

| | | | |
|----------------|-----|-----|----------------|
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |
| SSS | YYY | YYY | SSS |
| SSS | YYY | YYY | SSS |
| SSS | YYY | YYY | SSS |
| SSS | YYY | YYY | SSS |
| SSS | YYY | YYY | SSS |
| SSS | YYY | YYY | SSS |
| SSSSSSSSSSS | YYY | YYY | SSSSSSSSSSS |
| SSSSSSSSSSS | YYY | YYY | SSSSSSSSSSS |
| SSSSSSSSSSS | YYY | YYY | SSSSSSSSSSS |
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| | YYY | YYY | SSS |
| | YYY | YYY | SSS |
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |
| SSSSSSSSSSSSSS | YYY | YYY | SSSSSSSSSSSSSS |

SYSLOGNAM
Table of contents

| | | |
|-----|-----|--|
| (3) | 236 | CREATE Logical Name |
| (4) | 334 | Check table number, privileges and logical name string |
| (5) | 369 | DELETE Logical Name |
| (6) | 441 | TRANSLATE Logical Name |
| (7) | 669 | LNMSIGTORET - TURN SSS_NOLOGNAM EXCEPTION INTO RETURN STATUS |

```
0000 1 .TITLE SYSLOGNAM - Old System Service Interface to Logical Names
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 D. N. CUTLER 10-OCT-76
0000 29
0000 30 Old System Services Interfaces to Manipulate Logical Names
0000 31
0000 32 $CRELOG - CREATE Logical Name
0000 33 $DELLOG - DELETE Logical Name
0000 34 $TRNLOG - TRANSLATE Logical Name
0000 35
0000 36 The arguments are probed by these routines before they are passed off
0000 37 to the new system services so that the previous access mode is correct.
0000 38 The new system services are call thru the CMKRNL dispatcher so that the
0000 39 previous mode is CMKRNL so that literal data in this code can be accessed.
0000 40
0000 41
0000 42 MODIFICATION HISTORY:
0000 43
0000 44 V03-014 MSH0053 Michael S. Harvey 29-May-1984
0000 45 Probe argument lists for $CRELOG, $TRNLOG and $DELLOG to
0000 46 ensure accessibility. Also, make sure that the minimum
0000 47 number of arguments for these services has been specified.
0000 48 This ensures that behavior observed prior to these services
0000 49 becoming caller's mode services is maintained.
0000 50
0000 51 V03-013 TMK0003 Todd M. Katz 15-Nov-1983
0000 52 Fix a bug introduced by TMK0002. The address of $TRNLOG's
0000 53 optional output table parameter must be loaded into R8
0000 54 before R8 is ever referenced. With the TMK0002 change if the
0000 55 logical name started with an underscore (and no translation
0000 56 is attempted), or DSBMSK specified that no table was to be
0000 57 searched, then R8 was never being initialized before it was
```

```

0000 58 : referenced. As one might imagine, this lead to unpredictable
0000 59 : results.
0000 60 :
0000 61 : V03-012 TMK0002 Todd M. Katz 19-Nov-1983
0000 62 : Optimize $TRNLOG in those cases when the caller has not
0000 63 : requested that the table in which the translated logical name
0000 64 : was found be returned. The caller requested that the table be
0000 65 : returned by specifying the optional system service output
0000 66 : parameter TABLE. The optimization consists of calling $TRNLNM
0000 67 : only once giving as the table name a logical name that
0000 68 : equates to the list of one or more tables that the caller wants
0000 69 : searched for the target logical name. The logical names that
0000 70 : may potentially serve as table names are created at system
0000 71 : initialization time. The optional system service input
0000 72 : parameter DSBMSK is used to select which logical name is used
0000 73 : as the table name. The reason why this optimization is
0000 74 : applicable only when TABLE has not been specified is because
0000 75 : it is not obvious as to which table the logical name was found
0000 76 : when $TRNLNM is presented with a list of tables to search. Thus,
0000 77 : the TABLE information could not be appropriately returned.
0000 78 :
0000 79 : V03-011 TMK0001 Todd M. Katz 23-Oct-1983
0000 80 : Change the logical name table names that these old services
0000 81 : use. Replace LNMS$PROCESS with LOG$PROCESS, LNMS$GROUP with
0000 82 : LOG$GROUP, and LNMS$SYSTEM with LOG$SYSTEM. These logical names
0000 83 : which serve as table names for all three of the old system
0000 84 : services ($SYS$CRELOG, $SYS$DELLOG, and $SYS$TRNLOG) are setup at
0000 85 : system initialization time, and maybe changed by users in
0000 86 : order for them to make use of the features of the new logical
0000 87 : name services without converting existing programs to use the
0000 88 : new services.
0000 89 :
0000 90 : V03-010 RAS0175 Ron Schaefer 28-Jul-1983
0000 91 : Add support in $CRELOG to strip a leading "" and set
0000 92 : LNMSM TERMINAL; remove recognition of LNMSM CONCEALED
0000 93 : from $TRNLOG; and make $TRNLOG recognize PPF-format names.
0000 94 :
0000 95 : V03-009 RAS0167 Ron Schaefer 21-Jul-1983
0000 96 : Add special condition handler to $TRNLOG in order to
0000 97 : properly process programs with system service failure mode
0000 98 : exception enabled.
0000 99 :
0000 100 : V03-008 RAS0171 Ron Schaefer 20-Jul-1983
0000 101 : Make the register masks in RAS0170 be constant and
0000 102 : not relocatable.
0000 103 :
0000 104 : V03-007 RAS0170 Ron Schaefer 18-Jul-1983
0000 105 : Fixed trashed registers from a MOV C3 when prefixing
0000 106 : ""'s in $TRNLOG.
0000 107 :
0000 108 : V03-006 RAS0165 Ron Schaefer 5-Jul-1983
0000 109 : Eliminate the access mode argument to $TRNLNM from $TRNLOG.
0000 110 : Make sure there is a non-kernel mode access mode argument
0000 111 : for $CRELOG and $DELLOG.
0000 112 :
0000 113 : V03-005 DMW4059 DMWalp 23-Jun-1983
0000 114 : Change $xxLNM value parameters to be by reference

```



```
0000 131 :  
0000 132 : MACRO library calls  
0000 133 :  
0000 134 $CHFDEF ; define condition handling  
0000 135 $CRELOGDEF ; define CRELOG symbols  
0000 136 $CRELNMDEF ; define CRELNM arglist  
0000 137 $DELLOGDEF ; define DELLOG symbols  
0000 138 $DELLNMDEF ; define DELLNM arglist  
0000 139 $TRNLOGDEF ; define TRNLOG symbols  
0000 140 $TRNLNMDEF ; define TRNLNM arglist  
0000 141 $LNMDEF ; define new log nam offsets  
0000 142 $LOGDEF ; define log offsets  
0000 143 $PSLDEF ; define PSL offsets  
0000 144 $SSDEF ; define system status values  
0000 145 :  
0000 146 :  
0000 147 : LOCAL SYMBOLS  
0000 148 :  
0000 149 : argument list offset definitions for CREATE logical name  
0000 150 :  
00000004 0000 151 TBLFLG = 4 ; logical name table number  
00000008 0000 152 LOGNAM = 8 ; address of logical name string  
0000 153 ; descriptor  
0000000C 0000 154 EQLNAM = 12 ; address of equivalence name string  
0000 155 ; descriptor  
00000010 0000 156 CRACMODE = 16 ; access mode  
0000 157 :  
0000 158 :  
0000 159 : argument list offset definitions for DELETE logical name  
0000 160 :  
00000004 0000 161 TBLFLG = 4 ; logical name table number  
00000008 0000 162 LOGNAM = 8 ; address of logical name string  
0000 163 ; descriptor  
0000000C 0000 164 DLACMODE = 12 ; access mode  
0000 165 :  
0000 166 :  
0000 167 : argument list offset definitions for TRANSLATE logical name  
0000 168 :  
00000004 0000 169 TRLOGNAM = 4 ; address of logical name string  
0000 170 ; descriptor  
00000008 0000 171 RSLLEN = 8 ; address to store length of result  
0000 172 ; string  
0000000C 0000 173 RSLBUF = 12 ; address of result buffer descriptor  
00000010 0000 174 TABLE = 16 ; address to store translation table  
0000 175 ; number  
00000014 0000 176 TRACMODE = 20 ; address to store assignment access  
0000 177 ; mode  
00000018 0000 178 DSBMSK = 24 ; table search disable mask  
0000 179 :  
0000 180 :  
0000 181 : local area storage defination for $CRELNM call  
0000 182 :  
00000000 0000 183 RET_TRANSIZE = 0 ; the returned translation size  
00000004 0000 184 RET_TRANATTR = 4 ; the returned translation attributes  
00000008 0000 185 RET_ACMODE = 8 ; the returned access mode  
0000000C 0000 186 IN_ACMODE = 12 ; the input access mode  
00000010 0000 187 LOCAL_AREA = 16 ; the number of byte the above take
```

```

0000001B 0000 188
00000000 0000 189 ESCAPE = 27 ; ASCII escape char for PPFs
00000000 0000 190
00000000 0000 191 .PSECT YF$SYSLOGNAM
00000000 0000 192 ;
00000000 0000 193 ; Literal string definitions
00000000 0000 194 ;
00000028' 0000 195 TABLE_NAME_LIST: ; array of descriptor addresses
0000003A' 0004 196 .ADDRESS SYSTEM_TABLE ; pointer to system table name
0000004B' 0008 197 .ADDRESS GROUP_TABLE ; pointer to group table name
00000000 000C 198 .ADDRESS PROCESS_TABLE ; pointer to process table name
00000000 000C 199
000000B5' 000C 200 TRNLOG_TABLE: ; array of desc adhrs equated to DSBMSK
0000007A' 0010 201 .ADDRESS PGS_TABLE ; DSBMSK = 0 -> PROCESS, GROUP, & SYSTEM
00000097' 0014 202 .ADDRESS PG_TABLE ; DSBMSK = 1 -> PROCESS & GROUP
0000004B' 0018 203 .ADDRESS PS_TABLE ; DSBMSK = 2 -> PROCESS & SYSTEM
0000005E' 001C 204 .ADDRESS PROCESS_TABLE ; DSBMSK = 3 -> PROCESS
0000003A' 0020 205 .ADDRESS GS_TABLE ; DSBMSK = 4 -> GROUP & SYSTEM
00000028' 0024 206 .ADDRESS GROUP_TABLE ; DSBMSK = 5 -> GROUP
00000000 0028 207 .ADDRESS SYSTEM_TABLE ; DSBMSK = 6 -> SYSTEM
00000000 0028 208
59 53 24 47 4F 4C 00000030'010E0000' 0028 209 SYSTEM_TABLE:
4D 45 54 53 0036 210 .ASCID 'LOG$SYSTEM' ; system table name
003A 211 GROUP_TABLE:
52 47 24 47 4F 4C 00000042'010E0000' 003A 212 .ASCID 'LOG$GROUP' ; group table name
50 55 4F 0048
004B 213 PROCESS_TABLE:
52 50 24 47 4F 4C 00000053'010E0000' 004B 214 .ASCID 'LOG$PROCESS' ; process table name
53 53 45 43 4F 0059
005E 215
005E 216 GS_TABLE: ; group and system table names
47 4F 4C 4E 52 54 00000066'010E0000' 005E 217 .ASCID 'TRNLOG$_GROUP_SYSTEM'
54 53 59 53 5F 50 55 4F 52 47 5F 24 006C
4D 45 0078
007A 218
007A 219 PG_TABLE: ; process and group table names
47 4F 4C 4E 52 54 00000082'010E0000' 007A 220 .ASCID 'TRNLOG$_PROCESS_GROUP'
52 47 5F 53 53 45 43 4F 52 50 5F 24 0088
50 55 4F 0094
0097 221
0097 222 PS_TABLE: ; process and system table names
47 4F 4C 4E 52 54 0000009F'010E0000' 0097 223 .ASCID 'TRNLOG$_PROCESS_SYSTEM'
59 53 5F 53 53 45 43 4F 52 50 5F 24 00A5
4D 45 54 53 00B1
00B5 224
00B5 225 PGS_TABLE: ; process, group, and system table names
47 4F 4C 4E 52 54 000000BD'010E0000' 00B5 226 .ASCID 'TRNLOG$_PROCESS_GROUP_SYSTEM'
52 47 5F 53 53 45 43 4F 52 50 5F 24 00C3
4D 45 54 53 59 53 5F 50 55 4F 00CF
00D9 227
00D9 228 TABLE_MODE:
03 01 00D9 229 .BYTE 1, 3 ; System Table is exec mode
00DB 230 ; Group Table is user mode
00DB 231
00DB 232 LNM_TERM:
00000200 00DB 233 .LONG LNMSM_TERMINAL ; terminal attribute for $CRELNM

```



```

00DF 236      .SBTTL CREATE Logical Name
00DF 237      :
00DF 238      : EX$CRELOG - CREATE Logical Name
00DF 239      :
00DF 240      : This service provides the capability to insert a logical name equivalence
00DF 241      : into either the process, group, or system logical name table via the old
00DF 242      : system service interface.
00DF 243      :
00DF 244      : INPUTS:
00DF 245      :
00DF 246      :     TBLFLG (AP) = logical name table number.
00DF 247      :     LOGNAM (AP) = address of logical name string descriptor.
00DF 248      :     EQLNAM (AP) = address of equivalence name string descriptor.
00DF 249      :     CRACMODE (AP) = access mode of logical name to be created.
00DF 250      :
00DF 251      : OUTPUTS:
00DF 252      :
00DF 253      :     R0 low bit clear indicates failure to create logical name table entry.
00DF 254      :         R0 = exception turned in return status
00DF 255      :         R0 = status returned from new sevice
00DF 256      :
00DF 257      :     R0 low bit set indicates successful completion.
00DF 258      :         R0 = status returned from new sevice
00DF 259      :
00DF 260      : -
01DC 00DF 261      :
01DC 00DF 262      : .ENTRY EX$CRELOG, ^M<R2,R3,R4,R6,R7,R8>
00E1 263      :
00E1 264      : Only registers R0-R4 are used, the other registers are saved for
00E1 265      : compatability with old versions of the service
00E1 266      :
00E1 267      :
00E1 268      :
00E1 269      : Return exception as return status
00E1 270      :
6D 00000000'EF 9E 00E1 271      MOVAB L^EX$SIGTORET,(FP)
00E8 272      :
00E8 273      :
00E8 274      : Verify that the argument list is accessible and has the minimum
00E8 275      : number of arguments for successful execution of the service.
00E8 276      :
00E8 277      ASSUME CRELOG$ NARGS LT 128
00E8 278      CMPB (AP),#CRELOG$_NARGS ; Minimum number of arguments specified?
00E8 279      BLSSU INSARG ; If LSSU, no, return error status
10 AC D5 00ED 280      TSTL <CRELOG$_NARGS*4>(AP) ; Touch last argument, verify accessibility
00F0 281      :
00F0 282      :
00F0 283      : Calculate access mode and check table number
00F0 284      :
52 10 AC 02 00 EF 00F0 285      EXTZV #0,#2,CRACMODE(AP),R2 ; get caller specified access mode
004D 30 00F6 286      BSBW CHECKOUT ; check table number and privilege
00F9 287      :
00F9 288      :
00F9 289      : Set up itemlist for $CRELNM
00F9 290      : Default index ( LNMS_INDEX ) of zero
00F9 291      :
7E 7C 00F9 292      CLRQ -(SP) ; end of list, return size not needed

```

```

50  OC BC D4 00FB 293      CLRL R4                : flag no attributes
61  SF 8F 7D 00FD 294      MOVQ @EQLNAM(AP),R0    : get equiv name descriptor
                                #^A\_(R1) : leading "_"?
                                10$      : nope
                                50  D7 0107 297      DECL R0                : reduce size
                                51  D6 0109 298      INCL R1                : advance ptr
                                54  D6 0108 299      INCL R4                : flag terminal attribute
02  7E 50 7D 010D 300 10$:  MOVQ R0,-(SP)          : equivalence name descriptor
    AE 02 B0 0110 301      MOVW #LNMS_STRING,2(SP) : stuff the item list code
    OB 54 E9 0114 302      BLBC R4,20$           : need an attribute item?
    7E D4 0117 303      CLRL -(SP)            : no return len
    BF AF DF 0119 304      PUSHAL LNM_TERM       : point to terminal attribute
00030004 8F DD 011C 305      PUSHL #<4<LNMS_ATTRIBUTES@16>> : item code and size
    50 5E D0 0122 306 20$:  MOVL SP,R0            : save the pointer to the list
51  FED6 CF 43 D0 0125 307      MOVL TABLE_NAME_LIST[R3],R1 : level of indirection
    52 DD 012B 308      PUSHL R2              : save access mode for reference
    04 DD 012D 309      PUSHL #LNMSM_CRELOG   : save attributes for reference
    52 5E D0 012F 310      MOVL SP,R2            : save pointer to ACMODE and ATTR
                                0132 311
                                0132 312
                                0132 313
                                0132 314
                                0132 315 :
                                0132 316 :
                                0132 317 :
                                0132 318 :
                                0132 319 :
                                60  DF 0132 320      PUSHAL (R0)
                                04  A2  DF 0134 321      ASSUME CRELNMS_ITMLST EQ CRELNMS_ACMODE+4
                                08  BC  DF 0134 322      PUSHAL 4(R2)
                                61  DF 0137 323      ASSUME CRELNMS_ACMODE EQ CRELNMS_LOGNAM+4
                                62  DF 0137 324      PUSHAL @LOGNAM(AP)
                                80000000'9F 05 FB 013A 325      ASSUME CRELNMS_LOGNAM EQ CRELNMS_TABNAM+4
                                04  04  DF 013A 326      PUSHAL (R1)
                                61  DF 013A 327      ASSUME CRELNMS_TABNAM EQ CRELNMS_ATTR+4
                                62  DF 013C 328      PUSHAL (R2)
                                80000000'9F 05 FB 013E 329      ASSUME CRELNMS_NARGS EQ 5
                                04  04  FB 013E 330      CALLS #CRELNMS_NARGS,@#SYSS$CRELNM - P1SYSVECTORS + ^X80000000
                                04  04  0145 331      RET

```

```

0146 334 .SBTTL Check table number, privileges and logical name string
0146 335
0146 336 : Check table number, and access mode
0146 337
0146 338 CHECKOUT: : check table number and access mode
0146 339
0146 340 : Logical name table number checkout
0146 341
0146 342 MOVZBL TBLFLG(AP),R3 : get logical name table number
53 04 AC 9A 014A 343 CMPL #LOG$C_PROCESS,R3 : legal table number?
53 02 D1 014A 343
08 19 014D 344 BLSS 10$ : number greater than 2
OC 13 014F 345 BEQL 20$ : number was 2 ( process table )
0151 346
0151 347
0151 348 : Set up access mode for group and system tables
0151 349
52 84 AF43 9A 0151 350 MOVZBL TABLE_MODE[R3],R2 : convert table to acmode
0156 351 : group is user mode, system is exec
05 0156 352 RSB
0157 353
50 015C 8F 3C 0157 354 10$: MOVZWL #SS$_IVLOGTAB,R0 : set invalid logical name table number
04 015C 355 RET
015D 356
52 05 015D 357 20$: TSTL R2 : was an access mode given?
07 12 015F 358 BNEQ 30$ : use it if so
52 DC 0161 359 MOVPSL R2 : otherwise use mode of caller
52 52 02 18 EF 0163 360 EXTZV #PSL$V_CURMOD,#PSL$S_CURMOD,R2,R2
05 0168 361 30$: RSB
0169 362
0169 363
0169 364
50 0114 8F 3C 0169 365 INSARG: MOVZWL #SS$_INSFARG,R0 : Report incorrect arg list count
04 016E 366 RET
    
```

```

016F 369      .SBTTL  DELETE Logical Name
016F 370      :+
016F 371      : EXE$DELLOG - DELETE Logical Name
016F 372      :
016F 373      : This service provides the capability to delete a previously created logical
016F 374      : name equivalence from either the process, group, or system logical
016F 375      : name table via the old system service interface.
016F 376      :
016F 377      : INPUTS:
016F 378      :
016F 379      :     TBLFLG (AP) = logical name table number.
016F 380      :     LOGNAM (AP) = address of logical name string descriptor. zero
016F 381      :                   implies all.
016F 382      :     DLACMODE (AP) = access mode of logical name to be deleted.
016F 383      :
016F 384      : OUTPUTS:
016F 385      :
016F 386      : R0 low bit clear indicates failure to delete logical name table entry.
016F 387      :     R0 = exception turned in return status
016F 388      :     R0 = status returned from new sevice
016F 389      :
016F 390      : R0 low bit set indicates successful completion.
016F 391      :     R0 = status returned from new sevice
016F 392      :
016F 393      : -
016F 394      :
01FC 016F 395      .ENTRY  EXE$DELLOG, ^M<R2,R3,R4,R5,R6,R7,R8>
0171 396      :
0171 397      : Only registers R0-R3 are used, the other registers are saved for
0171 398      : compatability with old versions of the service
0171 399      :
0171 400      :
0171 401      :
0171 402      : Return exception as return status
0171 403      :
0171 404      :
6D  00000000'EF  9E 0171 404      MOVAB  L^EXE$SIGTORET,(FP)
0178 405      :
0178 406      :
0178 407      : Verify that the argument list is accessible and has the minimum
0178 408      : number of arguments for successful execution of the service.
0178 409      :
0178 410      ASSUME  DELLOG$ NARGS LT 128
0178 411      CMPB   (AP),#DELLOG$_NARGS      ; Minimum number of arguments specified?
0178 412      BLSSU  INSARG                      ; If LSSU, no, return error status
017D 413      TSTL  <DELLOG$_NARGS*4>(AP)  ; Touch last argument, verify accessibility
0180 414      :
0180 415      :
0180 416      : Calculate access mode and check table number
0180 417      :
0180 418      EXTZV  #0,#2,DLACMODE(AP),R2    ; get specified access mode
52  0C AC  02  00  EF 0186 419      BSBW  CHECKOUT                          ; check table number and privileges
      FFBD  30 0189 420
0189 420      :
0189 421      MOVL  TABLE_NAME_LIST[R3],R1  ; level of indirection
51  FE72 CF43  D0 0189 421
018F 422      :
018F 423      PUSHL  R2                          ; save access mode for reference
      52  52  DD 018F 423
0191 424      MOVL  SP,R2                      ; save pointer to ACMODE
      52  5E  D0 0191 424
0194 425      :

```

```
0194 426 ; Call System Service
0194 427 .
0194 428 $DELLNM_S TABNAM = (R1),-
0194 429 LOGNAM = @LOGNAM(AP),-
0194 430 ACMODE = (R2)
62 DF 0194 431 PUSHAL (R2)
08 BC DF 0196 432 ASSUME DELLNMS_ACMODE EQ DELLNMS_LOGNAM+4
61 DF 0199 433 PUSHAL @LOGNAM(AP)
0199 434 ASSUME DELLNMS_LOGNAM EQ DELLNMS_TABNAM+4
0198 435 PUSHAL (R1)
80000000'9F 03 FB 0198 436 ASSUME DELLNMS_NARGS EQ 3
04 01A2 437 CALLS #DELLNMS_NARGS,@#SYSS$DELLNM - P1SYSVECTORS + ^X80000000
438 RET
```

```

01A3 441 .SBTTL TRANSLATE Logical Name
01A3 442 :+
01A3 443 : EXESTRNLOG - TRANSLATE Logical Name
01A3 444 :
01A3 445 : This service provides the capability to translate a logical name string
01A3 446 : to a resultant name string via old system service interface.
01A3 447 :
01A3 448 : INPUTS:
01A3 449 :
01A3 450 :     TRLOGNAM (AP)  = address of logical name string descriptor.
01A3 451 :     RSLLEN (AP)   = address to store length of result string.
01A3 452 :     RSLBUF (AP)   = address of resultant string buffer descriptor.
01A3 453 :     TABLE (AP)   = address to store translation table number.
01A3 454 :     TRACMODE (AP) = address to store assignment access mode.
01A3 455 :     DSBMSK (AP)   = table search disable mask.
01A3 456 :
01A3 457 : OUTPUTS:
01A3 458 :
01A3 459 :     R0 low bit clear indicates failure to translate logical name string.
01A3 460 :     R0 = $$$_RESULTOVF - can not add "" or "" to output buffer,
01A3 461 :     the buffer is too small
01A3 462 :     R0 = exception turned in return status
01A3 463 :     R0 = status returned from new sevice
01A3 464 :
01A3 465 :     R0 low bit set indicates successful completion.
01A3 466 :     R0 = status returned from new sevice
01A3 467 : -
01A3 468 :
01FC 01A3 469 .ENTRY EXESTRNLOG,^M<R2,R3,R4,R5,R6,R7,R8>
01A5 470 :
01A5 471 :
01A5 472 : Return exception as return status
01A5 473 :
6D 0000000'EF 9E 01A5 474 MOVAB L^EXE$$SIGTORET,(FP)
01AC 475 :
01AC 476 :
01AC 477 : Verify that the argument list is accessible and has the minimum
01AC 478 : number of arguments for successful execution of the service.
01AC 479 :
01AC 480 ASSUME TRNLOG$ NARGS LT 128
01AC 481 CMPB (AP),#TRNLOG$_NARGS ; Minimum number of arguments specified?
01AF 482 BLSSU INSARG ; If LSSU, no, return error status
01B1 483 TSTL <TRNLOG$_NARGS*4>(AP) ; Touch last argument, verify accessibility
01B4 484 :
55 18 AC FFFFFFFF8 8F CB 01B4 485 BICL3 #^C^X07,DSBMSK(AP),R5 ; set table search disable mask
58 10 AC D0 01BD 486 MOVL TABLE(AP),R8 ; pickup address of the table parameter
01C1 487 :
01C1 488 :
01C1 489 : Resultant string checkout
01C1 490 :
54 0C AC D0 01C1 491 MOVL RSLBUF(AP),R4 ; get address of result string buffer
01C5 492 : descriptor
53 64 3C 01C5 493 MOVZWL (R4),R3 ; get size of result string buffer
54 04 A4 D0 01C8 494 MOVL 4(R4),R4 ; get address of result string buffer
01CC 495 :
01CC 496 :
01CC 497 : Logical Name Checkout

```

```

51 04 AC D0 01CC 498      ;
      50 61 3C 01D0 499      MOVL   TRLOGNAM(AP),R1      ; get address of logical name string
51 04 A1 D0 01D3 500      MOVZWL (R1),R0              ; get length of logical name string
      51 DD 01D7 501      MOVL   4(R1),R1            ; get address of logical name string
      50 DD 01D9 502      PUSHL  R1                    ; local copy of lognam descriptor
52 5E D0 01DB 503      PUSHL  R0                    ;
      5E D0 01DE 504      MOVL   SP,R2                    ; remember the location of descriptor
      01DE 505
      01DE 506
      01DE 507      ; Get local stack storage
      01DE 508
5E 10 C2 01DE 509      SUBL2  #LOCAL_AREA,SP
56 5E D0 01E1 510      MOVL   SP,R6                    ; get a pointer to our local store
      01E4 511
      01E4 512      ; Test for no translation
      01E4 513
      01E4 514
61 5F 8F 91 01E4 515      CMPB   #'A'_'',(R1)          ; logical name start with underscore?
      03 12 01E8 516      BNEQ   5$                    ; continue if no; otherwise,
      0081 31 01EA 517      BRW    NOTRANS                ; special case code for no translation
      01ED 518
      01ED 519      ; Build itemlist
      01ED 520
      01ED 521
      01ED 522 5$:      CLRQ   -(SP)                    ; end of list, no return length
008 A6 DF 01EF 523      PUSHAL RET ACMODE(R6)          ; area for returned access mode
00060001 8F DD 01F2 524      PUSHL  #1!<LNMS_ACMODE@16>      ; size of area and item code
      00 DD 01F8 525      PUSHL  #0                    ; no return length
      04 A6 DF 01FA 526      PUSHAL RET TRANATTR(R6)        ; area for returned trans attributes
00030004 8F DD 01FD 527      PUSHL  #4!<LNMS_ATTRIBUTES@16> ; size of area and item code
      66 D4 0203 528      CLRQ   RET_TRANSIZE(R6)        ; clear returned longword
      66 DF 0205 529      PUSHAL RET_TRANSIZE(R6)        ; return length of translation address
      64 DF 0207 530      PUSHAL (R4)                    ; translation buffer address
      53 DD 0209 531      PUSHL  R3                    ; size of translation buffer
02 AE 02 B0 020B 532      MOVW   #LNMS_STRING,2(SP)       ; stuff the item list code
      00 DD 020F 533      PUSHL  #0                    ; no return length
00010004 6E DF 0211 534      PUSHAL (SP)                    ; point to a zeroed longword (0 index)
      8F DD 0213 535      PUSHL  #4!<LNMS_INDEX@16>      ; stuff the item list code
      0219 536
      0219 537
      0219 538      ; If TABLE has not been specified, then use DSBMSK to index into
      0219 539      ; the list of logical name table names to obtain the address of
      0219 540      ; the logical name to use as the table name in the single call to
      0219 541      ; $TRNLNM.
      0219 542
      0219 543
07 55 03 00 ED 0219 544      CMPZV  #0,#3,R5,#7            ; are any tables to be searched?
      49 13 021E 545      BEQL   50$                    ; return immediately if no
      0220 546
51 FDE7 CF45 D0 0220 547      MOVL   TRNLOG_TABLE[R5],R1      ; assume TABLE has not been specified
      58 D5 0226 548      TSTL  R8                    ; TABLE specified?
      OD 13 0228 549      BEQL  20$                    ; must do table loop if so; otherwise,
      022A 550      ; only one $TRNLNM need be done
      022A 551
      022A 552
      022A 553
      022A 554      ; Loop thru the valid logical name tables.
      ;

```

| | | | | | | | |
|----|-----------|------|------|------|------|--------|--|
| | | | 022A | 555 | | | |
| | 57 | 02 | 9A | 022A | 556 | MOVZBL | #2,R7 |
| | 35 | 55 | E0 | 022D | 557 | BBS | R7,R5,40\$ |
| | | | | 0231 | 558 | | |
| 51 | FDCA | CF47 | D0 | 0231 | 559 | MOVL | TABLE_NAME_LIST[R7],R1 ; level of indirection |
| | | | | 0237 | 560 | | |
| | | | | 0237 | 561 | | |
| | | | | 0237 | 562 | | |
| | | | | 0237 | 563 | | |
| | | | | 0237 | 564 | | |
| | | | | 0237 | 565 | | |
| | | | | 0237 | 566 | | |
| | CC | A6 | DF | 0237 | 567 | 20\$: | PUSHAL -<4*13>(R6) |
| | | | | 023A | 568 | ASSUME | TRNLNMS_ITMLST EQ TRNLNMS_ACMODE+4 |
| | | 00 | DD | 023A | 569 | PUSHL | #0 |
| | | 62 | DF | 023C | 570 | ASSUME | TRNLNMS_ACMODE EQ TRNLNMS_LOGNAM+4 |
| | | | | 023C | 571 | PUSHAL | (R2) |
| | | 61 | DF | 023E | 572 | ASSUME | TRNLNMS_LOGNAM EQ TRNLNMS_TABNAM+4 |
| | | | | 023E | 573 | PUSHAL | (R1) |
| | | 00 | DD | 0240 | 574 | ASSUME | TRNLNMS_TABNAM EQ TRNLNMS_ATTR+4 |
| | | | | 0240 | 575 | PUSHL | #0 |
| | | | | 0242 | 576 | ASSUME | TRNLNMS_NARGS EQ 5 |
| | | | | 0242 | 577 | | |
| 6D | 000002D2' | EF | 9E | 0242 | 578 | MOVAB | LNMS\$SIGTORET,(FP) ; special handler |
| | 80000000' | 9F | 05 | FB | 0249 | CALLS | #TRNLNMS_NARGS,@#SYS\$TRNLNM - P1SYSVECTORS + ^X80000000 |
| | | | | 0250 | 581 | | |
| 6D | 00000000' | EF | 9E | 0250 | 582 | MOVAB | L^EXE\$SIGTORET,(FP) |
| | | | | 0257 | 583 | | |
| | | | | 0257 | 584 | | |
| | | | | 0257 | 585 | | |
| | | | | 0257 | 586 | | |
| | | 30 | 50 | E8 | 0257 | BLBS | R0,CHECK_ATTR |
| | | | | 025A | 588 | | |
| | | | | 025A | 589 | | |
| | | | | 025A | 590 | | |
| | | | | 025A | 591 | | |
| | | | | 025A | 592 | | |
| | 01BC | 8F | 50 | B1 | 025A | 01 | 04 |
| | | | | 025F | 593 | CMPW | R0,#SS\$_NOLOGNAM |
| | | | | 0261 | 594 | BEQL | 30\$ |
| | | | | 0261 | 595 | RET | |
| | | | | 0262 | 596 | | |
| | | | | 0262 | 597 | | |
| | | | | 0262 | 598 | | |
| | | | | 0262 | 599 | | |
| | | | | 0262 | 600 | | |
| | | 58 | D5 | 0262 | 601 | 30\$: | TSTL R8 ; is table looping being done? |
| | | 03 | 13 | 0264 | 602 | BEQL | 50\$; done if no table looping |
| | | C4 | 57 | F4 | 0266 | 40\$: | SOBGEQ R7,10\$; otherwise continue with next table |
| | | | | 0269 | 604 | | |
| | | | | 0269 | 605 | | |
| | | | | 0269 | 606 | | |
| | | | | 0269 | 607 | | |
| | | 50 | 62 | 7D | 0269 | 50\$: | MOVQ (R2),R0 |
| | | | 04 | 11 | 026C | BRB | NOTRANS2 ; special case code for no translation |
| | | | | 026E | 610 | | |
| | | | | 026E | 611 | | |


```

        026E 612 ; No translation, stuff the input into the output buffer
        026E 613 ;
50      D7 026E 614 NOTRANS:DECL R0 ; get rid of leading "_", decrease size
51      D6 0270 615 INCL R1 ; bump pointer
        0272 616 NOTRANS2:
53      50 D1 0272 617 CMPL R0,R3 ; is the output buffer big enough
55      1A 0275 618 BGTRU BUFOVR ; buffer too small, pail out
64      66 50 3C 0277 619 MOVZWL R0,RET_TRANSIZE(R6) ; store result string length
61      61 50 28 027A 620 MOVCL R0,(R1),(R4) ; stuff in user buffer
57      D4 027E 621 CLRL R7 ; zero the table number
50      08 A6 D4 0280 622 CLRL RET_ACMODE(R6) ; zero the access mode
0629 8F 3C 0283 623 MOVZWL #SS$ NOTRAN,R0 ; stuff old error code
27      11 0288 624 BRB RET_VALUES ; rejoin for normal exit
        028A 625
        028A 626
        028A 627 ; Check if underscores need to be added
        028A 628
        028A 629 CHECK_ATTR:
        028A 630 ;
        028A 631 ; If actual size is greater than returned size
        028A 632 ;
22 04 A6 09 E1 028A 633 BBC #LNMSV_TERMINAL,RET_TRANATTR(R6),RET_VALUES
51      51 66 D0 028F 634 MOVL RET_TRANSIZE(R6),R1 ; get actual size
53      51 D1 0292 635 INCL RET_TRANSIZE(R6) ; add "_" to count
64      1B B1 0294 636 CMPL R1,R3 ; will string now fit?
54      06 12 0297 637 BGEQU BUFOVR ; nope
51      04 C0 0299 638 CMPW #ESCAPE,(R4) ; is this a PPF?
01 A4 64 51 28 029C 639 BNEQ 60$ ; nope
64      5F 8F 90 029E 640 ADDL2 #4,R4 ; insert "_" after PPF info
51      11 BB 02A1 641 SUBL2 #4,R1
64      5F 8F 90 02A4 642 60$: PUSHR #^M<R0,R4> ; save status and start addr
51      08 AC D0 02A6 643 MOVCL R1,(R4),1(R4) ; shift right 1 character
61      66 B0 02AB 644 POPR #^M<R0,R4> ; restore registers
57      03 13 02AD 645 MOVB #^A'_'',(R4) ; stuff underscore
51      14 AC D0 02B1 646 ;
61      08 A6 90 02B1 647 ;
51      08 AC D0 02B1 648 ; Return the translation size, table number and access mode
61      66 B0 02B1 649 RET_VALUES:
57      03 13 02B1 650 MOVL RSLLEN(AP),R1 ; get address to store result length
61      66 B0 02B5 651 BEQL 110$ ; if not specified
57      03 13 02B7 652 MOVW RET_TRANSIZE(R6),(R1) ; store result string length
51      14 AC D0 02BA 653 TSTL R8 ; is table number to be returned?
61      08 A6 90 02BC 654 110$: BEQL 120$ ; if not specified
57      03 13 02BE 655 MOVW R7,(R8) ; store translation table number
61      66 B0 02C1 656 120$: MOVL TRACMODE(AP),R1 ; get address to store assignment
57      03 13 02C5 657 BEQL 130$ ; access mode
61      08 A6 90 02C5 658 BEQL 130$ ; if not specified
57      03 13 02C7 659 MOVB RET_ACMODE(R6),(R1) ; store assignment access mode
61      66 B0 02CB 660 130$: RET ;
57      03 13 02CC 661 ;
61      08 A6 90 02CC 662 ; Buffer is too small
57      03 13 02CC 663 ;
61      66 B0 02CC 664 ;
50      0214 8F 3C 02CC 665 BUFOVR: MOVZWL #SS$_RESULTOVF,R0 ; buffer specified too small
51      08 AC D0 02D1 666 RET ;
57      03 13 02D1 667 ;

```

```

02D2 669 .SBTTL LNM$SIGTORET - TURN SSS_NOLOGNAM EXCEPTION INTO RETURN STATUS
02D2 670 :++
02D2 671 : FUNCTIONAL DESCRIPTION:
02D2 672 :
02D2 673 : THIS IS A CONDITION HANDLER THAT TURNS A SSS_NOLOGNAM
02D2 674 : EXCEPTION IN THE A LOWER
02D2 675 : FRAME INTO A RETURN FROM THE LOWER FRAME WITH THE EXCEPTION NAME
02D2 676 : AS THE STATUS. ALL OTHER EXCEPTIONS
02D2 677 : ARE RESIGNALLED. UNWINDS ARE IGNORED.
02D2 678 :
02D2 679 : INPUT PARAMETERS:
02D2 680 : 00(AP) = NUMBER OF CONDITION ARGUMENTS.
02D2 681 : 04(AP) = ADDRESS OF SIGNAL ARGUMENT LIST.
02D2 682 : 08(AP) = ADDRESS OF MECHANISM ARGUMENT LIST.
02D2 683 :
02D2 684 : OUTPUT PARAMETERS:
02D2 685 : RO - COMPLETION STATUS CODE
02D2 686 : SSS_RESIGNAL - ALWAYS
02D2 687 :
02D2 688 :
02D2 689 LNM$SIGTORET:
0000 02D2 690 .WORD 0
02D4 691
02D4 692 ASSUME CHF$MCHARGLST, EQ, CHF$SIGARGLST+4
02D4 693
02D4 694 MOVQ CHF$SIGARGLST(AP), RO ; GET ADDRESS OF SIGNAL ARGUMENT LIST
04 A0 50 04 AC 7D 02D4 695 CMPL #SS$NOLOGNAM, CHF$SIG_NAME(RO) ; MAGIC ERROR?
000001BC 8F D1 02D8 696 BEQL 10$ ; BRANCH TO EXIT IF NOT
1B 13 02E0 697
04 A0 0000045C 8F D1 02E2 697 CMPL #SS$SSFAIL, CHF$SIG_NAME(RO) ; OR SSFAIL?
22 12 02EA 698 BNEQ 50$ ; BRANCH TO EXIT IF NOT
08 A0 000001BC 8F D1 02EC 699 CMPL #SS$NOLOGNAM, CHF$SIG_ARG1(RO) ; MAGIC ERROR?
18 12 02F4 700 BNEQ 50$ ; BRANCH TO EXIT IF NOT
0C A1 08 A0 D0 02F6 701 MOVL CHF$SIG_ARG1(RO), CHF$MCH_SAVRO(R1) ; SET RETURN STATUS
05 11 02FB 702 BRB 20$
0C A1 04 A0 D0 02FD 703 10$: MOVL CHF$SIG_NAME(RO), CHF$MCH_SAVRO(R1) ; SET RETURN STATUS
7E D4 0302 704 20$: CLRL -(SP) ; CLEAR NEW PC ARGUMENT
08 A1 9F 0304 705 PUSHAB CHF$MCH_DEPTH(R1) ; NUMBER OF FRAMES TO UNWIND
00000000'GF 02 FB 0307 706 CALLS #2, G^SYSSONWIND ; UNWIND TO ESTABLISHER
50 0918 8F 3C 030E 707 50$: MOVZWL #SS$RESIGNAL, RO ; RETURN RESIGNAL STATUS
G4 0313 708 RET
0314 709
0314 710 .END

```

SYSLOGNAM
Symbol table

```

SSARGS = 00000005
SST1 = 00000018
BUFOVR = 000002CC R 02
CHECKOUT = 00000146 R 02
CHECK_ATTR = 0000028A R 02
CHFSL_MCHARGLST = 00000008
CHFSL_MCH_DEPTH = 00000008
CHFSL_MCH_SAVRO = 0000000C
CHFSL_SIGARGLST = 00000004
CHFSL_SIG_ARG1 = 00000008
CHFSL_SIG_NAME = 00000004
CRACMODE = 00000010
CRELNMS_ACMODE = 00000010
CRELNMS_ATTR = 00000004
CRELNMS_ITMLST = 00000014
CRELNMS_LOGNAM = 0000000C
CRELNMS_NARGS = 00000005
CRELNMS_TABNAM = 00000008
CRELOGS_ACMODE = 00000010
CRELOGS_EQLNAM = 0000000C
CRELOGS_LOGNAM = 00000008
CRELOGS_NARGS = 00000004
CRELOGS_TBLFLG = 00000004
DELLNMS_ACMODE = 0000000C
DELLNMS_LOGNAM = 00000008
DELLNMS_NARGS = 00000003
DELLNMS_TABNAM = 00000004
DELLOGS_ACMODE = 0000000C
DELLOGS_LOGNAM = 00000008
DELLOGS_NARGS = 00000003
DELLOGS_TPLFLG = 00000004
DLACMODE = 0000000C
DSBMSK = 00000018
EQLNAM = 0000000C
ESCAPE = 0000001B
EXESCRELOG = 000000DF RG 02
EXESDELLOG = 0000016F RG 02
EXESSIGTORET = ***** X 02
EXESTRNLOG = 000001A3 RG 02
GROUP_TABLE = 0000003A R 02
GS_TABLE = 0000005E R 02
INSARG = 00000169 R 02
IN_ACMODE = 0000000C
LNMSM_CRELOG = 00000004
LNMSM_TERMINAL = 00000200
LNMSM_SIGTORET = 000002D2 R 02
LNMSM_TERMINAL = 00000009
LNMSM_ACMODE = 00000006
LNMSM_ATTRIBUTES = 00000003
LNMSM_INDEX = 00000001
LNMSM_STRING = 00000002
LNM_TERM = 000000DB R 02
LOCAL_AREA = 00000010
LOGSC_PROCESS = 00000002
LOGNAM = 00000008
NOTRANS = 0000026E R 02
NOTRANS2 = 00000272 R 02

```

```

P1SYSVECTORS ***** X 02
PGS_TABLE = 00000085 R 02
PG_TABLE = 0000007A R 02
PROCESS_TABLE = 00000048 R 02
PSLSS_CURMOD = 00000002
PSLSV_CURMOD = 00000018
PS_TABLE = 00000097 R 02
RET_ACMODE = 00000008
RET_TRANATTR = 00000004
RET_TRANSIZE = 00000000
RET_VALUES = 000002B1 R 02
RSLBUF = 0000000C
RSLLEN = 00000008
SSS_INSFARG = 00000114
SSS_IVLOGTAB = 0000015C
SSS_NOLOGNAM = 000001BC
SSS_NOTRAN = 00000629
SSS_RESIGNAL = 00000918
SSS_RESULTOVF = 00000214
SSS_SSFALL = 0000045C
SYS$CRELNM ***** X 02
SYS$DELLNM ***** X 02
SYS$TRNLNM ***** X 02
SYS$UNWIND ***** X 02
SYSTEM_TABLE = 00000028 R 02
TABLE = 00000010
TABLE_MODE = 000000D9 R 02
TABLE_NAME_LIST = 00000000 R 02
TBLFLG = 00000004
TRACMODE = 00000014
TRLOGNAM = 00000004
TRNLNMS_ACMODE = 00000010
TRNLNMS_ATTR = 00000004
TRNLNMS_ITMLST = 00000014
TRNLNMS_LOGNAM = 0000000C
TRNLNMS_NARGS = 00000005
TRNLNMS_TABNAM = 00000008
TRNLOGS_ACMODE = 00000014
TRNLOGS_DSBMSK = 00000018
TRNLOGS_LOGNAM = 00000004
TRNLOGS_NARGS = 00000006
TRNLOGS_RSLBUF = 0000000C
TRNLOGS_RSLLEN = 00000008
TRNLOGS_TABLE = 00000010
TRNLOG_TABLE = 0000000C R 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 |
| \$ABSS | 00000000 (0.) | 01 (1.) | NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE |
| YF\$SYSLOGNAM | 00000314 (788.) | 02 (2.) | NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE |

+-----+
! Performance indicators !
+-----+

| Phase | Page faults | CPU Time | Elapsed Time |
|------------------------|-------------|-------------|--------------|
| Initialization | 36 | 00:00:00.09 | 00:00:00.26 |
| Command processing | 129 | 00:00:00.56 | 00:00:01.33 |
| Pass 1 | 260 | 00:00:06.78 | 00:00:15.05 |
| Symbol table sort | 0 | 00:00:00.88 | 00:00:01.61 |
| Pass 2 | 135 | 00:00:01.94 | 00:00:04.19 |
| Symbol table output | 13 | 00:00:00.09 | 00:00:00.11 |
| Psect synopsis output | 2 | 00:00:00.02 | 00:00:00.05 |
| Cross-reference output | 0 | 00:00:00.00 | 00:00:00.00 |
| Assembler run totals | 577 | 00:00:10.37 | 00:00:22.60 |

The working set limit was 1500 pages.
 39221 bytes (77 pages) of virtual memory were used to buffer the intermediate code.
 There were 40 pages of symbol table space allocated to hold 588 non-local and 18 local symbols.
 710 source lines were read in Pass 1, producing 22 object records in Pass 2.
 20 pages of virtual memory were used to define 19 macros.

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

| Macro library name | Macros defined |
|-------------------------------------|----------------|
| _\$255\$DUA28:[SYS.OBJ]LIB.MLB;1 | 1 |
| _\$255\$DUA28:[SYSLIB]STARLET.MLB;2 | 15 |
| TOTALS (all libraries) | 16 |

623 GETS were required to define 16 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$;SYSLOGNAM/OBJ=OBJ\$;SYSLOGNAM MSRC\$;SYSLOGNAM/UPDATE=(ENH\$;SYSLOGNAM)+EXECMLS/LIB

0386 AH-BT13A-SE
VAX/VMS V4.0

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This image displays a grid of 144 small terminal windows, arranged in 12 rows and 12 columns. Each window shows a different system utility or command-line interface, likely from the VAX/VMS operating system. The windows are densely packed and contain various text-based outputs, including command prompts, status reports, and data listings. Some windows are clearly labeled with titles such as:

- SYSPARAM LIS** (top right)
- SYSLOGNAM LIS** (second row, seventh column)
- SYSMTACC LIS** (second row, eighth column)
- SYSIMGSTA LIS** (third row, first column)
- SYSLNM LIS** (third row, fourth column)
- SYSLOADEC LIS** (third row, seventh column)
- SYSLKWSET LIS** (fourth row, third column)
- SYSMAILBX LIS** (seventh row, eighth column)

The text within the windows is small and difficult to read, but it appears to consist of various system-related information, including file listings, configuration parameters, and diagnostic data.