



```

SSSSSSSS  AAAAAA  TTTTTTTTTT  SSSSSSSS  SSSSSSSS  FFFFFFFFFF  000000  888888
SSSSSSSS  AAAAAA  TTTTTTTTTT  SSSSSSSS  SSSSSSSS  FFFFFFFFFF  000000  888888
SS        AA      AA      TT        SS        SS        FF        00      00      88      88
SS        AA      AA      TT        SS        SS        FF        00      00      88      88
SS        AA      AA      TT        SS        SS        FF        00      0000     88      88
SS        AA      AA      TT        SS        SS        FF        00      0000     88      88
SSSSSSS   AA      AA      TT        SSSSSS   SSSSSS   FFFFFFFF  00      00      888888
SSSSSSS   AA      AA      TT        SSSSSS   SSSSSS   FFFFFFFF  00      00      888888
          SS   AAAAAAAAAA  TT        SS        SS        FF        0000     00      88      88
          SS   AAAAAAAAAA  TT        SS        SS        FF        0000     00      88      88
          SS   AA      AA   TT        SS        SS        FF        00      00      88      88
          SS   AA      AA   TT        SS        SS        FF        00      00      88      88
SSSSSSSS  AA      AA      TT        SSSSSSSS  SSSSSSSS  FF        000000  888888
SSSSSSSS  AA      AA      TT        SSSSSSSS  SSSSSSSS  FF        000000  888888

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....  
....  
....  
....

```

LL        IIIIII  SSSSSSSS
LL        IIIIII  SSSSSSSS
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

```

(1)	56	DECLARATIONS
(1)	183	SATSSF08
(1)	270	SFCME10
(1)	299	SFGTM10
(1)	322	SFGTM30
(1)	345	SFGTM31
(1)	402	EXECUTE & CLEANUP
(1)	411	TC CONTROL
(1)	492	SUBROUTINES

```
0000 1 .TITLE SATSSF08 - SATS SYSTEM SERVICE TESTS (FAILING S.C.)
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: SATS SYSTEM SERVICE TESTS
0000 31 :
0000 32 : ABSTRACT: THE SATSSF08 MODULE TESTS THE EXECUTION OF CERTAIN
0000 33 : VMS SYSTEM SERVICES, INVOKED IN SUCH A WAY AS TO EXPECT FAILING
0000 34 : STATUS CODES. THE SYSTEM SERVICES TESTED AND THE STATUS CODES
0000 35 : EXPECTED ARE SUMMARIZED AS ARGUMENTS TO THE TESTSERV MACROS
0000 36 : WHICH APPEAR NEAR THE END OF THIS LISTING. SUCCESSFUL STATUS
0000 37 : CODES ARE TESTED IN OTHER MODULES.
0000 38 :
0000 39 :
0000 40 : ENVIRONMENT: USER MODE IMAGE; NEEDS CMKRNL PRIVILEGE,
0000 41 : DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000 42 :
0000 43 : AUTHOR: THOMAS L. CAFARELLA, CREATION DATE: MAY, 1977
0000 44 : PAUL D. FAY (DISPSERV & TESTSERV MACROS)
0000 45 :
0000 46 : MODIFIED BY:
0000 47 :
0000 48 :
0000 49 : V03-001 RNP0001 Robert N. Perron 07-Oct-1981
0000 50 : Changed to reflect change in CMKRNL privilege. CMKRNL
0000 51 : now overlaps CMEXEC.
0000 52 :
0000 53 : **
0000 54 : --
```

```

0000 56 .SBTTL DECLARATIONS
0000 57 :
0000 58 : INCLUDE FILES:
0000 59 :
0000 60 $PHDDEF ; PROCESS HEADER OFFSET SYMBOLS
0000 61 $PCBDEF ; PROCESS CONTROL BLOCK OFFSET SYMBS
0000 62 $STSDEF ; STATUS MESSAGE SYMBOLS
0000 63 $PRVDEF ; SYMBOL DEFS FOR PRIVILEGES
0000 64 $UETPDEF ; UETP MSG CODE DEFINITIONS
0000 65 $$HR_MESSAGES UETP,116,<<TEXT,INFO>>
0000 66 ; DEFINE UETP$ TEXT
0000 67 ; GET RID OF MACRO DEFINITIONS
0000 68 :
0000 69 : MACROS:
0000 70 :
0000 71 :
0000 72 : EQUATED SYMBOLS:
0000 73 :
00000000 0000 74 WARNING = 0 ; WARNING SEVERITY VALUE FOR MSGS
00000001 0000 75 SUCCESS = 1 ; SUCCESS SEVERITY VALUE FOR MSGS
00000002 0000 76 ERROR = 2 ; ERROR SEVERITY VALUE FOR MSGS
00000003 0000 77 INFO = 3 ; INFORMATIONAL SEV VALUE FOR MSGS
00000004 0000 78 SEVERE = 4 ; SEVERE (FATAL) SEV VALUE FOR MSGS
00000000 0000 79 TCG_NO = 0 ; INITIALIZE TEST CASE GROUP NUMBER
00000000 0000 80 GRP_TOTAL = 0 ; INITIALIZE TEST CASE GROUP TOTAL
00007FFF 0000 81 RO_THRU_SP = ^M<R0,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,AP,FP,SP>
00000000 0000 82 ARGLST_CME = 0 ; ARGLST ARG FOR CMEXEC ...
0000 83 ; ... (MISSING ARG LIST)
0000 84 :
0000 85 : OWN STORAGE:
0000 86 :

```

```

00000000 88 .PSECT RODATA, RD, NOWRT, NOEXE, LONG
BFFC 0000 89 REG_COMP_MASK: .WORD ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,AP,FP> ! ^X8000 -
0002 90 ; REG COMPARE MASK (HIGH-ORDER ...
0002 91 ; ... BIT MUST BE ON
0002 92 ERR_MSG_FAOCTL: STRING I, <!!/!AC!1ZB!1ZB: REGISTER !2UW CONTENTS ALTERED>, -
0002 93 <; BEFORE SERVICE CALL: !8XL AFTER SERVICE CALL: !8XL>
006E 94 TEST_MOD_NAME: STRING C, <SATSSF08> ; TEST MODULE NAME
0077 95 TEST_MOD_BEG: STRING C, <begun> ; DISPOSITION FIELD OF TEST MOD MSG
007D 96 TEST_MOD_SUCC: STRING C, <successful> ; DISPOSITION FIELD OF TEST MOD MSG
0088 97 TEST_MOD_FAIL: STRING C, <failed> ; DISPOSITION FIELD OF TEST MOD MSG
008F 98 TEST_MOD_NAME_D: STRING I, <SATSSF08> ; TEST MODULE NAME DESCRIPTOR
009F 99 TTNAME: STRING I, <TT> ; TERMINAL LOGICAL NAME
00000000'00000000' 00A9 100 INADR: .LONG NOACCESS, NOACCESS ; PAGE ADDRESS OF NOACCESS PSECT
00000000' 00B1 101 PROT: .LONG PRTSC_NA ; PROTECTION CODE FOR NOACCESS PSECT
FFFFFFFF FFFFFFFF 00B5 102 ONES: .LONG -1, -1 ; A QUADWORD OF 1-BITS
00BD 103 ROUTIN_CME: ; ROUTIN ARGUMENT FOR CMEXEC
00BD 104 ROUTIN_CME10: ; ROUTIN ARGUMENT FOR CMEXEC
50 0000 00BD 105 .WORD 0 ; ENTRY MASK FOR CHANGE MODE SERVS
00'8F 9A 00BF 106 MOVZBL #SS$ _NORMAL, R0 ; R0 LOAD FOR CHANGE MODE SERVICES
04 00C3 107 RET ; RETURN INSTR FOR CHANGE MODE SERVS
00000000 00C4 108 MSGID_GTM: .LONG 0 ; MSGID ARGUMENT FOR GETMSG
0000000F 00C8 109 FLAGS_GTM: .LONG ^B1111 ; FLAGS ARGUMENT FOR GETMSG
OFFFFFF0 00CC 110 MSGID_GTM10: .LONG ^XOFFFFFF0 ; MSGID ARGUMENT FOR GETMSG

```

```

00000000 112 .PSECT RWDATA,RD,WRT,NOEXE
00000004 0000 113 TPID: .BLKL 1 ; PROCESS ID FOR THIS PROCESS
00000008 0004 114 CURRENT_TC: .BLKL 1 ; PTR TO CURRENT TEST CASE
00000044 0008 115 REG_SAVE_AREA: .BLKL 15 ; SAVE AREA FOR ALL REGS (SANS PC)
007480D9 0044 116 MOD_MSG_CODE: .LONG UETPS_SATSMS ; TEST MODULE MSG CODE FOR PUTMSG
0000004C 0048 117 CLOB_REG_NO: .BLKL 1 ; CLOBBERED REG NO (FOR FAO ERR MSG)
00000050 004C 118 REG_BEFORE_SS: .BLKL 1 ; REG CONTENTS BEFORE S.S.
00000054 0050 119 ; ... (FOR FAO ERROR MSG)
00000054 0050 120 REG_AFTER_SS: .BLKL 1 ; REG CONTENTS AFTER S.S.
00000054 0054 121 ; ... (FOR FAO ERROR MSG)
00000054 0054 122 $$STSTN$$: STRING C,< SF > ; ASCII PORTION OF TEST CASE NAME
0000006E' 005C 123 TMN_ADDR: .ADDRESS TEST_MOD_NAME ; ADDR OF TEST MOD NAME FOR FAO
00000077' 0060 124 TMD_ADDR: .ADDRESS TEST_MOD_BEG ; ADDR OF T.M. DISP FIELD FOR FAO
00000068 0064 125 TS_EP: .BLKL 1 ; ENTRY PNT FOR CURR TESTSERV MACRO
00000070 0068 126 RETADR: .BLKL 2 ; RETURN LONGWORDS FOR SETPRT
00000071 0070 127 PRVPRT: .BLKB 1 ; PROT RETURN BYTE FOR SETPRT
00000079 0071 128 PRIVMASK: .BLKQ 1 ; ADDR OF PRIVILEGE MASK (IN PHD)
0000007D 0079 129 CHM_CONT: .BLKL 1 ; CHANGE MODE CONTINUE ADDRESS
00000091 007D 130 REGS: .BLKL 5 ; AREA FOR COND INDEX REGS (R2-R6)
00000093 0091 131 MSGLEN_GTM: .BLKW 1 ; MSGLEN ARGUMENT FOR GETMSG
00000093 0093 132 BUFADR_GTM: STRING 0,256 ; BUFADR ARGUMENT FOR GETMSG
0000019F 019B 133 OUTADR_GTM: .BLKB 4 ; OUTADR ARGUMENT FOR GETMSG
0000019F 019F 134 BUFADR_GTM30: ; BUFADR ARGUMENT FOR GETMSG
00000000 019F 135 ; ZERO LENGTH STRING ...
000001A3' 01A3 136 ; ... AT AN ACCESSIBLE LOCATION
000001A7 01A7 137 BUFADR_GTM31: STRING 0,1 ; BUFADR ARGUMENT FOR GETMSG

```

```
00000000 139 .PSECT SATS_ACCVIO_1,RD,WRT,NOEXE,PAGE
00000200 0000 140 EMPTY: .BLKB 512 ; RESERVE A PAGE OF SPACE
      0200 141 :
      0200 142 : +
      0200 143 : *****
      0200 144 : *
      0200 145 : * THE ORDER OF STATEMENTS IN THIS PSECT IS CRITICAL. *
      0200 146 : * DO NOT RE-ARRANGE THE VARIABLES. CONSULT SATS *
      0200 147 : * FUNCTIONAL SPECIFICATION FOR A DESCRIPTION OF THE USE *
      0200 148 : * OF THE EMPTY PSECT (AND ITS COMPANION PSECT, NOACCESS). *
      0200 149 : *
      0200 150 : *****
      0200 151 : -
      0200 152 :
      0200 153 : TYPE AAAAA_SSSX1 (TYPE AAAAA_SSSX2 IF NOT DESC) GO HERE:
000001F3 0200 154 : = . - 13 ; ALLOW ROOM FOR STRING DESCRIPTOR
      01F3 155 : TYPE AAAAA_SSSX5 GO HERE:
00000006 01F3 156 : .LONG 6 ; STRING LENGTH (WILL CROSS PSECT BOUNDARY)
000001FB' 01F7 157 : .ADDRESS +4 ; STRING ADDRESS
      01FB 158 : TYPE AAAAA_SSSX3 GO HERE:
000001FC 01FB 159 : .BLKB 1 ; LOW-ORDER BYTE OF STRING LENGTH
      01FC 160 : TYPE AAAAA_SSSX2 GO HERE:
00000200 01FC 161 : .BLKL 1 ; STRING LENGTH
      0200 162 :
      0200 163 :
      0200 164 :
      0200 165 :
00000000 166 .PSECT SATS_ACCVIO_2,RD,WRT,NOEXE,PAGE
00000200 0000 167 NOACCESS: .BLKB 512 ; RESERVE A PAGE OF SPACE
00000000 0200 168 : = . - 512 ; RETURN LOC CTR TO BEGINNING OF PSECT
00000000' 0000 169 : .ADDRESS EMPTY ; ADDRESS OF ACCESSIBLE STRING
00000000' 0004 170 : .ADDRESS EMPTY/^X100 ; ADDRESS OF ACCESSIBLE STRING
      0008 171 : +
      0008 172 : *** NOTE -- DO NOT CHANGE LOCATION OR SEQUENCE OF ABOVE STATEMENTS!
      0008 173 : *** THIS PSECT (NOACCESS) MUST APPEAR IN MEMORY IMMEDIATELY
      0008 174 : *** FOLLOWING THE EMPTY PSECT. PSECT NAMES AND OPTIONS WILL BE
      0008 175 : *** CHOSEN TO FORCE THE DESIRED PSECT ORDERING.
      0008 176 : -
      0008 177 :
      0008 178 :
      0008 179 :
00000000 180 :
00000000 181 .PSECT SATSSF08,RD,WRT,EXE,LONG
```

```

0000 183      .SBTTL  SATSSF08
0000 184      :++
0000 185      : FUNCTIONAL DESCRIPTION:
0000 186      :
0000 187      :         AFTER PERFORMING SOME INITIAL HOUSEKEEPING, SUCH AS
0000 188      : PRINTING THE MODULE BEGIN MESSAGE AND ACQUIRING ALL PRIVILEGES,
0000 189      : THE SATSSF08 ROUTINE EXECUTES THE TEST SERV EXEC MACRO TO RUN
0000 190      : ALL TEST CASES. WHEN THE MACRO COMPLETES ITS EXECUTION, SATSSF08
0000 191      : PRINTS A TEST MODULE SUCCESS OR FAIL MESSAGE AND EXITS TO THE
0000 192      : OPERATING SYSTEM. TEST SERV EXEC CALLS THE TC CONTROL/TESTSERV
0000 193      : CO-ROUTINE PAIR ONCE PER TEST CASE GROUP TO EXECUTE ALL TEST
0000 194      : CASES IN THAT GROUP. EACH TEST CASE GROUP IS DEFINED BY BOUNDING
0000 195      : ITS TEST CASES WITH A TC_GROUP MACRO BEFORE THE FIRST TEST CASE
0000 196      : AND A TCEND MACRO AFTER THE LAST ONE. THE TEST CASES THEMSELVES
0000 197      : ARE DEFINED WITHIN THESE BOUNDS BY PRECEDING EACH WITH A
0000 198      : NEXT_TEST_CASE MACRO. TC_CONTROL/TESTSERV EXECUTES THE CODE
0000 199      : FOLLOWING EACH NEXT_TEST_CASE MACRO IMMEDIATELY BEFORE ISSUING
0000 200      : THE SYSTEM SERVICE AS REQUESTED IN THE TESTSERV MACRO. TC_CONTROL/
0000 201      : TESTSERV ALSO CHECKS THE RESULTS OF THE SERVICE WITH RESPECT
0000 202      : TO ITS EXPECTED STATUS CODE AND PRINTS ANY REQUIRED FAILURE
0000 203      : MESSAGES FOR THE TEST CASE. THE CODE APPEARING AFTER EACH
0000 204      : NEXT_TEST_CASE MACRO IS MERELY TO SET UP CONDITIONS REQUIRED
0000 205      : FOR THE SYSTEM SERVICE AND TO CLEAN UP ANY RESOURCES ACQUIRED
0000 206      : BY THE PREVIOUS TEST CASE.
0000 207      :
0000 208      : CALLING SEQUENCE:
0000 209      :
0000 210      :     $ RUN SATSSF08 ... (DCL COMMAND)
0000 211      :
0000 212      : INPUT PARAMETERS:
0000 213      :
0000 214      :     NONE
0000 215      :
0000 216      : IMPLICIT INPUTS:
0000 217      :
0000 218      :     NONE
0000 219      :
0000 220      : OUTPUT PARAMETERS:
0000 221      :
0000 222      :     NONE
0000 223      :
0000 224      : IMPLICIT OUTPUTS:
0000 225      :
0000 226      :     MESSAGES TO SYSS$OUTPUT ARE THE ONLY OUTPUT FROM SATSSF08.
0000 227      :     THEY ARE OF THE FORM:
0000 228      :
0000 229      :         %UETP-S-SATSMS, TEST MODULE SATSSF08 BEGUN ... (BEGIN MSG)
0000 230      :         %UETP-S-SATSMS, TEST MODULE SATSSF08 SUCCESSFUL ... (END MSG)
0000 231      :         %UETP-E-SATSMS, TEST MODULE SATSSF08 FAILED ... (END MSG)
0000 232      :         %UETP-I-TEXT, ... (VARIABLE INFORMATION ABOUT A TEST MODULE FAILURE)
0000 233      :
0000 234      : COMPLETION CODES:
0000 235      :
0000 236      :     THE SATSSF08 ROUTINE TERMINATES WITH A $EXIT TO THE
0000 237      :     OPERATING SYSTEM WITH A STATUS CODE DEFINED BY UETP$_SATSMS.
0000 238      :
0000 239      : SIDE EFFECTS:

```

```

0000 240 :
0000 241 : NONE
0000 242 :
0000 243 :--
0000 244 :
0000 245 :
0000 246 :
0000 247 SATSSF08:
OFFC 0000 248 .WORD ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
0002 249 : ENTRY MASK
0002 250 $WAKE S TPID : GET PID OF THIS PROCESS
0011 251 $HIBER S : UNDO WAKE
0018 252 $SETPRN_S TEST_MOD_NAME_D : SET PROCESS NAME
0025 253 BSBW MOD_MSG_PRINT : PRINT TEST MODULE BEGIN MSG
0028 254 MOVAL TEST_MOD_SUCC_TMD_ADDR : ASSUME END MSG WILL SHOW SUCCESS
0033 255 INSV #SUCCESS,#0,#3,MOD_MSG_CODE : ADJUST STATUS CODE FOR SUCCESS
003C 256 MODE TO,10$,KRNL,NOREGS : KERNEL MODE TO ACCESS PHD
59 00000000'9F DO 0059 257 MOVL @#CTL$GL PHD,R9 : GET PROCESS HEADER ADDRESS
00000071'EF 69 DE 0060 258 MOVAL PHD$Q PRIVMSK(R9),PRIVMASK : GET PRIV MASK ADDRESS
0067 259 MODE FROM,T0$ : GET BACK TO USER MODE
0068 260 PRIV ADD,ALL : GET ALL PRIVILEGES
0088 261 DISPSERV : SET UP DISPLAY INFO FOR TESTSERV
021D 262 $SETPRT_S INADR=INADR, RETADR=RETADR, -
023E 263 PROT=PROT, PRVPRT=PRVPRT
023E 264 : SET NOACCESS PSECT ...
055B 31 023E 265 : ... FOR NO USER ACCESS
0241 266 BRW EXECUTE : GO EXECUTE ALL TEST CASES
0241 267 :
0268 268 TC_GROUP CME,1,TS1
0268 269 :
0268 270 NEXT_TEST_CASE SFCME10

```



SATSSF08  
V04-000

0299	296	:		
0299	297	:	TC_GROUP	GTM,1,TS2
02C0	298	:		
02C0	299	:	NEXT_TEST_CASE	SFGTM10

SA  
Ps  
  
PS  
--  
SA  
RO  
RW  
SA  
SA  
SA  
  
Ph  
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Co  
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Pa  
Sy  
Ps  
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60  
62  
  
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-S  
TO  
12  
Th  
MA

```
02C0 300 :  
02C0 301 :++  
02C0 302 :*****  
02C0 303 :*  
02C0 304 :* TEST CASE NAME: SFGTM10  
02C0 305 :*  
02C0 306 :* SYSTEM SERVICE: GETMSG  
02C0 307 :*  
02C0 308 :* ARGUMENT UNDER TEST: MSGID_GTM10  
02C0 309 :*  
02C0 310 :* INPUT CONDITIONS:  
02C0 311 :* MESSAGE IDENTIFICATION NOT IN USE BY SYSTEM  
02C0 312 :*  
02C0 313 :* EXPECTED RESULTS:  
02C0 314 :* 1) SYSTEM STATUS CODE: MSGNOTFND  
02C0 315 :* 2) REGISTERS R2 THROUGH FP UNCHANGED  
02C0 316 :*  
02C0 317 :*****  
02C0 318 :--  
02C0 319 :  
02C0 320 : PRIV ADD,ALL ; GET BACK ANY PRIVS LOST BY LAST TEST CASE  
02E0 321 :  
02E0 322 : NEXT_TEST_CASE SFGTM30
```

```
02EC 323 :
02EC 324 :++
02EC 325 :*****
02EC 326 :*
02EC 327 :* TEST CASE NAME: SFGTM30
02EC 328 :*
02EC 329 :* SYSTEM SERVICE: GETMSG
02EC 330 :*
02EC 331 :* ARGUMENT UNDER TEST: BUFADR_GTM30
02EC 332 :*
02EC 333 :* INPUT CONDITIONS:
02EC 334 :* MESSAGE BUFFER (LENGTH 0) NOT LARGE
02EC 335 :* ENOUGH TO CONTAIN MESSAGE.
02EC 336 :*
02EC 337 :* EXPECTED RESULTS:
02EC 338 :* 1) SYSTEM STATUS CODE: BUFFEROVF
02EC 339 :* 2) REGISTERS R2 THROUGH FP UNCHANGED
02EC 340 :*
02EC 341 :*****
02EC 342 :--
02EC 343 :
02EC 344 :
02EC 345 : NEXT_TEST_CASE SFGTM31
```

```
02F8 346 :  
02F8 347 :++  
02F8 348 :*****  
02F8 349 :*  
02F8 350 :* TEST CASE NAME: SFGTM31  
02F8 351 :*  
02F8 352 :* SYSTEM SERVICE: GETMSG  
02F8 353 :*  
02F8 354 :* ARGUMENT UNDER TEST: BUFADR_GTM31  
02F8 355 :*  
02F8 356 :* INPUT CONDITIONS:  
02F8 357 :* MESSAGE BUFFER (LENGTH 1) NOT LARGE  
02F8 358 :* ENOUGH TO CONTAIN MESSAGE.  
02F8 359 :*  
02F8 360 :* EXPECTED RESULTS:  
02F8 361 :* 1) SYSTEM STATUS CODE: BUFFEROVF  
02F8 362 :* 2) REGISTERS R2 THROUGH FP UNCHANGED  
02F8 363 :*  
02F8 364 :*****  
02F8 365 :--  
02F8 366 :  
02F8 367 :  
02F8 368 : TCEND
```

```
02F9 369 TS1:
02F9 370 TESTSERV CMEXEC,ERR,SATS, -
02F9 371 <1,ROUTIN_CME, -
02F9 372 ROUTIN_CME10,NOPRIV, - ; SFCME10
02F9 373 >, -
02F9 374 <1,ARGLST_CME, -
02F9 375 >, -
02F9 376 TS_CLEANUP ; CLEAN UP & RETURN TO TEST_SERV_EXEC
02F9 377
02F9 378
0444 379
```

```
0464 380 TS2:
0464 381 TESTSERV GETMSG,ERR,SATS, -
0464 382
0464 383 <1,MSGID_GTM, -
0464 384 MSGID_GTM10,MSGNOTFND, - ; SFGTM10
0464 385 >, -
0464 386
0464 387 <1,MSGLEN_GTM, -
0464 388 >, -
0464 389
0464 390 <1,BUFADR_GTM, -
0464 391 BUFADR_GTM30,BUFFEROVF, - ; SFGTM30
0464 392 BUFADR_GTM31,BUFFEROVF, - ; SFGTM31
0464 393 >, -
0464 394
0464 395 <1,FLAGS_GTM, -
0464 396 >, -
0464 397
0464 398 <1,OUTADR_GTM, -
0464 399 >, -
0464 400
077C 401 TS_CLEANUP ; CLEAN UP & RETURN TO TEST_SERV_EXEC
```

```
00000044'EF 01 1C 0138 30 079C 402 .SBTTL EXECUTE & CLEANUP
079C 403 EXECUTE:
079C 404 TEST_SERV_EXEC ; EXECUTE ALL T. CASES IN ALL GROUPS
07B0 405 CLEANUP:
07B0 406 BSBW MOD MSG PRINT ; PRINT TEST MODULE END MSG
07B3 407 INSV #1,#STSSV_INHIB_MSG,#1,MOD_MSG_CODE ; INHIBIT PRINTING
07BC 408 ; INHIBIT PRINTING
07BC 409 $EXIT_S MOD_MSG_CODE ; EXIT TO OP SYS WITH MSG CODE
```

```
07C9 411 .SBTTL TC_CONTROL
07C9 412 :++
07C9 413 : FUNCTIONAL DESCRIPTION:
07C9 414 :
07C9 415 : THE TC CONTROL SUBROUTINE IS CALLED BY THE TEST_SERV_EXEC
07C9 416 : MACRO TO EXECUTE A GROUP OF TEST CASES. A GROUP IS DEFINED BY A TC_GROUP
07C9 417 : MACRO. FOR EACH TC_GROUP MACRO, THERE IS A CORRESPONDING TESTSERV MACRO.
07C9 418 : TESTSERV CONTAINS CODE TO EXECUTE SYSTEM SERVICES AND CHECK THE RETURNED
07C9 419 : STATUS CODE VALUES. TESTSERV ARGUMENTS ARE CODED TO SPECIFY ALL THE SYSTEM
07C9 420 : SERVICE ARGUMENT VALUES AND THE EXPECTED STATUS CODE FOR EACH TEST CASE
07C9 421 : DEFINED BY A NEXT TEST CASE MACRO WITHIN THE GROUP. TC CONTROL USES A
07C9 422 : CO-ROUTINE INTERFACE TO ENTER THE CODE OF THE APPROPRIATE TESTSERV MACRO
07C9 423 : IN VARIOUS PLACES. THE FIRST ENTRY OCCURS ONCE PER GROUP TO ALLOW TESTSERV
07C9 424 : TO DO SOME INITIALIZATION. THEN TWO ENTRIES ARE MADE FOR EACH TEST CASE IN
07C9 425 : THE GROUP. THE FIRST ALLOWS TESTSERV TO ISSUE THE SUBJECT SYSTEM SERVICE.
07C9 426 : THE SECOND ENTRY FOR THE TEST CASE CAUSES TESTSERV TO CHECK THE RETURNED
07C9 427 : STATUS CODE, PRINTING A FAILURE MESSAGE IF IT IS NOT THE EXPECTED CODE.
07C9 428 : IF THERE ARE NO MORE TEST CASES IN THE CURRENT GROUP, TESTSERV (NOT TC CONTROL)
07C9 429 : RETURNS DIRECTLY TO TEST_SERV_EXEC (RSB ACTUALLY ISSUED IN TS_CLEANUP MACRO)
07C9 430 : FROM THIS SECOND ENTRY; OTHERWISE, CONTROL RETURNS TO TC_CONTROL WHICH
07C9 431 : IN TURN ENTERS TESTSERV AGAIN FOR THE NEXT TEST CASE. THE FAILURE OF A
07C9 432 : TEST CASE DOES NOT CAUSE TERMINATION OF THE TEST MODULE.
07C9 433 :
07C9 434 : CALLING SEQUENCE:
07C9 435 :
07C9 436 : BSBW TC_CONTROL (ISSUED WITHIN THE TEST_SERV_EXEC MACRO)
07C9 437 : (RSB IS ISSUED WITHIN THE TS_CLEANUP MACRO)
07C9 438 :
07C9 439 : INPUT PARAMETERS:
07C9 440 :
07C9 441 : NONE
07C9 442 :
07C9 443 : IMPLICIT INPUTS:
07C9 444 :
07C9 445 : ARGUMENTS SPECIFIED ON EACH TESTSERV MACRO MAY BE VIEWED AS
07C9 446 : INPUTS, SINCE TC_CONTROL AND TESTSERV ACT AS CO-ROUTINES.
07C9 447 :
07C9 448 : OUTPUT PARAMETERS:
07C9 449 :
07C9 450 : SEVERITY CODE FIELD OF MOD_MSG_CODE (BITS 0,1,2) IS SET TO ERROR
07C9 451 : IF ANY TEST CASE IN THE CURRENT GROUP FAILS; OTHERWISE IT REMAINS
07C9 452 : SET TO SUCCESSFUL.
07C9 453 :
07C9 454 : IMPLICIT OUTPUTS:
07C9 455 :
07C9 456 : %UETP-I-TEXT, ERROR MESSAGES ARE WRITTEN TO SYSS$OUTPUT BY
07C9 457 : THE TESTSERV MACRO (CO-ROUTINE WITH TC_CONTROL)
07C9 458 :
07C9 459 : COMPLETION CODES:
07C9 460 :
07C9 461 : NONE
07C9 462 :
07C9 463 : SIDE EFFECTS:
07C9 464 :
07C9 465 : NONE
07C9 466 :
07C9 467 :--
```

			07C9	468				
			07C9	469				
			07C9	470				
			07C9	471	TC_CONTROL:			
00000064'EF	DD		07C9	472	PUSHL	TS EP	:	PUSH TESTSERV ENTRY POINT
	9E	16	07CF	473	JSB	@(SP)+	:	ENTER TESTSERV INITIALIZATION
			07D1	474	10\$:		:	PROCESS NEXT TEST CASE
00000056'EF	20	90	07D1	475	MOVB	#*A/ /,\$\$TSTN\$\$+2	:	MAKE SURE T.C. NAME HAS A BLANK
	002F	30	07D8	476	BSBW	REG_SAVE	:	SAVE REGISTERS
00000004'FF	16	07DB	477	JSB	@CURRENT_TC		:	JUMP TO CURRENT TEST CASE
	0037	30	07E1	478	BSBW	REG_REST	:	RESTORE REGS FOR TESTSERV
	9E	16	07E4	479	JSB	@(SP)+	:	LET TESTSERV ISSUE SYSTEM SERVICE
	0042	30	07E6	480	BSBW	REG_COMP	:	COMPARE REGS TO SEE IF ...
			07E9	481			:	... SYSTEM SERVICE CHANGED ANY
	9E	16	07E9	482	JSB	@(SP)+	:	LET TESTSERV CHEK S.S. STATUS CODE
00000056'EF	2A	91	07EB	483	CMPB	#*A/*/,\$\$TSTN\$\$+2	:	HAS TESTSERV INDICATED FAILURE ?
	DD	12	07F2	484	BNEQU	10\$	:	NO -- PROCESS NEXT TEST CASE
00000060'EF	00000088'EF	DE	07F4	485	MOVAL	TEST MOD FAIL,TMD ADDR	:	YES -- INDICATE FAILED IN END MSG
00000044'EF	03 00	F0	07FF	486	INSV	#ERROR,#0,#3,MOD_MSG_CODE	:	ADJUST STATUS CODE FOR ERROR
		C7	11	0808	BRB	10\$	:	LOOP BAK TO PROCESS NEXT TEST CASE
			080A	488	:		:	
			080A	489	:		:	
			080A	490	:		:	

TC\_CONTROL RETURNS TO TEST\_SERV\_EXEC VIA TESTSERV (IN TS\_CLEANUP MACRO)

```
080A 492 .SBTTL SUBROUTINES
080A 493 REG_SAVE:
080A 494 :
080A 495 :*****
080A 496 :*
080A 497 :* SAVES R0 THRU SP IN REG_SAVE_AREA
080A 498 :*
080A 499 :*****
080A 500 :
00000008'EF 7FFF 8F BB 080A 501 PUSHR #R0_THRU_SP ; SAVE ALL REGS ON STACK
6E 6E 3C 28 080E 502 MOV C3 #60,(SP),REG_SAVE_AREA ; SAVE REGS (BEFORE S.S.)
7FFF 8F BA 0816 503 POPR #R0_THRU_SP ; CLEAN UP STACK
05 081A 504 RSB ; .... AND RETURN
081B 505 :
081B 506 :
081B 507 :
081B 508 :
081B 509 REG_REST:
081B 510 :
081B 511 :
081B 512 :*****
081B 513 :*
081B 514 :* RESTORES R0 THRU SP FROM REG_SAVE_AREA
081B 515 :*
081B 516 :*****
081B 517 :
6E 00000008'EF 5E 3C C2 081B 518 SUBL2 #60,SP ; MOVE SP TO MAKE ROOM FOR REGS
7FFF 8F BA 081E 519 MOV C3 #60,REG_SAVE_AREA,(SP) ; MOVE REGS ONTO STACK FOR POP
05 0826 520 POPR #R0_THRU_SP ; RESTORE ALL REGS FOR TESTSERV
082A 521 RSB ; ... AND RETURN
```

```

082B 523 REG_COMP:
082B 524 :
082B 525 : *****
082B 526 : *
082B 527 : * 1) PUSHES ALL REGS ONTO STACK *
082B 528 : * 2) COMPARES REGISTER IMAGES FROM STACK WITH CORRESPONDING *
082B 529 : * IMAGES FROM REG_SAVE_AREA FOR ALL REGISTERS SPECIFIED *
082B 530 : * IN REG_COMP_MASK. *
082B 531 : * 3) FOR EACH UNEQUAL COMPARE, AN ERROR MESSAGE IS PRINTED *
082B 532 : * (USING $FAO AND $OUTPUT SYSTEM SERVICES). *
082B 533 : * 4) POPS ALL REGS OFF OF STACK *
082B 534 : *
082B 535 : *****
082B 536 :
56 7FFF 8F BB 082B 537 PUSHR #R0_THRU_SP : SAVE ALL REGISTERS ON STACK
00000008'EF DE 082F 538 MOVAL REG_SAVE_AREA,R6 : POINT R6 TO BEG OF
54 5E D0 0836 539 : : REGS (BEFORE S.S.)
53 FF 8F 98 0839 540 MOVL SP,R4 : POINT R4 TO BEG OF
0839 541 : : REGS (AFTER S.S.)
083D 542 CVTBL #-1,R3 : INITIALIZE REG_COMP_MASK INDEX
53 53 D6 083D 543 REG_COMP_NEXT:
53 0F 91 083F 544 INCL R3 : POINT TO NEXT BIT IN MASK
03 1A 0842 545 CMPB #15,R3 : END OF THE MASK ?
009F 31 0844 546 BGTRU REG_COMP_CONT : NO -- CONTINUE
84 86 D1 0847 547 BRW REG_COMP_RSB : YES -- GO TO COMMON RETURN
E9 00000000'EF 53 E1 084C 548 REG_COMP_CONT:
00000048'EF 53 D0 0854 549 CMPL (R6)+,(R4)+ : REG BEFORE = REG AFTER ?
0000004C'EF FC A6 D0 085B 550 BEQLU REG_COMP_NEXT : YES -- LOOK FOR NEXT REG
00000050'EF FC A4 D0 0863 551 BBC R3,REG_COMP_MASK,REG_COMP_NEXT : NO -- GET NEXT IF BIT NOT SET
00000056'EF 2A 90 086B 552 MOVL R3,CLOB_REG_NO : NO -- GIVE REG NUMBER TO FAO
0872 553 MOVL -4(R6),REG_BEFORE_SS : GIVE 'BEFORE' CONTENTS TO FAO
0872 554 MOVL -4(R4),REG_AFTER_SS : GIVE 'AFTER' CONTENTS TO FAO
0872 555 MOVB #^A/^/, $$TSTN$$+2 : GIVE FAILURE INDIC'N IN ERROR MSG
08A5 556 :
08A5 557 : $FAO_S ERR_MSG FAOCTL,OUTL,OUTD,$$SNAD$$, -
08AC 558 : $$ASEQ$$,$$PSEQ$$,CLOB_REG_NO,REG_BEFORE_SS,REG_AFTER_SS
F868 CF F832 CF B0 08A5 559 :
08AC 560 : MOVW OUTL,OUTD : ACTUAL OUTPUT LEN IN STRING DESC'R
F84C CF 0084 8F B0 08AC 561 PUTMSG <#UETPS TEXT,#1,#OUTD> : PRINT THE MSG
00000056'EF 20 90 08C1 562 MOVW #OUTE-00TB,OUTD : GET MAX LEN BACK INTO DESCRIPTOR
00000060'EF 00000088'EF DE 08C8 563 MOVB #^A/ /,$$TSTN$$+2 : REMOVE FAIL INDIC'N FOR NEXT MSG
00000044'EF 03 00 02 FO 08CF 564 MOVAL TEST_MOD_FAIL,TMD_ADDR : INDICATE FAILED IN END MSG
FF57 31 08DA 565 INSV #ERROR,#0,#3,MOD_MSG_CODE : ADJUST STATUS CODE FOR ERROR
08E6 566 BRW REG_COMP_NEXT : GO LOOK FOR NEXT REG TO COMPARE
7FFF 8F BA 08E3 567 REG_COMP_RSB:
08E6 568 POPR #R0_THRU_SP : CLEAN UP STACK
05 08EA 569 RSB : RETURN TO CALLER
08EA 570

```

```
08EB 572 MOD_MSG_PRINT:
08EB 573 :
08EB 574 : *****
08EB 575 : *
08EB 576 : * PRINTS THE TEST MODULE BEGUN/SUCCESSFUL/FAILED MESSAGES *
08EB 577 : * (USING THE PUTMSG MACRO). *
08EB 578 : *
08EB 579 : *****
08EB 580 :
05 08EB 581 PUTMSG <MOD_MSG_CODE,#2,TMN_ADDR,TMD_ADDR> ; PRINT MSG
0906 582 RSB ; ... AND RETURN TO CALLER
0907 583 :
0907 584 CHMRTN:
0907 585 : *****
0907 586 : *
0907 587 : * CHANGE MODE ROUTINE. THIS ROUTINE GETS CONTROL WHENEVER
0907 588 : * A CMKRNL, CMEXEC, OR CMSUP SYSTEM SERVICE IS ISSUED
0907 589 : * BY THE MODE MACRO ('TO' OPTION). IT MERELY DOES
0907 590 : * A JUMP INDIRECT ON A FIELD SET UP BY MODE. IT HAS
0907 591 : * THE EFFECT OF RETURNING TO THE END OF THE MODE
0907 592 : * MACRO EXPANSION.
0907 593 : *
0907 594 : *****
0907 595 :
0000079'FF 0000 0907 596 .WORD 0 ; ENTRY MASK
17 0909 597 JMP @CHM_CONT ; RETURN TO MODE MACRO IN NEW MODE
090F 598 :
090F 599 : * RET INSTR WILL BE ISSUED IN EXPANSION OF 'MODE FROM, ....' MACRO
090F 600 :
090F 601 .END SATSSF08
```

```

SSSCHARS          = 00000048
SSSFIRSTTCSS$    = 00000000
SS$STRINGS        = 00000000
SSACT$           = 000000F3 R 06
SSARG$           = 000000FB R 06
SSASEQ$          = 000000EB R 06
SSCALL$          = 000000DF R 06
SSDISP$          = 000001E6 R 06
SSERR$           = 000001A0 R 06
SSEXPS$          = 000000F7 R 06
SSINIT$          = 000000E3 R 06
SSMAXP$          = = 00000005
SSPSEQ$          = 000000EF R 06
SSSNAD$          = 000000E7 R 06
SST1             = 00000004
SST2             = 00000009
SSTSTN$          = 00000054 R 03
ARGLST_CME       = 00000000
BUFADR_GTM       = 00000093 R 03
BUFADR_GTM30     = 0000019F R 03
BUFADR_GTM31     = 000001A7 R 03
CHMRTN           = 00000907 R 06
CHM CONT         = 00000079 R 03
CLEANUP          = 0000007B0 R 06
CLOB REG NO      = 00000048 R 03
CTL$GL PRD      = ***** X 06
CURRENT_TC       = 00000004 R 03
EMPTY            = 00000000 R 04
ERROR            = = 00000002
ERR_MSG_FAOCTL   = 00000002 R 02
EXECUTE          = 0000079C R 06
FLAGS GTM        = 000000C8 R 02
GRP TOTAL        = = 00000002
INADR            = 000000A9 R 02
INFO             = = 00000003
LIB$SIGNAL       = ***** X 06
MEXIT            = = 00000000
MOD_MSG_CODE     = 00000044 R 03
MOD_MSG_PRINT    = 000008EB R 06
MSGID_GTM        = 000000C4 R 02
MSGID_GTM10     = 000000CC R 02
MSGLEN_GTM       = 00000091 R 03
NARGS            = = 0000000E
NOACCESS         = 00000000 R 05
NSSARGS          = = 00000005
ONES             = 00000085 R 02
OUTADR_GTM       = 0000019B R 03
OUTB             = 0000011C R 06
OUTD             = 00000114 R 06
OUTE             = 000001A0 R 06
OUTL             = 000000DB R 06
PHD$Q PRIVMSK   = = 00000000
PRIVMSK          = 00000071 R 03
PRIV_ARGS        = = 00000002
PROT             = 000000B1 R 02
PRT$C_NA         = ***** X 02
PRVSV_CMEEXEC   = = 00000001
    
```

```

PRVSV_CMKRNL
PRVPRT
RO_THRU_SP
REGS
REG_AFTER_SS
REG_BEFORE_SS
REG_COMP
REG_COMP_CONT
REG_COMP_MASK
REG_COMP_NEXT
REG_COMP_RSB
REG_REST
REG_SAVE
REG_SAVE_AREA
RETADR
ROUTIN_CME
ROUTIN_CME10
SATSSF08
SEVERE
SHR$K SHRDEF
SHR$ TEXT
SS$_BUFFEROVF
SS$_MSGNOTFND
SS$_NOPRIV
SS$_NORMAL
STSV_INHIB_MSG
SUCCESS
SYSSCMEEXEC
SYSSCMKRNL
SYSSEXIT
SYSSFAO
SYSSFAOL
SYSSGETMSG
SYSSHIBER
SYSSSETPRN
SYSSSETPRT
SYSSSETPRV
SYSSWAKE
TC1
TC2
TCG_NO
TC CONTROL
TEST_MOD_BEG
TEST_MOD_FAIL
TEST_MOD_NAME
TEST_MOD_NAME_D
TEST_MOD_SUCC-D
TMD_ADDR
TMN_ADDR
TPID
TS1
TS2
TS EP
TTNAME
UETPS_SATSMS
UETPS_TEXT
WARNING
    
```

```

= 00000000
00000070 R 03
= 00007FFF
0000007D R 03
00000050 R R 03
0000004C R R 03
0000082B R R 06
00000847 R R 06
00000000 R R 02
0000083D R R 06
000008E6 R R 06
0000081B R R 06
0000080A R R 06
00000008 R R 03
00000068 R R 03
000000BD R R 02
000000BD R R 02
00000000 R 06
= 00000004
= 00000001
= 00001130
***** X 06
***** X 06
***** X 06
***** X 02
= 0000001C
= 00000001
***** GX 06
***** GX 06
***** GX 06
***** X 06
***** GX 06
00000241 R 06
00000299 R 06
= 00000002
000007C9 R 06
00000077 R 02
00000088 R 02
0000006E R 02
0000008F R 02
0000007D R 02
00000060 R 03
0000005C R 03
00000000 R 03
000002F9 R 06
00000464 R 06
00000064 R 03
0000009F R 02
= 007480D9
= 00741133
= 00000000
    
```

+-----+  
! 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
RODATA	000000D0 ( 208.)	02 ( 2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
RWDATA	000001B0 ( 432.)	03 ( 3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC BYTE
SATS_ACCVIO_1	00000200 ( 512.)	04 ( 4.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC PAGE
SATS_ACCVIO_2	00000200 ( 512.)	05 ( 5.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC PAGE
SATSSF08	0000090F ( 2319.)	06 ( 6.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC LONG

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

Phase	Page faults	CPU Time	Elapsed Time
Initialization	38	00:00:00.07	00:00:00.39
Command processing	141	00:00:00.60	00:00:02.45
Pass 1	339	00:00:12.70	00:00:27.30
Symbol table sort	0	00:00:00.97	00:00:01.98
Pass 2	128	00:00:02.76	00:00:05.62
Symbol table output	14	00:00:00.10	00:00:00.30
Psect synopsis output	3	00:00:00.03	00:00:00.04
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	665	00:00:17.23	00:00:38.08

The working set limit was 1650 pages.  
66336 bytes (130 pages) of virtual memory were used to buffer the intermediate code.  
There were 40 pages of symbol table space allocated to hold 593 non-local and 78 local symbols.  
601 source lines were read in Pass 1, producing 26 object records in Pass 2.  
62 pages of virtual memory were used to define 46 macros.

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

Macro library name	Macros defined
_\$255\$DUA28:[SHRLIB]UETP.MLB;1	19
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	2
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	19
TOTALS (all libraries)	40

1226 GETS were required to define 40 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SATSSF08/OBJ=OBJ\$:SATSSF08 MSRC\$:SATSSF08/UPDATE=(ENH\$:SATSSF08)+EXECML\$/LIB+SHRLIB\$:UETP/LIB

