
0000 93      : 20(AP)=Count of devices in buffer
0000 94
0000 95      : IMPLICIT OUTPUTS:
0000 96      : Buffer is filled with device data
0000 97
0000 98      : COMPLETION CODES:
0000 99      : $$$_NORMAL
0000 100     : $$$_INSFARG
0000 101     : $$$_IVBUFLN
0000 102     : $$$_ACCVIO
0000 103
0000 104     : SIDE EFFECTS:
0000 105     : NONE
0000 106
0000 107     :--
0000 108     .PSECT  $CODE , PIC,CON,REL,LCL, SHR, EXE, RD,NOWRT, LONG
0000 109
0000 110     .ENTRY  GET_DEVICE_INFO,^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
50  0114 8F 3C 0002 111     MOVZWL  #$$$_INSFARG,R0
   05  6C  D1 0007 112     Cmpl   (AP),#5 ; Must have 5 arguments
   03  13  000A 113     BEQL   $$
   00AF 31 000C 114 1$: BRW    9999$
50  034C 8F 3C 000F 115 5$: MOVZWL  #$$$_IVBUFLN,R0
   57  08  AC  D0 0014 116     MOVL   BUFLN(AP),R7 ; R7 <= buffer length
58  57  20  C7 0018 117     DIVL3  #32,R7,R8 ; R8 <= max # of devices
   EE  15  001C 118     BLEQ   1$ ; Error if <= 0
   56  04  AC  D0 001E 119     MOVL   BUFADDR(AP),R6 ; R6 <= buffer address
   50  0C  3C  0022 120     MOVZWL  #$$$_ACCVIO,R0
   0025 121     IFNOWRT SIZ=R7,- ; Make sure buffer
   0025 122     ADR=(R6),-
   0025 123     DEST=1$
   002B 124     IFNOWRT SIZ=#4,- ; and device name counter
   002B 125     ADR=@DEVCC.NT(AP),- ; are writable
   002B 126     DEST=1$
54  00000000'GF D4 0032 127     CLRL   @DEVCCOUNT(AP) ; Zero device name counter
   00000000'GF D0 0035 128     MOVL   G*SCH$GL_CURPCB,R4 ; R4 <= PCB address of this process
   00000000'GF 16 003C 129     JSB   G*SCH$IOLOCKR ; Lock I/O database (returns @ IPL 2)
   5A  7C  0042 130     CLRQ  R10 ; Clear UCB/DCB context

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00000000'GF 16 0044 131 10$: JSB G^IOC$SCAN_IODB ; Get next device UCB address
SE 50 E9 004A 132 BLBC R0,100$ ; Quit if done
OC AC 95 004D 133 TSTB DCLASS(AP) ; Accept all devices classes ?
OB 19 0050 134 BLSS 20$ ; BR if yes
40 AA OC AC 91 0052 135 CMPB DCLASS(AP),UCB$B_DEVCLASS(R10) ; Device class match ?
04 13 0057 136 BEQL 20$ ; BR if yes
5A D4 0059 137 CLRL R10 ; Skip entire controller
E7 11 005B 138 BRB 10$
10 AC 95 005D 139 20$: TSTB DEVTYPE(AP) ; Accept all device types ?
09 19 0060 140 BLSS 30$ ; BR if yes
41 AA 10 AC 91 0062 141 CMPB DEVTYPE(AP),UCB$B_DEVTYPE(R10) ; Device type match ?
02 13 0067 142 BEQL 30$ ; BR if yes
D9 11 0069 143 BRB 10$ ; Get next device
01 40 AA 91 006B 144 30$: CMPB UCB$B_DEVCLASS(R10),#DC$_DISK ; If disk device and
05 12 006F 145 BNEQ 40$ ; CDP bit set,
CE 3C AA 03 E0 0071 146 BBS #DEV$V_CDP,UCB$B_DEVCHAR2(R10),10$ ; get next device
86 5A D0 0076 147 40$: MOVL R10,(R6)+ ; Buffer gets UCB address
57 04 C2 0079 148 SUBL2 #4,R7 ; R7 <= updated buffer length
51 56 D0 007C 149 MOVL R6,R1 ; R1 <= buffer address
50 57 D0 007F 150 MOVL R7,R0 ; R0 <= buffer length
54 01 D0 0082 151 MOVL #1,R4 ; R4 <= Format control
55 5A D0 0085 152 MOVL R10,R5 ; R5 <= UCB address
00000000'GF 16 0088 153 JSB G^IOC$CVT_DEVNAM
1A 50 E9 008E 154 BLBC R0,100$
66 10 20 66 51 2C 0091 155 MOVCS R1,(R6),#^A/ /,#16,(R6) ; Pad device name to 16 characters
56 53 D0 0097 156 MOVL R3,R6 ; R6 <= updated buffer address
86 38 AA 7D 009A 157 MOVQ UCB$Q_DEVCHAR(R10),(R6)+ ; Get device characteristics
009E 158
009E 159 ASSUME UCB$B_DEVTYPE EQ UCB$B_DEVCLASS+1
009E 160
40 AA 3C 009E 161 MOVZWL UCB$B_DEVCLASS(R10),- ; Get device class & type
86 00A1 162 (R6)+
57 1C C2 00A2 163 SUBL2 #28,R7 ; R7 <= updated buffer length
14 BC D6 00A5 164 INCL @DEV$COUNT(AP) ; Count another device name
99 58 F5 00A8 165 SOBGTR R8,10$
54 00000000'GF D0 00AB 166 100$: MOVL G^SCH$GL_CURPCB,R4 ; R4 <= PCB address of this process
00000000'GF 16 00B2 167 JSB G^SCH$I/O_UNLOCK ; Unlock I/O database
00B8 168 SETIPL #0 ; Restore IPL
50 01 3C 00BB 169 9998$: MOVZWL #SS$_NORMAL,R0
04 00BE 170 9999$: RET
00BF 171
00BF 172 .END

```

GET DEVICE INFO
Symbol table

- Get device information

N 9

16-SEP-1984 02:16:06 VAX/VMS Macro V04-00
5-SEP-1984 04:36:53 [UTIL32.SRC]GETDINFO.MAR;1

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```

BUFADDR          = 00000004
BUFLN           = 00000008
DCS_DISK        = 00000001
DCLASS          = 0000000C
DEVSV_CDP       = 00000003
DEVCOUNT        = 00000014
DEVTYPE         = 00000010
GET_DEVICE_INFO 00000000 RG      02
IOC$CVT_DEVNAM ***** X      02
IOC$SCAN_IODB   ***** X      02
PRS_IPL         ***** X      02
SCH$GL_CURPCB   ***** X      02
SCH$IO$CKR      ***** X      02
SCH$IO$UNLOCK   ***** X      02
SS$_ACCVIO      = 0000000C
SS$_INSFARG     = 00000114
SS$_IVBUFLN     = 0000034C
SS$_NORMAL      = 00000001
UCB$B_DEVCLASS  = 00000040
UCB$B_DEVTYPE   = 00000041
UCB$L_DEVCHAR2  = 0000003C
UCB$Q_DEVCHAR   = 00000038
    
```

! 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
\$CODE	000000BF (191.)	02 (2.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	48	00:00:00.10	00:00:00.65
Command processing	165	00:00:00.68	00:00:02.62
Pass 1	288	00:00:08.89	00:00:24.95
Symbol table sort	0	00:00:01.52	00:00:02.84
Pass 2	46	00:00:01.51	00:00:03.27
Symbol table output	4	00:00:00.07	00:00:00.13
Psect synopsis output	1	00:00:00.03	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	554	00:00:12.82	00:00:34.49

The working set limit was 1350 pages.
49304 bytes (97 pages) of virtual memory were used to buffer the intermediate code.
There were 60 pages of symbol table space allocated to hold 1026 non-local and 9 local symbols.
172 source lines were read in Pass 1, producing 16 object records in Pass 2.
14 pages of virtual memory were used to define 13 macros.

! Macro library statistics !

Macro library name	Macros defined
-----	-----
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	3
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	7
TOTALS (all libraries)	10

1105 GETS were required to define 10 macros.

There were no errors, warnings or information messages.

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

