TK5

Usermod Directory

vr, nov 22, 2024

Contents

Overview

Over the years many sysmods have been generated by the MVS 3.8 community to enhance the usability of MVS 3.8 and provide functionality available in later Operating Systems.

Hopefully the MVS 3.8 community will continue to develop usermods that will be included in later releases of TK5.

This Usermod Directory documents the usermods that have been installed in the TK5 system.

Rob Prins

New usermods.

These usermods are added in TK5: ZP60041, ZP60042, ZP60043, MS00100, RP00001, RP00002, RP00003, RP00004, ZBP0001, ZBP0002, RRKF007 and/ RRKF008.

Updates

This release of TK5 includes a number of reworked usermods.
These are ZJW0007, ZP60009, ZP60014, ZP60038, ZP60039, and ZP60040.
The 3375/3380/3390 usermods starting with M023 and M024 are reworked
and are placed into dataset USERMOD.M023000. See chapter M023000.

Superceded sysmods.

M096220, wait00A if master catalog resides on D/3375, D/3380 or D/3390.
TMVS805
ZUM0003

Deleted sysmods

M026200
M026302
M026304
M026305
M026404
M026405
M026408

Note

The usermod set in USERMOD.M023000 is the reworked set of the
usermods of Jim Morrison.
These usermods support the module devices 3375, 3380 and 3390.
This set contains of 27 usermods and are ACCEPTED.

#DYPDMY

```
++ USERMOD (#DYPDMY)  .
++ VER   (Z038)  FMID (EBB1102)               /* MVS 3.8 BASE */
                 PRE (UZ59124
                             )
               /*
               PRIVATE PROCLIB MODIFICATIONS
               VERSION 4, RELEASE 1, MODIFICATION 0
               THIS LOCAL MODIFICATION, ALONG WITH ITS
               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.
               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
               #DYP003  IEFVHF    ZAP FOR LINKAGE TO IEFVPP3
               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS
               #DYPDMY  IEFVH1    DUMMY ZAP TO FORCE RELINK OF IEFVH1
                                                                  */  .
++ ZAP   (IEFVH1)  DISTLIB (AOSB3)  .
```

#DYP001

```
++ USERMOD (#DYP001)  .
++ VER   (Z038)  FMID (FBB1221)
                 PRE (UZ45794)
               /*

               PRIVATE PROCLIB MODIFICATIONS
               FOR HERCULES TURNKEY#3 SYSTEM
               VERSION 4, RELEASE 1, MODIFICATION 0

               THIS LOCAL MODIFICATION, ALONG WITH ITS
               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.

               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
               #DYP003  IEFVHF    ZAP FOR LINKAGE TO IEFVPP3
               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS

               ***** WARNING ***** WARNING ***** WARNING *****

               DO NOT ATTEPMT TO RESEQUENCE THIS MODIFICATION,
               AS IT CONTAINS A MACRO UPDATE TO A SYSGEN MACRO.

               ***** WARNING ***** WARNING ***** WARNING *****

               THIS MOD SUPPLIES THE SYSGEN MACRO UPDATE FOR
               SGIEF441.  THIS MACRO IS UPDATED TO SUPPORT
               DYNAMIC PROCLIB.

               DOCUMENTATION ON THE DYNAMIC PROCLIB MODS
               ARE CONTAINED IN THE MOD CONTAINING THE
               OBJECT DECK FOR IEFVPP, A NEW MODULE.

               BEWARE THAT THE "CHANGE" STATEMENT FOR IEFVH1
               MAY NOT BE EFFECTIVE WITHOUT A UCLIN TO
               DELETE THE CURRENT DEFINITIONS OF MODULE
               IEFVH1 AND LOAD MODULE IEFVH1.

                                                              */  .
++ JCLIN .
/*
++ MACUPD (SGIEF441)  DISTLIB (AGENLIB)  .
```

#DYP002

```
++ USERMOD (#DYP002)  .
++ VER   (Z038)  FMID (EBB1102)             /* MVS 3.9 BASE */
                 PRE (
                      #DYP001               /* SYSGEN MACRO UPDATE */
                            )
               /*

               PRIVATE PROCLIB MODIFICATIONS
               VERSION 4, RELEASE 1, MODIFICATION 0

               THIS LOCAL MODIFICATION, ALONG WITH ITS
               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.

               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
               #DYP003  IEFVHF    ZAP FOR LINKAGE TO IEFVPP3
               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS

               ***** WARNING ***** WARNING ***** WARNING *****

               THIS OBJECT DECK WAS ASSEMBLED USING THE RESERVED WORD
               "RFULLE" IN THE CONVERTER WORK AREA USED AS THE ANCHOR
               FOR THE PRIVATE PROCLIB WORK AREA.

               ***** WARNING ***** WARNING ***** WARNING *****

  PREFACE
               THESE MODIFICATIONS ARE CONSTRUCTED IN FIVE SEPARATE
               PIECES BECASUE OF FUNCTIONAL OWNERSHIP AND
               MAINTENANCE PACKAGING.  IN ADDITION, THERE IS AN
               OPTIONAL MODIFICATION TO JES2 SUPPLIED IN THE
               TEXT OF THESE COMMENTS.

               THE ORIGINAL SOURCE OF THIS MOD IS MUTUAL LIFE OF
               WATERLOO, ONTARIO, CANADA.  AMDAHL HAS PROVIDED
               SUBSTANTIAL CHANGES IN THE METHODS OF INSTALLATION
               AND INTERFACES, AS WELL AS FUNCTIONAL ENHANCEMENTS.
               THE BASIC LOGIC, HOWEVER, IS UNCHANGED.

               THE IEFVPP MODULE HAS BEEN REWRITTEN TO BE COM-
               PATIBLE WITH ALL VERSIONS OF THE MVS CONVERTER
               THROUGH MVS/SP 2.1.1.  HOWEVER, IT SHOULD BE
               REASSEMBLED WHENEVER A CHANGE IS MADE TO THE
               CONVERTER WORK AREA MACROS (IEFCOMWA AND IEFCVRWA).

  JCLIN
               A JCLIN IS NECESSARY TO INCLUDE THIS
               SUPPORT INTO AN EXISTING SYSTEM.
               HOWEVER, IN DOING SO, THE CHANGE OF THE EXTERNAL
               REFERENCE TO IEFVHA IN IEFVH1 WILL NOT HAVE TAKEN
               PLACE AND THE INCORPORATION OF PRIVATE PROCLIB SUPPORT
               WILL BE INCOMPLETE.  SPECIFICALLY, THE CONVERTER WILL
               FAIL IN THE MOST HORRIBLE WAY IF THE SUPERZAPS TO
```

```
             THE VARIOUS CONVERTER MODULES HAVE BEEN PUT ON.
             THE JCLIN IS INCLUDED IN THE MODIFICATION THAT
             UPDATES THE SYSGEN MACRO, SGIEF441.  A TECHNIQUE
             TO EFFECT THE CHANGE IS DESCRIBED LATER.

             THE JCLIN IS AS FOLLOWS:

             JCLIN .

            //SG13 EXEC LINKS,
            //  PARM='NCAL,LIST,XREF,LET,RENT',NAME=LPALIB
            //SYSLIN DD *
              INCLUDE AOSB3(IEFVHA)
              INCLUDE AOSB3(IEFVHC,IEFVHCB)
              INCLUDE AOSB3(IEFVINE,IEFVHM,IEFVHL)
              INCLUDE AOSB3(IEFVINA)
              INCLUDE AOSB3(IEFVIND)
              INCLUDE AOSB3(IEFVINB)
              INCLUDE AOSB3(IEFVINC)
              INCLUDE AOSB3(IEFVHEB)
              INCLUDE AOSB3(IEFNB9CR)
              INCLUDE AOSB3(IEFNB9CT)
              INCLUDE AOSB3(IEFVFA,IEFVFB)
              INCLUDE AOSB3(IEFVGM)
              INCLUDE AOSB3(IEFVHQ)
              INCLUDE AOSB3(IEFVHR)
              INCLUDE AOSB3(IEFVHF)
      ====>    CHANGE IEFVHA(IEFVPP0)
              INCLUDE AOSB3(IEFVH1)
              INCLUDE AOSB3(IEZNCODE)
              INCLUDE AOSB3(IEZDCODE)
              INCLUDE AOSB3(IEFVGM90)
      ====>    INCLUDE AOSB3(IEFVPP0)
              ENTRY IEFVH1
              NAME IEFVH1(R)
            /*

             THIS JCLIN WAS TAKEN FROM THE SYSGEN STAGE 2.  THE
             TWO STATEMENTS MARKED BY "====>" ARE THE ADDED
             STATEMENTS.  CURRENT STAGE 1 OUTPUT SHOULD BE CHECKED
             BEFORE THE JCLIN AND ANY NECESSARY CHANGED BY MADE.

             A UCLIN TO DELETE THE LMOD ENTRY MAY
             BE NECESSARY, AS SMP MAY IGNORE THE "CHANGE"
             STATEMENT FOR IEFVH1 IF IEFVH1 IS ALREADY
             DEFINED TO IT (NOT SO HOT, EH?).
             THE UCLIN MAY NOT BE NECESSARY IN MVS 3.8
             WITH SMP 4.

             UCLIN .
             DEL LMOD (IEFVH1) .
             ENDUCL .

             NEITHER THE JCLIN OR UCLIN IS NECESSARY WHEN
             INSTALLING THESE MODS PRE-GEN.

SYSGEN MACRO
             THE SYSGEN MACRO, SGIEF441, IS MODIFIED TO CONTAIN
             THE NECESSARY LINK EDIT CONTROL STATEMENTS TO FULLY
             INCORPORATE THE MODIFICATION AND TO INSURE THAT A
             RE-SYSGEN DOES NOT "DOWN LEVEL" THE MODIFICATION.
```

THE MACRO MODIFICATIONS CONSIST OF CHANGING
THE EXTERNAL REFERENCE TO IEFVHA IN IEFVH1 TO
REFER TO IEFVPP0, WHICH IS THE PRIVATE PROCLIB
INITIALIZATION ENTRY POINT, AND INCLUDING MODULE
IEFVPP, WHICH IS A NEW MODULE THAT CONTAINS ALL
PRIVATE PROCLIB SUPPORT, EXCEPT THE SUPERZAPS THAT
CAUSE THE VARIOUS PRIVATE PROCLIB ENTRY POINTS TO
BE ENTERED.

SUPERZAPS

SUPERZAPS ARE MADE TO THE CONVERTER/INTERPRETER
TO PERFORM THE LINKAGE TO THE PRIVATE PROCLIB
SUPPORT AND PROVIDE THE IEFUJV INTERNAL TEXT EXIT
FOR A JOB STREAM MANAGER. SEE THE CO-REQUISITE
MODIFICATIONS FOR A DESCRIPTION OF THE LOGIC
ASSOCIATED WITH EACH OF THE MODIFICATIONS.
THE MODULES ZAPPED ARE IEFVHF, IEFVFA, AND IEFVHE.

NEW MODULE

IEFVPP IS THE NEW MODULE ADDED FOR THIS SUPPORT.
IT IS COMPATIBLE WITH ALL CURRENTLY AVAILABLE
VERSIONS OF THE CONVERTER/INTERPRETER.
HOWEVER, IT IS DEPENDENT ON THE EXISTANCE OR
NON-EXISTANCE OF MVS/SE RELEASE 2. THE SOURCE
MODULE MUST BE ASSEMBLED WITH THE PROPER
LEVEL OF "SYS1.AMODGEN" IN ORDER FOR IT
TO FUNCTION PROPERLY. CONDITIONAL ASSEMBLY IS
USED TO IMPLEMENT THE NECESSARY LOGIC
CHANGES AND CONTROL BLOCK DEPENDENCIES.
CONSULT THE ASSEMBLY LISTING OF IEFVPP FOR SPECIFIC
INFORMATION ON ITS FUNCTIONS AND LOGIC.

THE SU MACRO FOR MVS/SE RELEASE 2 (IHASU74)
IS USED TO EFFECT THE CONDITIONAL ASSEMBLY.
IT IS ASSUMED THAT ALL RELEASES OF MVS/SP
WILL PROVIDE THIS MACRO WITH THE SU BIT
TURNED ON. IF NOT, THEN THE SOURCE OF IEFVPP
WILL HAVE TO BE UPDATED ACCORDINGLY.

IT IS RECOMMENDED THAT THE IEFVPP SOURCE MODULE
BE ASSEMBLED BY THE INSTALLATION AND THAT THE
OBJECT DECK PROVIDED IN THE MODIFICATION BE
REPLACED WITH THE ONE CREATED BY THE ASSEMBLY.

JOB ENTRY SUBSYSTEM SUPPORT

JES2 IS FULLY SUPPORTED AS THE DYNAMIC PROCLIB
CODE IS NOT SENSITIVE TO THE LEVEL OF JES THAT
IS RUNNING. HOWEVER, IT MAY HAVE SOME PROBLEMS
IN A JES3 ENVIRONMENT, WHERE PERFORMING THE
DYNAMIC ALLOCATION OF PROCLIBS IS NOT SUBJECT
TO JES3 SETUP CONTROL. NO ATTEMPT HAS BEEN
MADE BY THE AUTHORS TO RUN IT IN A JES3 ENVIRONMENT.

THIS CODE FULLY SUPPORTS THE USE OF DYNAMIC
PROCLIB(S) BY STARTED TASKS AND TSO USERS.

THE ABILITY TO REQUEUE A JOB FOR RECONVERSION WHEN
A PROCLIB VOLUME IS NOT AVAILABLE HAS BEEN REMOVED
FROM THIS VERSION OF IEFVPP. IT WAS THOUGHT TO BE
OF MINIMAL VALUE AND FREQUENTLY LEFT JOBS AWAITING

CONVERSION FOR LONGS PERIODS OF TIME.

MSS SUPPORT

A BY-PRODUCT OF THE MSS IS THAT AN MSS VOLUME CONTAINING A PROCLIB MAY NOT BE MOUNTED. SINCE IEFVPP PERFORMS ALL LOCATES AND ALLOCATIONS REQUESTING NO MOUNTING, SUCH A PROCLIB WILL NOT BE FOUND, AND THE JOB WILL FAILED WITH A JCL ERROR. HOWEVER, EVEN IF THE MSS VOLUME CONTAING THE PROCLIB IS MOUNTED, IEFVPP WILL BE STILL INDICATE A JCL ERROR, AS THERE COULD BE SUBSTANTIAL DELAYS IN THE CONVERTER IF IT HAS TO WAIT FOR STAGING OR CYLINDER FAULTS. SINCE THE CONVERTER IS A SERIAL PROCESS, THIS CAN CAUSE SERIOUS DELAYS IN JOB PROCESSING, MOST NOTICABLE IN TSO LOGONS (BEING STACKED BEHIND A JOB STUCK CYLINDER FAULTING IN THE CONVERTER).

INSTALLATION

AN APPROACH TO PUTTING THE PRIVATE PROCLIB SUPPORT ON IS:

1. APPLY THE SYSGEN MACRO UPDATE AND THE NEW MODULE MODIFICATION. AT THIS POINT, THE JCLIN WILL HAVE BEEN DONE AND THE NEW MODULE (IEFVPP) WILL HAVE BEEN LINKED INTO THE CONVERTER, BUT DYNAMIC PROCLIB WILL NOT BE FUNCTIONING (THE CONVERTER WILL STILL FUNCTION, HOWEVER).
2. CREATE A "DUMMY" SUPERZAP FOR MODULE IEFVH1. APPLY THIS ZAP TO IEFVH1. THIS WILL STILL NOT CAUSE DYNMAIC PROCLIB TO WORK, AS THE EXTERNAL REFERENCE TO IEFVH1 POINTING TO IEFVHA WILL NOT HAVE BEEN CHANGED.
3. RESTORE THE ZAP TO IEFVH1. THIS WILL CAUSE A RE-LINK OF IEFVH1 AND SMP WILL INSERT THE CHANGE STATEMENT, CAUSING IEFVH1 TO NOW POINT TO IEFVPP0 IN IEFVPP.
4. APPLY THE ZAPS TO IEFVHF, IEFVHE, AND IEFVFA.
5. PLACE IEFVH1 AND IEFNB903 ON THE MLPA FOR TESTING. CLPA WHEN READY. IEFVH1 COULD BE PLACED IN THE STEPLIB USED TO RUN JES2, IF ANY.

SHOULD IT BE NECESSARY TO RESTORE THE CONVERTER TO ITS ORIGINAL STATE, THE FOLLOWING COULD BE USED:

1. PERFORM AN SMP RESTORE OF ALL FIVE MODIFICATIONS. THIS ASSUMES THAT THE SAVED CDS WILL BE USED TO RESTORE THE ORIGINAL JCLIN FOR IEFVH1. THE SAME TRICK USED TO FORCE AN INCLUDE OF IEFVH1 FROM THE DLIB (THIS TIME WITHOUT THE CHANGE STATEMENT WILL HAVE TO BE DONE). THE IEFVPP CSECT WILL REMAIN BEHIND IN THE IEFVH1 LOAD MODULE, BUT THIS WILL CAUSE NO HARM.
2. REMOVE THE MLPA OR CLPA, IF NECESSARY.

PTF LEVEL

PTF LEVEL FOR THE INDIVIDUAL MODULES IS NOTED WITH EACH MODULE. SOME OF THE CONVERTER MODULES WERE STRUCK BY MVS/SE AND MVS/SP, BUT THE CODE IS BASICALLY COMPATIBLE WITH ALL SU/PTF COMBINATIONS, BUT THE ZAP DISPLACEMENTS AND PATCH AREAS CHANGE.

```
  CURRENT RESTRICTIONS
               THE LIMIT ON THE NUMBER OF MULTIPLE CONCURRENT
               CONVERTERS IS 16.  ANYONE WHO HAS A PROBLEM WITH
               THIS DESERVES IT.

                                                                    */  .
++ MOD   (IEFVPP)  DISTLIB (AOSB3)
                   LMOD (IEFVH1) TXLIB(IEFVPP)
                   LEPARM (RENT,REUS,REFR) .
```

#DYP003

```
++ USERMOD (#DYP003)  .
++ VER   (Z038)  FMID (EBB1102)              /* MVS 3.8 BASE */
                 REQ (#DYP004)               /* ZAP TO IEFVFA */
                 PRE (UZ51830
                      #DYP001                /* SYSGEN MACRO UPDTE */
                      #DYP002                /* NEW MODULE IEFVPP */
                            )
               /*

               PRIVATE PROCLIB MODIFICATIONS
               VERSION 4, RELEASE 1, MODIFICATION 0

               THIS LOCAL MODIFICATION, ALONG WITH ITS
               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.

               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
               #DYP003  IEFVHF    ZAP FOR LINKAGE TO IEFVPP3
               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS

               ***** WARNING ***** WARNING ***** WARNING *****

               THIS SUPERZAP IS WRITTEN WITH RESERVED WORD "RFULLE"
               IN THE CONVERTER WORK AREA USED AS THE ANCHOR FOR
               THE PRIVATE PROCLIB WORK AREA.

               ***** WARNING ***** WARNING ***** WARNING *****

               IEFVHF

               IEFVHF IS THE CONVERTER TERMINATION MODULE.  THE ZAP
               CHANGES IEFVHF TO BRANCH TO IEFVPP3 IN IEFVPP TO
               ALLOW PRIVATE PROCLIB CLEANUP TO TAKE PLACE.  THE
               ADDRESS OF IEFVPP3 RESIDES IN THE PRIVATE PROCLIB
               WORK AREA THAT IS POINTED TO BY THE ANCHOR WORD IN
               THE CONVERTER WORK AREA.  THE OFFSET OF THE WORD
               USED TO ANCHOR THE ADDRESS THE OF THE PRIVATE PROCLIB
               WORK AREA IN THIS ZAP MUST CORRESPOND TO THAT USED
               IN THE ASSEMBLY OF IEFVPP.

                                                                  */  .
++ ZAP   (IEFVHF)  DISTLIB (AOSB3)  .
```

#DYP004

```
++ USERMOD (#DYP004)  .
++ VER   (Z038)  FMID (EBB1102)              /* MVS 3.8 BASE */
                 REQ (#DYP003)               /* ZAP TO IEFVHF */
                 PRE (
                      UZ69627                /* PTF  */
                      #DYP001                /* SYSGEN MACRO UPDATE */
                      #DYP002                /* NEW MODULE IEFVPP */
                            )
               /*

               PRIVATE PROCLIB MODIFICATIONS
               VERSION 4, RELEASE 1, MODIFICATION 0

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               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.

               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
               #DYP003  IEFVHF    ZAP FOR LINKAGE TO IEFVPP3
               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS

               ***** WARNING ***** WARNING ***** WARNING *****

               THIS SUPERZAP IS WRITTEN WITH RESERVED WORD "RFULLE"
               IN THE CONVERTER WORK AREA USED AS THE ANCHOR FOR
               THE PRIVATE PROCLIB WORK AREA.

               ***** WARNING ***** WARNING ***** WARNING *****

               IEFVFA

               IEFVFA IS THE CONVERTER SCAN ROUTINE.  THE ZAP IS
               TWO-FOLD.

               FIRST, AN ENTRY IN THE JCL KEYWORD TABLE IS
               CONVERTED TO THE "SYSPROC=" KEYWORD.  "SUBALLOC="
               WAS CHOSEN, SINCE ITS USE IS VIRTUALLY NON-EXISTANT.  TO
               FILL IN THE EXTRA BYTE LEFT OVER WHEN "SYSPROC=" AND ITS
               INTERNAL TEXT CODE (SYMBOL SYSPROCK DEFINED IN IEFVPP)
               IS ZAPPED OVER "SUBALLOC=" AND ITS INTERNAL TEXT
               CODE (SYMBOL SUBALLOK - X'4C' - DEFINED IN MACRO
               IEFVKEYS), "SYSPROC=" IS MADE MUTUALLY EXCLUSIVE
               WITH "DCB=" (SYMBOL DCBK - X'40' - DEFINED IN MACRO
               IEFVKEYS).

               SECOND, IEFVFA IS CHANGED TO BRANCH TO BOTH IEFVPP4
               IN IEFVPP AND IEFVPP5 IN IEFVPP, IMMEDIATELY
               AFTER A JCL STATEMENT HAS BEEN CONVERTED
               INTO INTERNAL TEXT.  IEFVPP4 EFFECTS LINKAGE TO
               IEFVPP1 AND IEFVPP2 IN IEFVPP DEPENDING ON THE
               STATEMENT BEING PROCESSED.  IEFVPP1 PERFORMS
               PRIVATE PROCLIB ALLOCATION.  IEFVPP2 PERFORMS
               PRIVATE PROCLIB CONCATENATION AND OPEN.  IEFVPP5
```

```
                CALLS IEFUJV WITH ENTRY CODE 64, GIVING IEFUJV
                AN INTERNAL TEXT EXIT.  THIS CODE IS IN SUPPORT OF
                THE JOB STREAM MANAGER.  IF THIS NEW ENTRY INTO
                IEFUJV IS NOT DESIRED OR NECESSARY, IT MAY BE
                ELIMINATED BY APPROPRIATE CHANGES TO THIS ZAP
                OR ASSEMBLING IEFVPP WITHOUT THE INTERNAL TEXT
                EXIT OPTION SET.

                THE ADDRESSES OF IEFVPP4 AND IEFVPP5 RESIDE IN THE
                PRIVATE PROCLIB WORK AREA THAT IS POINTED TO BY THE
                ANCHOR WORD THE CONVERTER WORK AREA.  THE OFFSET OF THE
                WORD USED TO ANCHOR THE ADDRESS THE OF THE PRIVATE
                PROCLIB WORK AREA IN THIS ZAP MUST CORRESPOND TO
                THAT USED IN THE ASSEMBLY OF IEFVPP.

                                                                */  .
++ ZAP   (IEFVFA)  DISTLIB (AOSB3) .
```

#DYP005

```
++ USERMOD (#DYP005)  .
++ VER   (Z038)  FMID (EBB1102)              /* MVS 3.8 BASE */
                 PRE (UZ58715
                      #DYP001                /* SYSGEN MACRO UPDATE */
                      #DYP002                /* NEW MODULE IEFVPP */
                      #DYP003                /* ZAP TO IEFVHF */
                      #DYP004                /* ZAP TO IEFVFA */
                            )
               /*

               PRIVATE PROCLIB MODIFICATIONS
               VERSION R, RELEASE 1, MODIFICATION 0

               THIS LOCAL MODIFICATION, ALONG WITH ITS
               COMPANION CO-REQUISITES, TOTALLY INTEGRATES THE
               NECESSARY SYSTEM MODIFICATIONS FOR DYNAMIC PROCLIB
               SUPPORT.

               #DYP001  SGIEF441  SYSGEN MACRO UPDATE AND JCLIN
               #DYP002  IEFVPP    NEW CONVERTER MODULE
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               #DYP004  IEFVFA    ZAP FOR LINKAGE TO IEFVPP4 & IEFVPP5
               #DYP005  IEFVHE    ZAP FOR INTERPRETER JOBPROC BYPASS

               IEFVHE

               IEFVHE IS THE INTERPRETER GET AND ROUTE ROUTINE.  THE
               ZAP CHANGES IEFVHE TO CHECK FOR A "JOBPROC" DD
               STATEMENT AND BYPASS PROCESSING IT.  THIS IS TO KEEP
               THE JOBPROC STATEMENT(S) FROM BEING PROCESSED BY THE
               INTERPRETER.  IF THIS IS NOT DONE, ANY JOB WITH A
               JOBPROC DD STATEMENT WILL RECEIVE A "MISPLACED DD
               STATEMENT" JCL ERROR.

               THE BYTE USED TO CONTAIN THE FLAG BIT IN THE
               INTERNAL TEXT HAS BEEN CHANGED FROM THE FOURTH
               TO THE THIRD BYTE.  THIS IS TO ACCOMODATE THE
               USE OF THE PREVIOUSLY USED FLAG BY THE CONVERTER
               ITSELF.

               THIS MODIFICATION DOES NOT NEED TO PRE-REQ OR CO-REQ
               ANY OF THE OTHER MODIFICATIONS FOR DYNAMIC PROCLIB,
               AS IT DOES NOT HAVE ANY DEPENDANCIES ON THE
               EXISTANCE OF THE OTHER CODE.  THE PRE-REQUISITES
               LISTED ARE TO INSURE THAT ALL OF THE OTHER PIECES
               ARE PROPERLY INSTALLED.  IF THIS MOD IS
               LEFT OFF, HOWEVER, ANY JOB THAT CONTAINS "JOBPROC"
               DD STATEMENTS WILL RECEIVE A JCL ERROR.

                                                                  */ .
++ ZAP   (IEFVHE)  DISTLIB (AOSB3) .
```

AY12275

```
++USERMOD(AY12275).
++VER(Z038) FMID(EBB1102) PRE(UZ35042)
 /*
  PROBLEM DESCRIPTION(S):
           OY12275 - TCTRSZ INCORRECTLY REFLECTS SIZE OF PRIVATE AREA,
                     RATHER THAN REGION SIZE REQUESTED.
  COMPONENT: 5752-SC1CH-EBB1102
  APARS FIXED: OY12275
  SPECIAL CONDITIONS:
  COMMENTS:          NONE
 */.
++ZAP(IEAVPRT0) DISTLIB(AOSC5).
```

MS00100

```
++USERMOD(MS00100) REWORK(20230906).
++VER(Z038) FMID(EBB1102) PRE(TNIP800)
  /*
   PROBLEM DESCRIPTION(S):
     DURING NIP PARMLIB LINK LIST CONCATENATION PROCESSING,
     LIBRARIES INCLUDED MUST BE CATALOGUED IN THE MASTER
     CATALOG OR THEY WILL NOT BE LOCATED AND THE ENTRY WILL
     BE IGNORED. THIS MODIFICATION ALLOWS THE INCLUSION OF
     A VOLUME SERIAL NUMBER IN PARENTHESES IMMEDIATELY AFTER
     THE LIBRARY NAME WHICH IS USED TO LOCATE THE LIBRARY.
       EXAMPLE: SYSC.LINKLIB(SYSCPK)
   COMPONENT: 5752-VS2-EBB1102
   SPECIAL CONDITIONS:
     ACTION:
       AN IPL IS REQUIRED FOLLOWING THE SUCCESSFUL APPLICATION.
   COMMENTS:
     REWORKED FROM JAMES PURDY ORIGINAL, SOURCE: SPLA FILE #030,
     COPY OBTAINED FROM CBT OVERFLOW V466 FILE #130.
     LAST CHANGE: 2020/05/19 JAY MOSELEY
   REWORK HISTORY:
       2020-05-19: JAY MOSELEY: REWORKED FROM ORIGINAL OF
                                JAMES PURDY.
       2023-09-06: ROB PRINS:   ALLOW VOLSER (******) IMMEDIATELY
                                AFTER DATASET NAME TO INDICATE,
                                THAT THE DATASET IS PRESENT ON
                                THE SYSTEM RESIDENCE VOLUME.
   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES
       SYS1.NUCLEUS(IEAVNP03)
     MACROS
       <NONE>
 */.
++ZAP(IEAVNP03) DISTLIB(AOSC5).
```

M023000

```
++USERMOD(M023000) REWORK(20231211) /*

   PROBLEM DESCRIPTION:
     Add support for D/3375, D/3380 and D/3390 in MVS38J.

   TEMPORARY FIX:
       Update the relevant SYSGEN macros to support these
       devices.
       Note: 3375, 3380 and 3390 DASD store data in a different
       manner from previous DASD models.
       Previous algorithms, provided for earlier model DASD, to
       calculate the number of blocks that will fit on a track
       or the capacity remaining on a track will not provide a
       correct result for these modulo DASD devices resulting
       in various error conditions.

       Programs, using 3375/3380/3390 DASD, that calculate
       the number of blocks that will fit on a track or
       the capacity remaining on a track must use the
       appropriate algorithms, as published in the
       3375/3380/3390 Reference Guides and the updated data
       returned by the DEVTYPE SVC, to calculate correct values.

       IBM recommends that the TRKCALC system service should
       be used for track capacity calculations to replace
       user developed implementations of the various track
       capacity algorithms.

   SPECIAL CONDITIONS:
     ACTION:
       This sysmod should be ACCEPTED to make effect.
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.
       2023-12-11: Rework from Jim Morrisons Usermods.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       USRDDT00
       UTRKCALC
       UTRK3390
                   */.
++VER(Z038)
     FMID(EDM1102)
     SUP(K900071)
     REQ(M023200 M023201 M023202 M023203 M023204).
++IF FMID(EBB1102)
     REQ(M023100).
++IF FMID(EDS1102)
     REQ(M023300 M023301 M023302).
++IF FMID(FDS1122)
     REQ(M023400 M023401 M023402 M023403 M023404 M023405).
++JCLIN.
/*
```

```
//UTRKCALC JOB MSGLEVEL=(1,1)
//ASM     EXEC PGM=IFOX00
//SYSLIB    DD DSN=SYS1.AMACLIB,DISP=SHR
//          DD DSN=SYS1.AMODGEN,DISP=SHR
//SYSPUNCH  DD DSN=&&PUNCH(UTRKCALC),SPACE=(TRK,(1,1,1)),DISP=(,PASS)
//SYSIN     DD DSN=SYS1.AMODGEN(UTRKCALC),DISP=SHR
//LKED     EXEC PGM=IEWL,PARM='LET,LIST,XREF,MAP,NCAL,REUS,RENT,REFR'
//SYSLMOD   DD DSN=SYS1.NUCLEUS,DISP=SHR
//SYSPUNCH  DD DSN=*.ASM.SYSPUNCH,DISP=(SHR,PASS)
//SYSLIN    DD *
  INCLUDE SYSPUNCH(UTRKCALC)
  NAME UTRKCALC(R)
/*
//UTRK3390 JOB MSGLEVEL=(1,1)
//ASM     EXEC PGM=IFOX00
//SYSLIB    DD DSN=SYS1.AMACLIB,DISP=SHR
//          DD DSN=SYS1.AMODGEN,DISP=SHR
//SYSPUNCH  DD DSN=&&PUNCH(UTRK3390),SPACE=(TRK,(1,1,1)),DISP=(,PASS)
//SYSIN     DD DSN=SYS1.AMODGEN(UTRK3390),DISP=SHR
//LKED     EXEC PGM=IEWL,PARM='LET,LIST,XREF,MAP,NCAL,REUS,RENT,REFR'
//SYSLMOD   DD DSN=SYS1.NUCLEUS,DISP=SHR
//SYSPUNCH  DD DSN=*.ASM.SYSPUNCH,DISP=(SHR,PASS)
//SYSLIN    DD *
  INCLUDE SYSPUNCH(UTRK3390)
  NAME UTRK3390(R)
/*
++MAC(IHADVCT2) DISTLIB(AMODGEN) TXLIB(IHADVCT2)
++SRC(USRDDT00) DISTLIB(AMODGEN) DISTMOD(AOSC5) TXLIB(USRDDT00).
++SRC(UTRKCALC) DISTLIB(AMODGEN) DISTMOD(AOSD0) TXLIB(UTRKCALC).
++SRC(UTRK3390) DISTLIB(AMODGEN) DISTMOD(AOSD0) TXLIB(UTRK3390).
++USERMOD(M023100)     /*

   PROBLEM DESCRIPTION:
     Add support for D/3380 and D/3390 in MVS38J.

   TEMPORARY FIX:
       Update the SYSGEN macro SGIFB600 to add device
       characteristics for D/3380 and D/3390.

   SPECIAL CONDITIONS:
     ACTION:
       This sysmod should be ACCEPTED to make effect.
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIFB600
                  */.
++VER(Z038) FMID(EBB1102) PRE(UZ57342).
++MACUPD(SGIFB600).
++USERMOD(M023200) REWORK(20231207) /*

   PROBLEM DESCRIPTION:
     Add support for modulo devices.

   TEMPORARY FIX:
       Update IEC0SCR1 to add support for modulo devices.
```

```
   SPECIAL CONDITIONS:
     ACTION:
       This sysmod should be ACCEPTED to make effect.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     S/ZAP:
       IEC0SCR1
                   */.
++VER(Z038) FMID(EDM1102) PRE(UZ39100).
++ZAP(IGC018).
++USERMOD(M023201) REWORK(20231205) /*

   PROBLEM DESCRIPTION:
     Add support for D/3380, D/3390 in macro SGIEC0DT to create
     a correct device table (DVCT) in IECZDTAB.

   TEMPORARY FIX:
       Update SGIEC0DT  macro to support D/3380 and D/33390.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEC0DT
                   */.
++VER(Z038) FMID(EDM1102) PRE(UZ33147).
++MACUPD(SGIEC0DT).
++USERMOD(M023202) /*

   PROBLEM DESCRIPTION:
     Add support for D/3380, D/3390 in macro SGIEC2DT.

   TEMPORARY FIX:
       Update SGIEC2DT  macro to add 3380 and 3390 selectors.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEC2DT
                   */.
++VER(Z038) FMID(EDM1102) PRE(UZ33147).
++MACUPD(SGIEC2DT).
++USERMOD(M023203) /*

   PROBLEM DESCRIPTION:
     Include IGC018, UTRKCALC and UTRK3390 in macro SGIEC3FB.
```

```
   TEMPORARY FIX:
       Update SGIEC3FB to include IGC018, UTRKCALC and UTRK3390.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEC3FB
                  */.
++VER(Z038) FMID(EDM1102) PRE(UZ30650).
++MACUPD(SGIEC3FB).
++USERMOD(M023204) /*

   PROBLEM DESCRIPTION:
     Add device types for D/3380 and D3390 in macro SGIGG500.

   TEMPORARY FIX:
       Update SGIGG500 to include these device types.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIGG500
                  */.
++VER(Z038) FMID(EDM1102).
++MACUPD(SGIGG500).
++USERMOD(M023300) /*

   PROBLEM DESCRIPTION:
     Support D/3380 and D/3390 devices in the DATASET macro.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       DATASET
                  */.
++VER(Z038) FMID(EDS1102) PRE(UZ90083).
++MACUPD(DATASET).
++USERMOD(M023301) /*

   PROBLEM DESCRIPTION:
     Support D/3380 and D/3390 device entries in macro SGIEI1SU.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEI1SU
                  */.
++VER(Z038) FMID(EDS1102).
++MACUPD(SGIEI1SU).
```

```
++USERMOD(M023302) REWORK(20231211) /*

   PROBLEM DESCRIPTION:
     Support D/3380 and D/3390 in the UNITNAME SYSGEN macro.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       UNITNAME
                  */.
++VER(Z038) FMID(EDS1102) PRE(UZ69948).
++MACUPD(UNITNAME).
++USERMOD(M023400) REWORK(20231206) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGFDSP03 to add D/3380 in the Device
     Features Table (DFT).

   TEMPORARY FIX:
       Replace SYSGEN macro SGFDSP03.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGFDSP03
                  */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGFDSP03).
++USERMOD(M023401) REWORK(20231206) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGFDSP04 to add D/3390 in the Device
     Features Table (DFT).

   TEMPORARY FIX:
       Replace SYSGEN macro SGFDSP04.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGFDSP04
                  */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGFDSP04).
++USERMOD(M023402) REWORK(20230730) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGIDSP03 to add D/3380 in the Device
```

```
     Information Table (DIT).

   TEMPORARY FIX:
       Replace SYSGEN macro SGIDSP03.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3380.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGIDSP03
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGIDSP03).
++USERMOD(M023403) REWORK(20230730) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGIDSP04 to add D/3390 in the Device
     Information Table (DIT).

   TEMPORARY FIX:
       Replace SYSGEN macro SGIDSP04.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGIDSP04
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGIDSP04).
++USERMOD(M023404) REWORK(20231211) /*

   PROBLEM DESCRIPTION:
     Support CUNUMBR and TIMEOUT in the IODEVICE macro

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       IODEVICE
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ65177).
++MACUPD(IODEVICE).
++USERMOD(M023405) /*

   PROBLEM DESCRIPTION:
     Recalculate BLKSIZE for LPALIB, LINKLIB, SVCLIB, NUCLEUS,
     and loadlib if allocated on D/3380 and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
```

```
       GENERATE
                    */.
++VER(Z038) FMID(FDS1122) PRE(UZ84429).
++MACUPD(GENERATE).
++USERMOD(M024001) /*

   PROBLEM DESCRIPTION:
     Add D/3375 in Device Description table (DDT).

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     SRCUPD:
       USRDDT00
                    */.
++VER(Z038) FMID(EDM1102) PRE(M023000).
++SRCUPD(USRDDT00).
++SRCUPD(UTRKCALC).
++USERMOD(M024101) /*

   PROBLEM DESCRIPTION:
     Add track allocation parameters for D/3375.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIFB600
                    */.
++VER(Z038) FMID(EBB1102) PRE(UZ57342 M023100).
++MACUPD(SGIFB600).
++USERMOD(M024205) REWORK(20231205) /*

   PROBLEM DESCRIPTION:
     Add support for D/3375 in macro SGIEC0DT to create
     a correct device table (DVCT) in IECZDTAB.

   TEMPORARY FIX:
       Update SGIEC0DT  macro to support D/3375..

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEC0DT
                    */.
++VER(Z038) FMID(EDM1102) PRE(UZ33147 M023201).
++MACUPD(SGIEC0DT).
++USERMOD(M024206) /*

   PROBLEM DESCRIPTION:
     Add D/3375, D3380 and D/3380 in the DVCT in IECZDTAB.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEC2DT
                    */.
++VER(Z038) FMID(EDM1102) PRE(UZ33147 M023202).
++MACUPD(SGIEC2DT).
```

```
++USERMOD(M024207) /*

   PROBLEM DESCRIPTION:
     Add device type for D/3375 in macro SGIGG500.

   TEMPORARY FIX:
       Update SGIGG500 to include this device type.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIGG500
                  */.
++VER(Z038) FMID(EDM1102) PRE(M023204).
++MACUPD(SGIGG500).
++USERMOD(M024303) /*

   PROBLEM DESCRIPTION:
     Support D/3375 device  in the DATASET macro.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       DATASET
                  */.
++VER(Z038) FMID(EDS1102) PRE(UZ90083 M023300).
++MACUPD(DATASET).
++USERMOD(M024304) /*

   PROBLEM DESCRIPTION:
     Support D/3375 device entry in macro SGIEI1SU.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       SGIEI1SU
                  */.
++VER(Z038) FMID(EDS1102) PRE(M023301).
++MACUPD(SGIEI1SU).
++USERMOD(M024305) REWORK(20231211) /*

   PROBLEM DESCRIPTION:
     Support D/3375 in the UNITNAME SYSGEN macro.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       UNITNAME
                  */.
++VER(Z038) FMID(EDS1102) PRE(UZ69948,M023302).
++MACUPD(UNITNAME).
++USERMOD(M024406) REWORK(20231206) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGFDSP04 to add D/3375 in the Device
     Features Table (DFT).
```

```
   TEMPORARY FIX:
       Replace SYSGEN macro SGFDSP05.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGFDSP05
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGFDSP05).
++USERMOD(M024407) REWORK(20230730) /*

   PROBLEM DESCRIPTION:
     Replace dummy macro SGIDSP05 to add D/3375 in the Device
     Information Table (DIT).

   TEMPORARY FIX:
       Replace SYSGEN macro SGIDSP05.

   SPECIAL CONDITIONS:
     ACTION:
       IOGEN required.

   COMMENTS:
     Run at least a SYSGEN with GENTYPE=IO to add D/3375, D/3380
     and D/3390.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       SGIDSP05
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ90058).
++MAC(SGIDSP05).
++USERMOD(M024408) /*

   PROBLEM DESCRIPTION:
     Recalculate BLKSIZE for LPALIB, LINKLIB, SVCLIB, NUCLEUS,
     and loadlib if allocated on D/3375.

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACUPD:
       GENERATE
                   */.
++VER(Z038) FMID(FDS1122) PRE(UZ84429 M023405).
++MACUPD(GENERATE).
```

M023100

```
++USERMOD(M023100)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023100 is described in the coverletter
       of M023000.

                          */.
```

M023200

```
++USERMOD(M023200)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023200 is described in the coverletter
       of M023000.

                          */.
```

M023201

```
++USERMOD(M023201)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023201 is described in the coverletter
       of M023000.

                          */.
```

M023202

```
++USERMOD(M023202)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023202 is described in the coverletter
       of M023000.

                          */.
```

M023203

```
++USERMOD(M023203)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023203 is described in the coverletter
       of M023000.

                          */.
```

M023204

```
++USERMOD(M023204)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023204 is described in the coverletter
       of M023000.

                          */.
```

M023300

```
++USERMOD(M023300)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023300 is described in the coverletter
       of M023000.

                          */.
```

M023301

```
++USERMOD(M023301)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023301 is described in the coverletter
       of M023000.

                          */.
```

M023302

```
++USERMOD(M023302)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023302 is described in the coverletter
       of M023000.

                          */.
```

M023400

```
++USERMOD(M023400)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023400 is described in the coverletter
       of M023000.

                          */.
```

M023401

```
++USERMOD(M023401)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023401 is described in the coverletter
       of M023000.

                          */.
```

M023402

```
++USERMOD(M023402)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023402 is described in the coverletter
       of M023000.

                          */.
```

M023403

```
++USERMOD(M023403)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023403 is described in the coverletter
       of M023000.

                          */.
```

M023404

```
++USERMOD(M023404)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023404 is described in the coverletter
       of M023000.

                          */.
```

M023405

```
++USERMOD(M023404)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M023404 is described in the coverletter
       of M023000.

                          */.
```

M024001

```
++USERMOD(M024001)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024001 is described in the coverletter
       of M023000.

                          */.
```

M024101

```
++USERMOD(M024101)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024101 is described in the coverletter
       of M023000.

                          */.
```

M024205

```
++USERMOD(M024205)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024205 is described in the coverletter
       of M023000.

                          */.
```

M024206

```
++USERMOD(M024206)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024206 is described in the coverletter
       of M023000.

                          */.
```

M024207

```
++USERMOD(M024207)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024207 is described in the coverletter
       of M023000.

                          */.
```

M024303

```
++USERMOD(M024303)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024303 is described in the coverletter
       of M023000.

                          */.
```

M024304

```
++USERMOD(M024304)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024304 is described in the coverletter
       of M023000.

                          */.
```

M024305

```
++USERMOD(M024305)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024305 is described in the coverletter
       of M023000.

                          */.
```

M024406

```
++USERMOD(M024406)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024406 is described in the coverletter
       of M023000.

                          */.
```

M024407

```
++USERMOD(M024407)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024407 is described in the coverletter
       of M023000.

                         */.
```

M024408

```
++USERMOD(M024408)  /*

       This usermod belongs to the usermod set M023000.
       This set of 27 usermods add support in the SYSGEN
       macros of the modulo devices 3375, 3380 and 3390.

       The function of M024408 is described in the coverletter
       of M023000.

                          */.
```

RP00001

```
++USERMOD(RP00001) .
++VER(Z038) FMID(EBB1102)
  PRE(UZ30889).
++IF FMID(FBB1221) REQ(RP00002)
 /*
   PROBLEM DESCRIPTION:
     AMDPRDMP DID NOT PRODUCE A VALID DUMP ON DDNAME=PRINTER,
       IF THE WORK DATASET WITH DDNAME=SYSUT1 IS ALLOCATED ON A
       D/3375, D/3380 OR D/3390, BECAUSE THE NUMBER OF BLOCKS
       ON A TRACK ARE NOT CORRECTLY CALCULATED.

   TEMPORARY FIX:
       UPDATE MODULE AMDPREAD TO ADD THE RIGHT NUMBER OF BLOCKS
       PER TRACK FOR D/3375, D/3380 AND D/3390.

   SPECIAL CONDITIONS:
     ACTION:
       NONE.

   COMMENTS:
     SKYBIRD SYSTEMS: PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 1.
     REWORK HISTORY:
       2023-11-06: INITIAL AVAILABILITY.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       AMDPREAD
 */.
++ZAP (AMDPREAD).
++USERMOD(RP00002).
++VER(Z038) FMID(FBB1221)
  PRE(UZ54567)
  REQ(RP00001)
 /*
   PROBLEM DESCRIPTION:
     MODULE IEAVTSDH INCORRECTLY CALCULATES THE NUMBER OF DUMP
     RECORDS THAT CAN BE WRITTEN PER TRACK TO A SYS1.DUMPXX DATA
     SET IF THE SYS1.DUMPXX DATA SET IS ALLOCATED ON A 3390 DEVICE

     CHANGES MADE BY THIS SYSMOD INCLUDE -
     1. REPLACE THE RYO RECORDS PER TRACK CALCULATION WITH THE
        TRKCALC SYSTEM SERVICE TO PROVIDE SUPPORT FOR ALL DASD
        DEVICE TYPES INCLUDING 3375/3380/3390 MODULO DASD
     2. USE OF SYSTEM MAPPING MACROS
     3. NUMEROUS SMALL CHANGES TO ENHANCE SOURCE CODE
        READABILITY

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVTSDH IN LPA LOAD MODULE IGC0005A
 */.
```

```
++MOD(IEAVTSDH) DISTLIB(AOSC5) TXLIB(IEAVTSDH).
```

RP00002

```
++USERMOD(RP00002)  /*

       This usermod belongs to the couple RP00001 and
       RPP0002

       The function of RP00002 is described in the coverletter
       of RP00001 in library USERMOD.RP00001

                          */.
```

RP00003

```
++USERMOD(RP00003).
++VER(Z038) FMID(EDM1102)
  PRE(UZ28801,UZ73568)
  /* PROBLEM DESCRIPTION:
     THE NUMBER OF CYLINDERS FOR 3380 AND 3390 DASD VOLUMES IS
     DEPENDENT ON THE CHARACTERISTICS OF THE VARIOUS MODELS OF
     3380 AND 3390 DASD.

     THERE IS NO IDENTIFICATION OF THE MODEL NUMBER AND HENCE NUMBER
     OF CYLINDERS PROVIDED IN ANY OF THE DEVICE CONTROL BLOCKS.
     THE NUMBER OF CYLINDERS ON A 3380 OR 3390 DASD VOLUME RETURNED BY
     THE DEVTYPE SVC REFLECTS ONLY THE NUMBER OF CYLINDERS AVAILABLE
     ON THE BASE MODEL AND NOT THE EXTENDED MODELS.

     CHANGES MADE BY THIS USERMOD INCLUDE:
       - THE DVACYL FIELD IN THE DEVTAB RESULT AREA, RETURNED BY
         DEVTYPE SVC, NOW CONTAINS THE ACTUAL NUMBER OF PHYSICAL
         CYLINDERS APPROPRIATE FOR THE DASD VOLUME IDENTIFIED BY
         THE DD NAME. THIS INFORMATION IS RETRIEVED FROM THE
         DASD DEVICE BY USE OF THE READ DEVICE CHARACTERISTICS
         CCW COMMAND.
       - THE DVAMODL FLAG IS NOW AVAILABLE IN DVAFLAGS
         TO IDENTIFY MODULO DASD DEVICES WHERE THE MODULO DASD
         TRACK CAPACITY ALGORITHM MUST BE USED.
       - DATA VARIABLES REQUIRED FOR MODULO DASD TRACK CAPACITY
         CALCULATIONS ARE CORRECTLY NAMED.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     SKYBIRD SYSTEMS: PUBLIC DOMAIN USERMOD FOR MVS 3.8

   THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
   MODULES:
       IGC00002D
       IGCT0002D
   MACROS:
       IHADVA
 */.
++MOD(IGC0002D) DISTLIB(AOSD0)   TXLIB(IGC0002D).
++MOD(IGCT002D) DISTLIB(AOSD0)   TXLIB(IGCT002D).
++MAC(IHADVA)   DISTLIB(AMACLIB) TXLIB(IHADVA).
```

RP00004

```
++USERMOD(RP00004).
++VER(Z038) FMID(EUT1102) PRE(UZ76063) /*

  PROBLEM DESCRIPTION:
    RAKF RETURNS AN RC=4, RSN=0 IN RACDEF OF A NEW ALLOCATED
    DATASET SAYING THAT THE RESOURE IS ALREADY DEFINED.

  LOCAL FIX:
    ZAP IEHMVSSX TO BYPASS THE RAKF RACDEF SVC (SVC 133) IN
    MVS3.8J. THIS ALLOWS IEHMOVE TO ALLOCATE NEW DATASETS WITHOUT
    GETTING A MESSAGE SAYING THAT THE DATASET COULD NOT
    BE ALLOCATED, BECAUSE THE RESOURCE IS ALREADY DEFINED.
    THE SUBSEQUENT RACHECK WILL NOT BE BYPASSED.

  THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
    MODULES:
    IEHMVSSX.

  AUTHOR:
    CLEM CLARKE MAY 10, 2024.
                                                                */.
++ZAP(IEHMVSSX).
```

RRKF007

```
++PTF(RRKF007) /*
 Remove sort requirement Users and Profiles members. */ .
++VER(Z038) FMID(TRKF120)
            PRE(RRKF001,RRKF002,RRKF003,RRKF004,RRKF005,RRKF006)
 /*
 Summary of Changes:
 -------------------
 + Remove sort requirement Users and Profiles members:

   RAKFUSER:
   ---------
   Allocate a storage table of 1,000 entries. Read the USERS member
   into this table and skip the comments cards. After completion of
   the READ into this table sort the entries in this table in
   alphabetical order before further processing.

   RAKFPROF:
   ---------
   Allocate a storage table of 2,000 entries. Read the PROFILES member
   into this table and skip the comments cards. After completion of
   the READ into this table sort the entries in this table in
   alphabetical order before further processing.

 Special Installation Instructions:
 ----------------------------------
 None

 */ .
++SRCUPD(RAKFUSER).
++SRCUPD(RAKFPROF).
```

RRKF008

```
++PTF(RRKF008) /*
 Replace the tools VTOCSRAC, VSAMLRAC and VSAMSRAC from the MAWK
 version to the BREXX version */.
++VER(Z038) FMID(TRKF120) PRE(RRKF006)
 /*
 Summary of Changes:
 -------------------
 + Replace tools VSAMLRAC, VSAMSRAC and VTOCSRAC.

   VSAMLRAC:
   ---------
   Replace the mawk utility with the BREXX component.
   change BREXX.CURRENT.RXLIB in the current BREXX RXLIB

   VSAMSRAC:
   ---------
   Replace the mawk utility with the BREXX component.
   change BREXX.CURRENT.RXLIB in the current BREXX RXLIB

   VTOCSRAC:
   ---------
   Replace the mawk utility with the BREXX component.
   change BREXX.CURRENT.RXLIB in the current BREXX RXLIB

 Special Installation Instructions:
 ----------------------------------
 None

 */ .
++MAC(VTOCSRAC).
++MAC(VSAMLRAC).
++MAC(VSAMSRAC).
```

SLB0001

```
++USERMOD (SLB0001) /*
    PROBLEM DESCRIPTION:
          Install USERMOD SLB0001: IPO OUTPUT, CANCEL, STATUS
          TSO exit (IKJEFF53) */.
++VER (Z038) FMID(EBB1102) .
++MOD(IKJEFF53) TXLIB(IKJEFF53) .
```

SLB0002

```
++USERMOD(SLB0002)       /* CONVERTER/INTERPRETER */ .
++VER(Z038) FMID(EBB1102) PRE(UZ36835,UZ39248)
 /*
   PROBLEM DESCRIPTION:
     THE JOB AND EXEC REGION PARAMETERS ONLY ALLOW REGION SIZE
       TO BE SPECIFIED AS KILOBYTES(K). THIS CHANGE, ALLOWS
       THOSE OF US USED TO CODING AN 'M' FOR THE REGION SIZE
       VALUE TO CONTINUE TO DO SO.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     THIS USERMOD WAS WRITTEN AND PUBLISHED BY SHELBY BEACH.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEFVEA, IEFVJA
 */.
++ZAP(IEFVEA) DISTLIB(AOSB3).
++ZAP(IEFVJA) DISTLIB(AOSB3).
```

SLB0003

```
++USERMOD(SLB0003)       /* TIMER/STIMER ROUTINE */ .
++VER(Z038) FMID(FBB1221) PRE(UZ35704)
 /*
   PROBLEM DESCRIPTION:
     CSDGDCC IS A FULL-WORD NUMERIC VALUE SET IN IEAVRTOD TO CONTAIN
       THE NUMBER OF WORKING CLOCK COMPARATORS IN THE COMPLEX. IN
       MVS 3.8 THIS WILL BE EITHER 1 (UP) OR 2 (AP/MP). COMMUNICATIONS
       TASK INITIALIZATION ISSUES STIMER REQUESTS WHICH DEPEND UPON
       THERE BEING WORKING CLOCK COMPARATORS IN THE COMPLEX (WHICH
       MEANS CSDGDCC > 0). TIMING ISSUES IN THE HERCULES ENVIRONMENT
       CAN SOMETIMES CAUSE CSDGDCC TO BE ZERO WHEN THE STIMER REQUEST
       IS ISSUED, AND RESULTS IN AN ABEND22F.

     THIS USER MODIFICATION MAKES THE ASSUMPTION THAT WHEN RUNNING
       UNDER HERCULES, THE CLOCK COMPARATOR WILL ALWAYS BE FUNCTIONAL.
       CONSEQUENTLY, THE STIMER ROUTINE IS MODIFIED TO IGNORE THE FACT
       THAT CSDGDCC IS CURRENTLY ZERO, AND TO SIMPLY CONTINUE PROCESSING
       THE STIMER REQUEST AND QUEUE THE NECESSARY TQE.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     THIS USERMOD WAS WRITTEN AND PUBLISHED BY SHELBY BEACH.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVRT00 (CSECT IGC0004F)
 */.
++ZAP(IEAVRT00) DISTLIB(AOSC5).
```

SYZJ201

```
++USERMOD(SYZJ201).
++VER(Z038) FMID(EJE1103) PRE(UZ77164,UZ33158,UZ35334,UZ37263,
      UZ31176,UZ52543,UZ54837,UZ57911,UZ60375,UZ63374,UZ65742,
      UZ68537,UZ71437,UZ76165,TJES801) /*

 PROBLEM DESCRIPTION:
 INSTALL THE MAXIMUM CONDITION CODE SYSMODS

 SPECIAL INSTRUCTIONS:
 ALSO APPLY SYSMOD SYZJ202 FOR MAXIMUM EFFECT
 YOU NEED THE RESTART JES2 AFTER APPLYING SYZJ201

 MODULES: HASPSSSM

 MACROS:  IEFAJCTZ
          SYZYGY1A

 IF YOU HAVE ANY QUESTIONS OR PROBLEMS CONTACT:

    BRIAN WESTERMAN
    SYZYGY INCORPORATED
    EMAIL: BRIAN_WESTERMAN@SYZYGYINC.COM
    PHONE: (800) 767-2244
                                                            */.
```

SYZJ202

```
++USERMOD(SYZJ202).
++VER(Z038) FMID(EJE1103) PRE(UZ76165,UZ31176,UZ33158,UZ35334,
     UZ37263,UZ52543,UZ54837,UZ57911,UZ60375,UZ63374,UZ65742,
     UZ68537,UZ71437)   /*

 PROBLEM DESCRIPTION:
 INSTALL THE MAXIMUM CONDITION CODE SYSMODS

 SPECIAL INSTRUCTIONS:
 ALSO APPLY SYSMOD SYZJ201 FOR MAXIMUM EFFECT
 YOU NEED THE RESTART JES2 AFTER APPLYING SYZJ202

 MODULES: HASPPRPU

 MACROS:  SYZYGY1B

 IF YOU HAVE ANY QUESTIONS OR PROBLEMS CONTACT:

    BRIAN WESTERMAN
    SYZYGY INCORPORATED
    EMAIL: BRIAN_WESTERMAN@SYZYGYINC.COM
    PHONE: (800) 767-2244
                                                              */.
++SRCUPD(HASPPRPU).
```

SYZM001

```
++USERMOD (SYZM001) /* SEND COMMAND IMPROVEMENT */.
++VER (Z038) FMID(EBB1102) /*
  THIS USER MOD FIXES THE SEND OPERATOR COMMAND TO NOT APPEND
  CN(00) TO THE MESSAGE WHEN SEND IS ISSUED BY A SYSTEM TASK.
  THIS IMPROVES THE APPEARANCE OF JES2 NOTIFY MESSAGES. */.
++ZAP (IEEVSND6).
```

TC01101

```
++USERMOD(TC01101) /*
         TC01101 MOD TO CAUSE PRIMARY AND ALTERNATE SCREEN
         SIZE FIELDS TO BE FILLED IN AS (24,80) AND (43,80)
         RESPECTIVELY FOR TERMINALS GENED AS HAVING 43 LINES.
         THIS IS BEING DONE FOR SUPPORT OF 3278 MOD 4 TUBES
         WITHOUT ACF-LEVEL TCAM.
             IPO 6/MVS 3.8 WITHOUT TCAM LEVEL-SET PTF

                          MARGARET GARDNER, GTE LABORATORIES, INC.
  */.
++VER(Z038) FMID(ETC0108).
++ZAP(IEDAYLL).
```

TC01303

```
++USERMOD(TC01303) /* 3278 MOD 4 FULLSCREEN SUPPORT
    ZAP TO IEDAYQ TO CREATE CHECK FOR ERASE-WRITE/ALTERNATE
    AS WELL AS ERASE-WRITE IN THE TIOC BUFFER - FOR SUPPORT OF
    FULL-SCREEN APPLICATIONS SUCH AS SESSION MANAGER AND SPF
    WITH 43-LINE 3278 MOD 4 TERMINALS ON TCAM10.
            IPO 6/MVS 3.8 WITH TCAM LEVEL-SET PTF

                        MARGARET GARDNER, GTE LABORATORIES, INC.
  reworked for UZ59749 Juergen Winkelmann, ETH Zuerich, 02/2012
               */.
++VER(Z038) FMID(ETC0108) PRE(UZ59749).
++ZAP(IEDAYQ).
```

TC01402

```
++USERMOD(TC01402) /* 3278 MOD 4 FULLSCREEN SUPPORT
    ZAP TO IEDAY88 TO ENSURE THAT TSB PRIMARY AND ALTERNATE
    SCREENSIZE FIELDS IN TSB ARE MOVED DURING LOGON RECONNECT
    SO WE WILL NOT LOSE INITIALIZATION PROVIDED BY IEDAYLL FOR
    SUPPORT OF FULL-SCREEN APPLICATIONS SUCH AS SESSION MANAGER
    AND SPF WITH 43-LINE 3278 MOD 4 TERMINALS.
           IPO 6/MVS 3.8 WITHOUT TCAM LEVEL-SET PTF

                       MARGARET GARDNER, GTE LABORATORIES, INC.
  reworked for UZ37730 Juergen Winkelmann, ETH Zuerich, 02/2012
  */.
++VER(Z038) FMID(ETC0108) PRE(UZ37730).
++ZAP(IEDAY88).
```

TC01503

```
++USERMOD(TC01503) /* 3278 alternate screen size support
    ZAPS TO IEDAYM TO CAUSE ERASE/WRITE ALTERNATE TO BE SENT
    INSTEAD OF ERASE/WRITE TO 3270 TERMINALS WHOSE TSBLNNO IS
    SET AT 43 LINES RATHER THAN 24 LINES. (BOTH LOCAL AND
    REMOTE 3270S) THIS IS FOR SUPPORT OF 43 LINE 3278 MOD 4
    TERMINALS ON TCAM 10.
            IPO 6/MVS 3.8 WITH TCAM LEVEL-SET PTF

                        MARGARET GARDNER, GTE LABORATORIES, INC.
  reworked for UZ52584 Juergen Winkelmann, ETH Zuerich, 02/2012
  SNA LU 2 support     Juergen Winkelmann, ETH Zuerich, 03/2012
  support all screens  Juergen Winkelmann, ETH Zuerich, 03/2012
  */.
++VER(Z038) FMID(ETC0108) PRE(UZ52584).
++ZAP(IEDAYM).
```

TC01601

```
++USERMOD(TC01601) /* SNA LU 2 full screen support
    ZAP to IEDQFSC to allow toggling full screen mode on
    SNA LU 2 terminals using the trigger defined by a

                FULLSCR TRIGGER=X'xx'

    macro in the TCAM message handler.

    Juergen Winkelmann, ETH Zuerich, 03/2012
                                                */.
++VER(Z038) FMID(ETC0108) PRE(UZ61706).
++ZAP(IEDQFSC).
```

TJES801

```
++ USERMOD(TJES801)     /* REWORK(20050811) */             .
++ VER (Z038)
   FMID(EJE1103)
   PRE  (UZ31176,UZ33158,UZ35334,UZ37263,UZ52543,UZ54837,
         UZ57911,UZ60375,UZ63374,UZ65742,UZ68537,UZ71437,
         UZ76165,UZ77164)

 /*
   PROBLEM DESCRIPTION(S):
     TJES801 -
       (1) Set SSCTSSID to SSCTJES2 (X'02') during JES2 initialization
           to indicate that the SSCVT is for a JES2 subsystem.
       (2) Set SSIBSSID to SSIBJES2 (X'02') when a job is selected
           to indicate that the selecting subsystem is JES2.

   COMPONENT:  5752-SC1BH-EJE1103

   APARS FIXED: TJES801

   SPECIAL CONDITIONS:
     ACTION:  An IPL with CLPA is required after installation of
       this user modification.

   COMMENTS:
     LAST CHANGE:  2005/08/11

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:

     MACROS
       HASPINIT
       HASPSSSM
 */.
++ SRCUPD   (HASPINIT) DISTLIB(HASPSRC ).
++ SRCUPD   (HASPSSSM) DISTLIB(HASPSRC ).
```

TMVS816

```
++ USERMOD(TMVS816)     /* REWORK(20200415) */             .
++ VER (Z038)
   FMID(EBB1102)
   PRE  (UZ45157)                                         .
++ IF FMID(FBB1221) THEN REQ (TMVS817)
 /*
   PROBLEM DESCRIPTION(S):
     TMVS816 -
       Four-digit year support for IEE3503D DISPLAY T command;
       Four-digit year support for IEE0603D SET command syntax checker;
       Four-digit year support for IEE6603D SET UTC module.

   COMPONENT: 5752-SC1B8-EBB1102
              5752-SC1CV-EBB1102

   APARS FIXED: TMVS816

   SPECIAL CONDITIONS:
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     ACTION:
      An IPL with CLPA is required after installation of this user
      modification.

     DOCUMENTATION:  Text of system message IEE136I modified.

       Publication:  OS/VS2 MVS System Messages
       Form Number:  GC38-1002

       Message IEE136I is modified as follows:

         IEE136I LOCAL: TIME=hh.mm.ss DATE=yyyy.ddd
                 UTC:   TIME=hh.mm.ss DATE=yyyy.ddd

           Explanation:  In response to a DISPLAY T command, this
             message shows the local time and date, as well as
             Coordinated Universal Time (UTC).  In the message
             text, hh specifies the hour (00-23), mm specifies the
             minute (00-59), ss specifies the second (00-59).  yyyy
             specifies the year (1900-2042), and ddd specifies the
             day (001-366).

           Operator Response:  None

    DOCUMENTATION:  Explanation of "SET DATE" command modified.

       Publication:  Operator's Library: OS/VS MVS System Commands
       Form Number:  GC38-0229

       Description of the "SET" command is modified as follows:

       SET Command

         The SET command is used to change the installation performance
         (IPS) value and to set the local time and date.
```

```
  The complete syntax of the SET command is:

  [ SET | T ]   IPS=nn
              [ [DATE=yyyy.ddd] [,CLOCK=hh.mm.ss] ]
                RESET
```

Resetting the Performance Specification

```
  Use the following form of the SET command to respecify the
  parameters the system resources manager uses to control job
  scheduling.  This command should be issued only at the
  direction of your system programmer.

  [ SET | T ]   IPS=nn

  Note: The local time and date can also be set at this time.

  IPS=nn
    The two alphameric characters indicating the IEAIPSnn
    member of SYS1.PARMLIB containing the new performance
    parameters to be used.  The new parameters take effect
    for jobs in progress as well as for jobs read and scheduled
    after the command.

  Example:

  t ips=00

    The installation performance parameters are changed
    according to the values found in the IEAIPS00 member
    of SYS1.PARMLIB.
```

Changing the Local Time and Date

```
  After system initialization, use the following form of the
  SET command to change the local date and time.

  [ SET | T ]   [ [DATE=yyyy.ddd] [,CLOCK=hh.mm.ss]  ]
                  RESET

  Note: IPS can also be changed at this time.

  DATE=yyyy.ddd
    The year (1900-2042) and the day (001-366).  If the new
    time implies a change of date, the new date must be
    explicitly stated.

    Note:  The date may be specified with two digits of years.
    If yy.ddd is specified, it is assumed to be 19yy.ddd.

  CLOCK=hh.mm.ss
    The time in hours (00-23), minutes (00-59), and seconds
    (00-59).  The system does not change the date when the new
    time implies change of date; if you want a new date, use the
    DATE parameter or wait for the time to pass midnight.

  RESET
    The local date and time are set to the values they would
    now contain had you not changed them at system
    initialization or through a previous SET command.
```

```
        Examples:

        If, when the displayed local time and date are 19.00.00 and
        2018.231, respectively, you want to set the local time ahead
        to 1:00 a.m. the next day, enter:

          t date=2018.232,clock=01.00.00

        It is necessary to enter DATE since, in this example,
        1:00 a.m. implies a change of date.  If you want to reset
        the time and date to accurate values, enter:

          t reset

   COMMENTS:
     LAST CHANGE: 2020/04/15

     REWORK HISTORY:
      2020/04/15: Corrected zap for IEE6603D to ensure that records
        aren't too long for the input deck.

      2020/04/10: Created.

     CROSS REFERENCE-MODULE/MACRO NAMES TO USERMODS
      IEE3503D  TMVS816
      IEE0603D  TMVS816
      IEE6603D  TMVS816

     CROSS REFERENCE-USERMODS TO MODULE/MACRO NAMES
      TMVS816   IEE3503D IEE0603D IEE6603D

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:

     MODULES
      IEE3503D
      IEE0603D
      IEE6603D

     LISTEND
 */.
++ SRC      (IEE0603D) DISTLIB(ASAMPLIB) SYSLIB(SAMPLIB )
                       DISTMOD(AOSB3   ) TXLIB(IEE0603D).
++ USERMOD(TMVS817)     /* REWORK(20200415) */             .
++ VER (Z038)
   FMID(FBB1221)                                          .
++ IF FMID(EBB1102) THEN REQ (TMVS816)
 /*
   PROBLEM DESCRIPTION(S):
     TMVS817 -
       Four-digit year support for IEAVRTOD IPL interface.

   COMPONENT: 5752-SC1CV-FBB1221

   APARS FIXED: TMVS817

   SPECIAL CONDITIONS:
     COPYRIGHT: (C) Copyright 2020 Kevin Leonard.  All rights reserved.

     ACTION:
      An IPL with CLPA is required after installation of this user
      modification.
```

```
DOCUMENTATION:  Text of system message IEA886A modified.

  Publication:  OS/VS2 MVS System Messages
  Form Number:  GC38-1002

  Message IEA886A is modified as follows:

    IEA886A TOD CLOCK(S) MUST BE SET

      Explanation:  No time-of-day clock is in the set state.

      System Action:  The system waits for the operator to reply.

      Operator Response:  Enter REPLY xx,'prm', where prm may be
        as follows:

          DATE=yyyy.ddd[,CLOCK=hh.mm.ss][,UTC|GMT][,IPS=nn]

            yyyy    is the year 1900-2042.  Note that the year
                    may be specified as two digits 00-99.  If
                    a two-digit year yy is specified, the year
                    is assumed to be 19yy.

            ddd     is the day 001-366.

            hh      is the hour 00-23.

            mm      is the minute 00-59.

            ss      is the second 00-59.

            nn      is a two-character value which when appended
                    to IEAIPS specifies a member name.

        The bracketed parameters are optional.  If UTC or GMT
        is specified, the entered DATE and CLOCK values are
        understood to be Coordinated Universal Time (UTC) values,
        and are used to set the time-of-day (TOD) clock.  If UTC
        or GMT is omitted, they are understood to be local values,
        and will be converted by the system to a UTC value with
        which to set the TOD clock.

DOCUMENTATION:  Text of system message IEA887A modified.

  Publication:  OS/VS2 MVS System Messages
  Form Number:  GC38-1002

  Message IEA887A is modified as follows:

    IEA887A CPU xx LOCAL DATE=yyyy.ddd,CLOCK=hh.mm.ss
    IEA887A TOD CLOCKS MUST BE SET, OR SELECT ADDRESS

      Explanation:  There are at least 2 set time-of-day clocks
        in the system which are not synchronized.

        The local date and clock values for each set clock
        are displayed. In the message text, yyyy specifies
        the year (1900-2042), ddd specifies the day (001-366),
        hh specifies the hour (00-23), mm specifies the minute
        (00-59), ss specifies the second (00-59), and xx specifies
```

```
        the CPU address (00-15).

     System Action:  The system waits for the operator to reply.

     Operator Response:  Reply as in message IEA886A, or enter
       REPLY xx,'ADDR=xx' where xx is the address of the CPU whose
       CLOCK and DATE values are displayed in the message. The IPS
       parameter is also acceptable in the latter reply.

       The 'ADDR=xx' response causes all time-of-day clocks in the
       system to be synchronized to the value in the clock of the
       selected CPU.

DOCUMENTATION:  Text of system message IEA888A modified.

  Publication:  OS/VS2 MVS System Messages
  Form Number:  GC38-1002

  Message IEA888A is modified as follows:

    IEA888A UTC   DATE=yyyy.ddd,CLOCK=hh.mm.ss
    IEA888A LOCAL DATE=yyyy.ddd,CLOCK=hh.mm.ss
            REPLY U, OR UTC/LOCAL TIME

      Explanation:  Either there is only one time-of-day clock in
        the system and it is set, or all set clocks are
        synchronized.

        Current values are displayed for the operator's
        verification.  Values displayed are local time and date,
        and Coordinated Universal Time (UTC) and date (also known
        as Greenwich Mean Time or GMT).  In the message text, yyyy
        specifies the year (1900-2042), ddd specifies the day
        (001-366), hh specifies the hour (00-23), mm specifies the
        minute (00-59), and ss specifies the second (00-59).

      System Action:  The system waits for the operator to reply.

      Operator Response:  If the values displayed are acceptable,
        enter:

          REPLY xx,'U'.

        If you wish to change the value of the time-of-day (TOD)
        clock, enter a new date, time, or both as follows:

          REPLY xx,'[DATE=yyyy.ddd][,CLOCK=hh.mm.ss],UTC|GMT'

        If you want to change the value of the local clock, enter a
        new date, time, or both as follows:

          REPLY xx,'[DATE=yyyy.ddd][,CLOCK=hh.mm.ss]'

        If the year is specified as a two-digit number yy, the
        year is assumed to be 19yy.

        Either UTC or GMT can be specified to indicate that the
        time-of-day clock is to be set.

        If you omit UTC or GMT, the system assumes that the local
        date and/or time is to be set.
```

```
             The IPS parameter can also be entered, although processing
             of the new value is delayed until initialization has
             proceeded far enough for the system to make the necessary
             changes.  You can enter the IPS parameter by itself, or in
             conjunction with the CLOCK, DATE, and UTC|GMT parameters.

             If the reply is anything except 'U', this message is
             repeated with the changed values displayed.

   COMMENTS:
     LAST CHANGE: 2020/04/15

     REWORK HISTORY:
      2020/04/15: Corrected documentation to ensure records aren't
        too long for the input deck.

      2020/04/10: Created.

     CROSS REFERENCE-MODULE/MACRO NAMES TO USERMODS
      IEAVRTOD  TMVS817

     CROSS REFERENCE-USERMODS TO MODULE/MACRO NAMES
      TMVS817   IEAVRTOD

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:

     MODULES
      IEAVRTOD

     LISTEND
 */.
++ SRC      (IEAVRTOD) DISTLIB(ASAMPLIB) SYSLIB(SAMPLIB )
                       DISTMOD(AOSC5   ) TXLIB(IEAVRTOD).
```

TMVS817

```
++USERMOD(TMVS817)  /*

       This usermod belongs to the couple TMVS816 and TMVS817

       The function of TMVS817 is described in the coverletter
       of TMVS816

                          */.
```

TNIP800

```
++ USERMOD(TNIP800) /* REWORK(20061130) */                .
++ VER (Z038)
   FMID(EBB1102)
 /*
   PROBLEM DESCRIPTION(S):
     TNIP800 -
       Add support for user-defined system parameter PRISUB=
       to define primary subsystem name.

   COMPONENT: 5752-SC1B6-EBB1102
              5752-SC1C8-EBB1102

   APARS FIXED: TNIP800

   SPECIAL CONDITIONS:
     ACTION:  An IPL is required to after installation of
       this user modification.

   COMMENTS:
     LAST CHANGE:  2006/11/30

     This usermod makes the following changes:

       IEAVNP03 - modified to use IEAPPNIP macro to build system
                  parameters table

       IEAPPNIP - new macro to define system parameters and generate
                  system parameters table

       IEAPMNIP - IBM private macro to map parameter lists for NIP
                  service calls

       IEAVNPF1 - New RIM to set primary subsystem name from PRISUB=
                  parameter

       IEAVNIPM - modified to add new RIM IEAVNPF1 to the list of RIMs
                  to be called

       IEFJSINT - modified to use primary subsystem name set by IEAVNPF1

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:

     MACROS
       IEAPMNIP
       IEAPPNIP
       IEAVNIPM
       IEAVNPF1
       IEAVNP03
       IEFJSINT

 */.
++ JCLIN.
++ SRC      (IEAVNP03) DISTLIB(ASAMPLIB) SYSLIB(SAMPLIB )
                       TXLIB(TNIP800) .
++ MAC      (IEAPPNIP) DISTLIB(AMACLIB ) SYSLIB(MACLIB  )
                       TXLIB(TNIP800) ASSEM(IEAVNP03).
```

```
++ MAC      (IEAPMNIP) DISTLIB(AMACLIB ) SYSLIB(MACLIB  )
                       TXLIB(TNIP800) ASSEM(IEAVNP03).
++ SRC      (IEAVNPF1) DISTLIB(ASAMPLIB) SYSLIB(SAMPLIB )
                       TXLIB(TNIP800) .
++ SRC      (IEAVNIPM) DISTLIB(ASAMPLIB) SYSLIB(SAMPLIB )
                       TXLIB(TNIP800) .
++ ZAP      (IEFJSINT) DISTLIB(AOSB3   ).
```

VS49603

```
++USERMOD (VS49603) .
++VER (Z038) FMID(FBB1221)
  PRE(UZ56445)
  /*
   Symptom: IEE331A EXCESSIVE DISABLED SPIN LOOP DETECTED
   Fix:     Apply IBM ZAP VS49603, which fixes excessive disabled
            spin loop conditions when MVS is running under VM
  */ .
++ ZAP (IEEVEXSN) .
```

WM00017

```
++USERMOD (WM00017) /* $DP COMMAND AND $U COMMAND */  .
++VER (Z038) FMID(EJE1103)
             PRE( UZ31176
                  UZ33158
                  UZ35334
                  UZ37263
                  UZ54837
                  UZ57911
                  UZ63374
                  UZ65742
                  UZ71437
                  UZ79531 )
   /* SOURCE: JES2 MODS (SHARE?)
      TWO NEW COMMANDS HAVE BEEN ADDED TO JES2 TO ENHANCE OUTPUT
      PROCESSING.  THE TWO COMMANDS ARE:- $DP & $U.  THE FORMAT
      OF THE $DP COMMAND IS AS FOLLOWS:-
         $DP   ----  WILL DISPLAY ALL PRINTED OUTPUT.  IT WILL
                     GIVE BOTH THE NUMBER OF LINES AND THE
                     OUTPUT CLASS PLUS THE USUAL JES2 SPOOL
                     UTILIZATION MESSAGE.
         $DPX  ----  WHERE X IS THE SYSOUT CLASS TO BE DISPLAYED.
                     EG. $DPA WILL DISPLAY ALL OUTPUT FOR SYSOUT
                     CLASS=A.  IF THERE IS NO SYSOUT=A THEN THE
                     JES2 SPOOL UTILIZATION MESSAGE IS DISPLAYED.
                     THE $DPX FORMAT DOES NOT SUPPORT MULTIPLE
                     SYSOUT CLASSES.
      THE FORMAT OF THE $U COMMAND IS AS FOLLOWS:-
         $U JOBID,O= FROM CLASS,C= TO CLASS WHERE JOBID CAN BE
                     JOB/TSU/STC NUMBER OR RANGE OF NUMBERS EG
                     J10, S23-25, T51 OR JOBNAME IN QUOTES EG
                     'TSTJOB'.  FROM CLASS CAN BE ONE OR MORE
                     CLASSES EG A, ABV, ABCDEF OR * TO SIGNIFY
                     ALL CLASSES.  TO CLASS IS A SINGLE CLASS
                     SPECIFICATION EG C.
         EXAMPLES OF THE $U COMMAND:-
            $US1,C=P,O=L   WILL RESET 'L' CLASS OUTPUT FOR STARTED
                     TASK 1 TO CLASS 'P'.
            $UJ10,O=V,C=P  WILL RESET 'V' CLASS OUTPUT FOR JOB 10
                     TO CLASS = 'P'.
            $U'TESTJOB',O=2A,C=5  WILL RESET '2' CLASS & 'A' CLASS
                     OUTPUT FOR TESTJOB TO CLASS = '5'.
            $UJ1-999,C=2,O=*  WILL RESET OUTPUT FOR ALL JOBS TO
                     CLASS = '2'.
      POINTS TO NOTE:-
         THE OPERANDS 'O' & 'C' MAY BE IN ANY ORDER.
         OUTPUT CURRENTLY BEING PRINTED CANNOT BE RESET.
         RESETTING OUTPUT TO THE 'Z' QUEUE RE-QUEUES OUTPUT TO A
         'Z' QUEUE BUT DOES NOT AUTOMATICALLY DELETE.
         ('Z' CLASS BEING SYSOUT CLASS NOT PRINTED)
      THE RESPONSES TO THE $U COMMAND WILL BE:-
         $HASP000 SYSOUT CLASS/ES CHANGED
                       OR
         $HASP000 NO OUTPUT FOUND                        */ .
++SRCUPD (HASPCOMM) DISTLIB (HASPSRC).
```

ZBP0001

```
++USERMOD(ZBP0001)            /* VM CP CLOSE ON JES2 PRT/PUN */  .
++VER(Z038) FMID(EJE1103)
  PRE(UZ31176,UZ33158,UZ35334,UZ37263,UZ52543,UZ54837,UZ57911,
      UZ60375,UZ63374,UZ65742,UZ68537,UZ71437,UZ76165,TJES801,
      SYZJ202,ZP60031)
 /*
   PROBLEM DESCRIPTION:
     When running MVS as a guest of VM, this usermod provides a
     means for job output to be spooled to individual CMS userids
     or to VM-owned printers.  This means that (for example) a
     CMS user can submit a job to MVS via the virtual reader and
     have the job execute as usual, and then have the resulting
     job output returned back to the CMS user's reader queue.

     Running MVS under VM normally presents a problem for JES2
     job output because VM sees the resulting output as a single
     spool file even though it may be the combined output of many
     jobs.  This modification allows JES2 to issue a CP SPOOL and
     CP CLOSE command at the end of each job's output processing
     in order to spin off the output into a separate VM spool file.
     The resulting VM spool file can destined for any CMS user or
     to a real VM-owned printer for final dispensation.

     In order to enable the routing of JES2 output to VM userids or
     VM-owned printers, at least one JES2 printer or punch device
     (or both) must be designated as VM-controlled.  To do this,
     specify the "VM" parameter in the PRINTERnnn or PUNCHnnn
     JES2 initialization statements.  For example:

       PRINTER1 CLASS=A,NOSEP,AUTO,NOPAUSE,UNIT=00E,DRAIN,VM

     Only printer and punch devices with the VM parameter will
     issue the CP SPOOL and CP CLOSE commands.  Other printer and
     punch devices may also be defined to JES2 as usual and they
     will operate as before. Thus a mixture of VM controlled
     printers and punches can exist with normal JES2 printer and
     punch devices.


     Routing of JES2 output to VM (CMS) userids is controlled
     by the use of the programmer name field in the JOB card of
     the JCL.  The first 1-8 bytes of the programmer name field
     should specify a VM userid.  You may place other information
     in the programmer name field as well, but the userid must be
     specified first and then must be delimited by either a blank,
     a period, or a comma.  When a valid VM userid specified and
     the job's SYSOUT class is an output class being serviced by
     a VM-controlled printer or punch, then the output will be
     spooled to that userid's virtual reader queue.

     If the userid is invalid or does not exist, the job's output
     will be spooled to 'system', that is, spooled to the VM print
     queue for eventual printing on a VM-owned printer.

     If it is desired for job output to go directly to a VM-owned
     printer then specify SYSTEM in the programmer name field of the
```

JOB card.

Whether jobs are submitted from TSO or from CMS, the programmer name field can specify a destination userid for the resulting output. The only other requirement is that the job's JCL specify a SYSOUT class (via MSGCLASS= and/or SYSOUT=) that is currently serviced by a JES2 printer or punch device that is designated as a VM-controlled printer (that is, has the "VM" parameter specification in its JES2 initialization definition).

Other Considerations.

Use of separator pages: Separator pages make sense for JES2 printers in their normal use, but are somewhat useless when job output is spooled back to the submitter's CMS userid. A specification of NOSEP in the JES2 initialization statement for a VM-controlled printer or punch is recommended.

Local devices only: Local JES2 printer and punch devices can support this feature only. Remote printer and punches used as RJEs are not supported and the VM initialization parameter will result in a specification error if coded for remotes.

MVS not running under VM: This modification detects when MVS is running under VM and when it is not. If not, printer or punch devices designated as VM-controlled will revert to their usual JES2 behavior and no attempt will be made to issue a CP SPOOL or CP CLOSE command on their behalf. Thus, it is not necessary to remove VM parameter designations or maintain separate JES2 initialization statement members for the purposes of MVS-under-VM or MVS-not-under-VM.

Example use flow of job submission by a CMS user and getting the resulting output back:

1. Define a VM-controlled printer to JES2. Use output class V for all output to be routed to VM destinations:

```
  PRINTER1 CLASS=V,NOSEP,AUTO,NOPAUSE,UNIT=00E,DRAIN,VM
```

   JES2 must be warm started in order for the VM parameter to take effect, and of course MVS must be IPLed and be running as a guest of VM.

2. User MAINT (a VM user) creates the following JCL which is stored on his CMS A-disk, as file TESTJOB JCL A.

```
 //TESTJOB  JOB  1,MAINT,CLASS=A,MSGCLASS=V
 //X        EXEC PGM=IEFBR14
 //
```

3. User MAINT then submits the job to the MVS virtual machine:

```
CP SPOOL PUNCH MVS
PUN TESTJOB JCL A (NOH
```

4. The job is received by MVS and executes. The resulting output is in output class V as specified by the MSGCLASS parameter on the JOB card. The JES2 printer processing class V output is a VM-controlled printer as defined in

```
        example step 1 above.  After JES2 writes the entire job
        output to the printer device, it will issue the CP SPOOL
        command to send the output to VM userid MAINT, and then
        issue the CP CLOSE command to spin off the output into
        the VM spool.

     5. User MAINT who was waiting a moment for his job to execute,
        sees the following message on his terminal:

        PRT FILE 0033 FROM MVS      COPY 01 NOHOLD

     6. User MAINT can query his reader queue to see what it is:

        CP Q R ALL
        OWNERID FILE CLASS RECDS  CPY HOLD DATE  TIME     NAME    DIST
        MAINT   0033 V PRT 000039  01 NONE 01/04 15:50:53 TESTJOB MVS
        Ready; T=0.01/0.01 15:51:48

        The user can read in the spool file onto his CMS disk with
        the READCARD command, or purge the file, or use other
        facilities available to VM users.


   SPECIAL CONDITIONS:
     ACTION:
       JES2 MUST BE WARM STARTED FOR THIS CHANGE TO BECOME ACTIVE.

   COMMENTS:
     THIS IS A PUBLIC DOMAIN USERMOD FOR MVS 3.8.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       HASPINIT, HASPPRPU
     MACROS:
       $DCT
 */.
++ MACUPD   ($DCT)      DISTLIB(HASPSRC ).
++ SRCUPD   (HASPINIT)  DISTLIB(HASPSRC ).
++ SRCUPD   (HASPPRPU)  DISTLIB(HASPSRC ).
```

ZBP0002

```
++USERMOD (ZBP0002) REWORK(20240110) .
++VER (Z038) FMID (EVT0108)
 /*
   PROBLEM DESCRIPTION:
     ADD TWO VTAM LOGMODE TABLES.
       1. ETHLOGON - FOR 3270 TERMINALS FOR TSO
       2. ETHLOGVM - FOR 3270 TERMINALS FOR TSO AND THE VM UNDIAL
                     FUNCTIONS NEEDED IF MVS 3.8J IS A GUEST OF
                     VM/370.

   SPECIAL CONDITIONS:
     ACTION:
       THIS SYSMOD REQUIRES AN IPL WITH "CLPA" TO BECOME ACTIVE.

   COMMENTS:
     ROB PRINS - SKYBIRD SYSTEMS.
       ETHLOGON CREATED BY JUERGEN WINKELMANN.
       ETHLOGVM CREATED BY MIKE GROSSMANN AND UPDATED BY ROB PRINS.

     REWORK HISTORY:
       2023-10-18  INITIAL AVAILABILITY.
       2024-01-10  ROB PRINS: FIX LOGON (,)APPLID= BUG.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       ETHLOGON
       ETHLOGVM
 */.
++JCLIN .
/*
++MOD(ETHLOGON) DISTLIB(AOS24) TXLIB(ETHLOGON).
++MOD(ETHLOGVM) DISTLIB(AOS24) TXLIB(ETHLOGVM).
```

ZJW0001

```
++ USERMOD(ZJW0001).
++ VER(Z038)
   FMID(EBB1102)
   .
++ MOD(IKJEFF10)
   DISTLIB(ACMDLIB)
   TXLIB(IKJEFF10)
   .
```

ZJW0003

```
++USERMOD (ZJW0003) /*
    DESC: Install USERMOD ZJW0003 to modify generation of MSTRJCL
          RAKF DD statements added for early initialization
          */.
++VER (Z038) FMID(EBB1102) PRE(ZUM0005) .
++MACUPD(SGIEE0MS).
```

ZJW0004

```
++USERMOD (ZJW0004) .
++VER (Z038) FMID(EBB1102)
  PRE(UY17588 UZ27405 ZUM0007)
  /*
   completion of Michael Koehne's Y2K patch ZUM0007
  */ .
++ ZAP (IKJEFLA) .
```

ZJW0005

```
++USERMOD(ZJW0005) REWORK(20230808) /*

    DESC: INSTALL USERMOD ZJW0005

          TSO PRE LOGON PROMPT EXIT IKJEFLD:
          - OVERWRITE UNITNAMES WITH 'SYSDA'.
          - ISSUE WTO MESSAGE IDENTIFYING THE TERMINAL ON
            ON WHICH A TSO LOGON IS IN PROGRESS.
          - INITIALIZE TCAM 3270 TERMINALS TO ALTERNATE SCREEN IF
            THEY ARE GEN'ED WITH MORE THAN 24 LINES.

          REWORK HISTORY:
          20120301 J. WINKELMANN, INITIAL VERSION.
          20230808 R. PRINS, REPLACE UNITNAME BY SYSDA
                                             */.
++VER(Z038) FMID(EBB1102) .
++MOD(IKJEFLD) TXLIB(IKJEFLD)
               DISTLIB(AOST4)
               LEPARM(RENT,REUS)
               LMOD(IKJEFLA) .
```

ZJW0006

```
++USERMOD(ZJW0006).
++VER(Z038) FMID(EBB1102) PRE(ZP60039) SUP(ZUM0003) /*
     Update IEECVXIT WTO message automation exit:

     o SNA LU1/2 terminals provided by the Hercules 3705 and 3791
       emulations shoud be varied inactive and then back active
       between consecutive logons for several reasons (reliabilty,
       usability with not SSCP-LU session capable TN3270 applica-
       tions through SIMLOGON to name the most important ones).

       Usermod ZJW0005 provides WTO message LGN001I identifying
       terminals when a TSO logon is in progress. Usermod ZJW0006
       adds V NET,INACT - V NET,ACT processing to the autopilot
       triggered by message LGN001I against terminals with LUnames
       beginning with T327A and T376A. Once one of this terminals
       has become inactive due to a V NET,INACT command a V NET,ACT
       command is issued after a delay. That delay is

        - 1 second if the 6th character of the LUname is an 'S'
        - 10 seconds in all other cases

     o Remote 3705 NCPs impersonated by the Hercules 3705 emulation
       appear to VTAM always as loaded. These NCPs (as well as the
       impersonated local ones) cannot be IPLed and consequently
       the IFLOADRN replacement just returns "success" to the caller
       but doesn't perform any real IPL operation on the emulated
       3705s. This leads to message

       IST183A  ncpname  FOUND LOADED WITH ncpname  - REPLY YES/NO
                TO RE-IPL

       being issued upon every activation of such an NCP. It is
       completely irrelevant if this message is answered with YES
       or NO, because an IPL will never take place anyway.

       Thus ZJW0006 has the autopilot always answer this message
       with YES.

       J. Winkelmann, 03/2012
                                */.
++MOD(IEECVXIT) TXLIB(IEECVXIT).
```

ZJW0007

```
++USERMOD(ZJW0007) REWORK(20220119) /*

    Desc: Install USERMOD ZJW0007
          Regenerate the subsystem name table
          Update Rob Prins at 2022/01/19: add subsystem EDIT
          */.
++VER(Z038) FMID(EBB1102).
++MOD(IEFJESNM) TXLIB(IEFJESNM).
```

ZJW0008

```
++USERMOD(ZJW0008)            /* set TSO terminal name */  .
++VER(Z038) FMID(EJE1103) PRE(UZ77164,UZ33158,UZ35334,UZ37263,
      UZ31176,UZ52543,UZ54837,UZ57911,UZ60375,UZ63374,UZ65742,
      UZ68537,UZ71437,UZ76165,TJES801,SYZJ201)
 /*
   PROBLEM DESCRIPTION:
     The t/p terminal name field JCTJTPTN contains binary zeros in
       all JCTs of a TSO address space.

     This USERMOD alters JES2 module HASPSSSM to initialize JCTJTPTN
       in the JCT of the initiator task to the terminal name from
       field TSBTRMID of the associated TSB. This allows problem state
       programs to access the terminal name even if the access method
       in use doesn't support the GTTERM interface.

   SPECIAL CONDITIONS:
     ACTION:
       An IPL with the CLPA option is required for this change to
       become active.

     The following modules and/or macros are affected by this USERMOD:
     MODULES:
       HASPSSSM
 */.
++ SRCUPD   (HASPSSSM)  DISTLIB(HASPSRC ).
```

ZJW0009

```
++USERMOD (ZJW0009) .
++VER (Z038) FMID(ETV0108)
  PRE(UZ55134)
  /*
   Fix SNA LU2 lost terminal condition occurring in TSO/VTAM
   when a 0-byte RU is about to be sent asynchronously after
   TGET NOWAIT was issued.
  */ .
++ ZAP (IKTOMLU2) .
```

ZJW0010

```
++USERMOD (ZJW0010) .
++VER (Z038) FMID(ETV0108)
  PRE(UZ37081)
  /*
   Make TSO/VTAM SNA LU1 ASIS translation table fully
   transparent to support unprefixed file transfers
   through Kermit.
   J. Winkelmann, 06/2013
  */ .
++ ZAP (IKTTOMRT) .
```

ZJW0011

```
++USERMOD (ZJW0011) /*
    Desc: Install usermod ZJW0011, modifiying SYSGEN macro CONSOLE
          to allow specification of 24 PFKeys

    Note: o An IOGEN is required to activate the changes introduced
            by this usermod.

          o This usermod needs to be ACCEPTed to ensure that the
            CONSOLE macro is updated in SYS1.AGENLIB. Consequently
            it cannot be RESTOREd.
                                        */.
++VER (Z038) FMID(EDS1102) .
++MACUPD(CONSOLE) .
```

ZJW0012

```
++USERMOD (ZJW0012) /*
    DESC: INSTALL USERMOD ZJW0012, INTRODUCING SUPPORT OF
          24 PFKEYS ON 3270 CONSOLES
                                          */.
++VER (Z038) FMID(EBB1102) PRE(UZ34427,ZUM0015) .
++MOD(IEECVFTA) TXLIB(IEECVFTA).
++MACUPD (IEECDCM) .
```

ZP60002

```
++USERMOD(ZP60002)         /* TSO TEST (LIST SUBCOMMAND) */  .
++VER(Z038) FMID(EBB1102) PRE(UY29953)
 /*
   PROBLEM DESCRIPTION:
     IN TSO TEST, A LIST OF INSTRUCTIONS STOPS AT A BAD OPCODE.
       WHEN LISTING INSTRUCTIONS IN TSO TEST, THE LIST STOPS
       WHENEVER AN INVALID OPCODE IS ENCOUNTERED.  THIS CAN
       REDUCE THE EASE-OF-USE OF TSO TEST DURING DEBUGGING.

       THIS USERMOD CHANGES LIST INSTRUCTION PROCESSING TO
       DISPLAY THE HEXADECIMAL OF EACH HALFWORD ENCOUNTERED
       WITH AN INVALID OPCODE AS A "DC" INSTRUCTION.  THIS
       CAN SIMPLIFY DEBUGGING PASSAGES OF CODE CONTAINING
       SMALL INLINE MACRO EXPANSIONS.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 2.
     THIS IS A COMPLETE REWORK FOR MVS 3.8J OF A MODIFICATION
     SHIPPED IN CBT FILE 300 AND DISCUSSED IN AN ARTICLE BY
     ALAN FIELD IN THE AUGUST 1990 ISSUE OF THE NASPA TECHNICAL
     SUPPORT MAGAZINE.  THIS USERMOD ALSO ADDS SOME EXTRA
     CHARACTERS NOT SUPPORTED BY THE 3277 BUT WHICH ARE AVAILABLE
     ON LATER TERMINALS TO THE DISPLAYABLE CHARACTER TRANSLATE
     TABLE WHICH IS USED WHEN LISTING CHARACTERS.

     ORIGINALLY FOR UZ39425 (OCT 2001).
     THIS REWORK FOR UY29953 (NOV 2002).

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJEGLSA
 */.
++ZAP(IKJEGLSA) DISTLIB(ACMDLIB).
/*
```

ZP60003

```
++USERMOD(ZP60003)       /* XF ASSEMBLER */  .
++VER(Z038) FMID(EAS1102) PRE(UZ32460)
 /*
   PROBLEM DESCRIPTION:
     THE XF ASSEMBLER CANNOT ACCEPT BLANK INPUT SOURCE RECORDS.
       MUCH ASSEMBLER CODE WRITTEN FOR THE HIGH-LEVEL ASSEMBLER
       WHICH WOULD OTHERWISE BE FULLY PROCESSABLE BY PUBLICLY
       AVAILABLE ASSEMBLERS CANNOT BE PROCESSED BECAUSE OF
       CHANGES TO RULES FOR ALLOWABLE INPUT.  ONE SUCH RULE IS
       THE REQUIREMENT FOR THE "SPACE" ASSEMBLER INSTRUCTION
       WHENEVER A BLANK LINE IS TO BE PRODUCED IN THE OUTPUT
       LISTING, WHEREAS THE HIGH-LEVEL ASSEMBLER (ASMA90) CAN
       ALSO ACCEPT BLANK INPUT RECORDS.

       THIS USERMOD UPDATES THE XF ASSEMBLER (IFOX00) TO
       ALLOW RECORDS WITH BLANKS IN THE FIRST 72 COLUMNS AS
       VALID INPUT.  NEW LOGIC ADDS THE INTERNAL TEXT FOR THE
       "SPACE" INSTRUCTION IN COLUMN 10 BEFORE THE INPUT RECORD
       IS PARSED WHENEVER A RECORD IS FOUND TO START WITH 72
       BLANKS.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 3.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IF0X0F
 */.
++ZAP(IFOX0F) DISTLIB(AOS03).
```

ZP60004

```
++USERMOD(ZP60004)       /* 3277 CONSOLE I/O */  .
++VER(Z038) FMID(EBB1102) PRE(UZ35462)
 /*
   PROBLEM DESCRIPTION:
     3270 HIGH INTENSITY IS NOT USED FOR IMMEDIATE ACTION MESSAGES.
       ALL CONSOLE MESSAGES DISPLAYED USING THE SHIPPED 3277
       CONSOLE SUPPORT ARE SHOWN IN LOW INTENSITY, WHEREAS THE
       EXPECTED BEHAVIOUR FOR 3270 OS CONSOLES IS THAT 3270
       DUAL INTENSITY IS EXPLOITED SO THAT IMMEDIATE MESSAGES
       INCLUDING WTORS ARE DISPLAYED IN HIGH INTENSITY UNTIL
       PROCESSED BY DOM.

       THIS USERMOD UPDATES THE 3277 CONSOLE WRITE MODULE TO
       UPDATE THE 3270 FIELD ATTRIBUTE BYTE FOR EACH IN-LINE
       MESSAGE LINE ACCORDING TO THE ACTION MESSAGE STATUS OF
       THE MESSAGE SHOWN ON THAT LINE BEFORE THE SCREEN IS
       WRITTEN.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 4.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEECVETV
 */.
++ZAP(IEECVETV) DISTLIB(AOSC5).
```

ZP60005

```
++USERMOD(ZP60005)       /* IOS SIO COUNTERS */  .
++VER(Z038) FMID(FBB1221) PRE(UZ68196)
 /*
   PROBLEM DESCRIPTION:
     IOS DOES NOT MAINTAIN CHANNEL AND DEVICE SIO COUNTS BY DEFAULT.
       THE HALFWORD WRAP-AROUND SIO COUNTERS FOR CHANNELS (IN
       THE CHANNEL AVAILABILITY TABLE) AND DEVICES (IN THE UNIT
       CONTROL BLOCK COMMON EXTENSION) ARE NOT MAINTAINED UNLESS
       MF/1 IS ACTIVE.  MF/1 ACTIVATION AND DEACTIVATION OVERLAYS
       THE "HOOK" INSTRUCTION WITH AN APPROPRIATE INSTRUCTION.
       BY REPLACING THE DEACTIVATION INSTRUCTION WITH THE ACTIVATION
       INSTRUCTION, SIO COUNTS WILL BE MAINTAINED AS SOON AS NUCLEUS
       INITIALIZATION DISABLES I/O TRACE.  FURTHER, BY REPLACING THE
       ASSEMBLED "HOOK" INSTRUCTION WITH THE ACTIVATION INSTRUCTION
       SIO COUNTS WILL BE MAINTAINED FROM THE START OF THE IPL.  TO
       COVER ALL POSSIBILITIES, THE I/O TRACE HOOK IS ALSO CHANGED
       SO THAT THE SIO COUNTER CODE IS NOT BYPASSED IF AN I/O TRACE
       IS PERFORMED.

       THIS USERMOD UPDATES THE ASSEMBLED HOOK INSTRUCTION AND THE
       MF/1 DEACTIVATION INSTRUCTION IN IOS TO MATCH THE MF/1 IOS
       ACTIVATION INSTRUCTION.

   SPECIAL CONDITIONS:
     ACTION:
       AN IPL MUST BE PERFORMED FOR THIS SYSMOD TO BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 5.

     ORIGINALLY FOR UZ64419 (DEC 2001).
     THIS REWORK FOR UZ68196 (NOV 2002).

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IECIOSAM
 */.
++ZAP(IECIOSAM) DISTLIB(AOSC5).
```

ZP60006

```
++USERMOD(ZP60006)         /* DATA SET DEALLOCATION MESSAGES */  .
++VER(Z038) FMID(EBB1102) PRE(UZ75723)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO FEEDBACK IN JOB MESSAGES ABOUT EXCP ACTIVITY.
       STANDARD JOB MESSAGE OUTPUT DOES NOT CONTAIN ANY DATA
       ABOUT I/O ACTIVITY PERFORMED BY THE JOB.  VERY USEFUL
       PERFORMANCE AND DEBUGGING INFORMATION CAN BE DEDUCED
       BY SHOWING THE NUMBER OF EXCPS TO EACH DATA SET.

       THIS USERMOD CHANGES THE SYSTEM GENERATED DATA SET
       DEALLOCATION MESSAGE IEF285I BY SHOWING THE EXCP COUNT
       AFTER THE DATA SET NAME.  UP TO 9,999,999 CAN BE SHOWN
       CORRECTLY.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 6.
     THIS IS MERELY A REPACKAGING FOR MVS 3.8J OF THE FAMOUS
     "I/O COUNT ZAP" DOCUMENTED IN DETAIL BY SAM GOLOB IN HIS
     "MVS TOOLS AND TRICKS OF THE TRADE" COLUMN IN THE JULY 1989
     ISSUE OF THE NASPA TECHNICAL SUPPORT MAGAZINE.  THE ARTICLE
     IS SHIPPED IN MEMBER CL8907JL OF CBT FILE 120, AND THE USERMODS
     FOR VARIOUS LEVELS OF MVS ARE SHIPPED IN CBT FILE 369.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEFAB4A2 (TO VERIFY DATA OFFSET)
       IEFAB4B0
 */.
++ZAP(IEFAB4A2) DISTLIB(AOSB3).
++ZAP(IEFAB4B0) DISTLIB(AOSB3).
```

ZP60007

```
++USERMOD(ZP60007)           /* ADD CONFTXT SUPPORT TO TSO */  .
++VER(Z038) FMID(ETV0108) PRE(UZ28155,UZ28257,UZ33846)
 /*
   PROBLEM DESCRIPTION:
     TSO/VTAM 3270 DATA STREAMS CANNOT BE TRACED BY GTF.
       WHEN ATTEMPTING TO DIAGNOSE PROBLEMS WITH TSO APPLICATIONS
       IT IS A USEFUL TECHNIQUE TO TRACE THE VTAM DATA TRAFFIC
       TO AND FROM THE TSO TERMINAL.  HOWEVER, TSO/VTAM SPECIFIES
       PROC=CONFTXT IN THE VTAM NIB WHICH INSTRUCTS VTAM TO TREAT
       TERMINAL TRAFFIC AS CONFIDENTIAL TEXT WHICH SHOULD NOT BE
       REPORTED BY A TRACE.  IBM HAS ADDED THE CONFTXT PARMLIB
       PARAMETER TO LATER VERSIONS OF VTAM SO THAT AN INSTALLATION
       CAN CONTROL THIS SETTING, BUT THIS FEATURE IS NOT SUPPORTED
       BY THE FREELY AVAILABLE VERSION OF TSO/VTAM.

       THIS USERMOD ADDS SUPPORT TO CORRECTLY PROCESS THE CONFTXT
       PARAMETER IN THE PARMLIB FILE OF THE TSO STARTED TASK,
       WHICH IS USUALLY A TSOKEY__ MEMBER OF SYS1.PARMLIB.
       FURTHER, TSO APPLICATION NIB INITIALISATION WILL ALTER THE
       NIB CONTENTS ACCORDING TO THE PARAMETER SETTING.  THE
       TCAST CONTROL BLOCK DSECT MACRO IS UPDATED TO REFLECT WHERE
       THIS SETTING IS STORED.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.
     DOC:
       CONFTXT=YES OR CONFTXT=NO CAN NOW BE SPECIFIED IN THE
       TSOKEY__ MEMBER OF SYS1.PARMLIB.  CONFTXT=YES IS THE DEFAULT.
       CONFTXT=YES WILL PREVENT THE TRACING OF TERMINAL DATA STREAMS.
       CONFTXT=NO WILL ALLOW THE TRACING OF TERMINAL DATA STREAMS.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 7.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKTCAS54
       IKTXINIT
     MACROS:
       IKTTCAST
 */.
++MOD(IKTCAS54) DISTLIB(AOST3) TXLIB(IKTCAS54).
++ZAP(IKTXINIT) DISTLIB(AOST4).
++MACUPD(IKTTCAST) DISTLIB(ATSOMAC).
```

ZP60008

```
++USERMOD(ZP60008)         /* ADD VTAM EWA AND WSF SUPPORT */  .
++VER(Z038) FMID(EVT0108)
 /*
   PROBLEM DESCRIPTION:
     ERASE/WRITE ALTERNATE AND WRITE STRUCTURED FIELD NOT SUPPORTED.
       VTAM APPLICATIONS CANNOT USE EXTENDED 3270 FACILITIES SINCE
       VTAM DOES NOT SUPPORT THE WRITE STRUCTURED FIELD (WSF)
       COMMAND NECESSARY TO ISSUE A READ PARTITION (QUERY) TO THE
       TERMINAL, AND THE ERASE/WRITE ALTERNATE (EWA) COMMAND
       NECESSARY TO SWITCH A 3270 SCREEN INTO ITS ALTERNATE AND
       USUALLY LARGER SCREEN SIZE.

       THIS USERMOD ADDS SUPPORT TO VTAM FOR THE WSF AND EWA COMMANDS
       FOR LOCAL NON-SNA 3270 TERMINALS ONLY.  THE RELEVANT COMMAND
       CODES (X'7E' FOR EWA AND X'F3' FOR WSF) HAVE NON-ZERO ENTRIES
       INSERTED INTO THE TRANSLATE TABLE OF THE 3270 SEND/RECEIVE LOCAL
       TRANSLATION CONTROLLER ISTZBF0L WHICH ARE DECODED BY THE 3270
       LOCAL WRITE CCW PROCESSOR ISTZBFBA SO THAT THE CORRECT CCW
       OPCODES ARE SET.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.
     DOC:
       WSF AND EWA ARE NOW VALID VTAM WRITE COMMANDS FOR LOCAL NON-SNA
       3270 TERMINALS.  IT IS UP TO THE VTAM APPLICATION TO DETERMINE
       IF THE USE OF EITHER OF THESE COMMANDS IS APPROPRIATE FOR THE
       3270 HARDWARE (OR EMULATION(S) THEREOF) INVOLVED.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 8.
       THE ZAP DOES NOT VERIFY THAT THE TRANSLATE TABLE ENTRIES BEING
       REPLACED ARE NULL, SO THIS USERMOD CAN BE REAPPLIED IF NECESSARY.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       ISTZBFBA
       ISTZBF0L
 */.
++MOD(ISTZBFBA) DISTLIB(AOS24) TXLIB(ISTZBFBA).
++ZAP(ISTZBF0L) DISTLIB(AOS24).
```

ZP60009

```
++USERMOD(ZP60009)   REWORK(20240311)                    .
++VER(Z038) FMID(ETV0108)
  PRE(UZ35180,UZ26905,UZ67122,UZ22286,UZ55134,UZ28255,
      UZ71054,UZ54020,UZ68882,UZ57385,UZ28016)
 /*
   PROBLEM DESCRIPTION:
     THE NOEDIT OPERAND OF TPUT AND TPG IS NOT HONOURED BY TSO/VTAM.
       THE TIOC COMMON SVC 93 ROUTINE IGC0009C CORRECTLY DETECTS THE
       REQUEST OF NOEDIT FOR TPUT AND TPG REQUESTS, BUT THIS IS NOT
       HANDLED PROPERLY BY TSO/VTAM.
     THE GTTERM MACRO FUNCTION IS NOT SUPPORTED BY TSO/VTAM.
       WHEN A TSO APPLICATION ISSUES THE GTTERM MACRO RC=4 RESULTS.
       AN APPLICATION CANNOT DETERMINE IF THE READ PARTITION (QUERY)
       FUNCTION IS SUPPORTED.  ALSO, THE ALTERNATE SCREEN SIZE CANNOT
       BE DETERMINED.
     3270 HOUSEKEEPING IS LIMITED TO MODEL-1 AND MODEL-2 SCREEN SIZES.
       TSO WILL ONLY PERFORM LINE MODE 3270 SCREEN HOUSEKEEPING FOR
       MODEL-1 (12 BY 40) AND MODEL-2 (24 BY 80) SCREEN SIZES.  THE
       ALTERNATE SCREEN SIZE OF A TERMINAL CANNOT BE PROPERLY EXPLOITED
       BY TSO LINE MODE, NOR BY TSO FULLSCREEN APPLICATIONS.
     THE NOEDIT OPERAND OF STFSMODE IS NOT SUPPORTED BY TSO/VTAM.
       NOEDIT INPUT MODE IS SET BY SPECIFYING NOEDIT=YES ON A
       'STFSMODE ON' MACRO.  THIS IS NOT SUPPORTED BY TSO.  WITHOUT
       THIS ABILITY ANY X'1E' IN INPUT DATA (INCLUDING A QUERY
       RESPONSE, OR AN SBA ORDER FROM A SCREEN WITH MORE THAN 4096
       LOCATIONS) WILL BE INTERPRETED AS A FIELD MARK CHARACTER AND
       CAUSE THE DATA FOLLOWING IT TO BE HELD OVER UNTIL THE NEXT TGET
       MACRO IS ISSUED.

       THIS USERMOD CHANGES SEVERAL TSO/VTAM MODULES.

       THE TSO/VTAM SVC 93 ROUTER IS CHANGED TO NOT REJECT REQUESTS
       WITH NOEDIT SPECIFIED.

       THE TSO/VTAM TPUT HANDLER IS CHANGED TO NOT TRUNCATE TRAILING
       BLANKS FROM NOEDIT REQUESTS.  A PREVIOUSLY RESERVED BIT IS
       USED TO FLAG NOEDIT REQUESTS, WHICH ARE ALSO FLAGGED AS
       FULLSCREEN REQUESTS BY THE TPUT AND TPG MACROS (AND NOW ALSO
       BY THIS MODULE).

       THE TSO/VTAM TGET HANDLER IS CHANGED TO BACK OUT THE FIX FOR
       APAR OZ60978 SHIPPED IN PTF UZ57385 TO REGRESS FUNCTIONALITY
       TO THE UZ55134 LEVEL SO THAT TPUT MACROS ISSUED AFTER TGET
       MACROS WITH THE NOWAIT OPERAND ARE NOT QUEUED UNTIL THERE IS
       SOME INPUT, BUT SENT TO THE SCREEN ASYNCHRONOUSLY.  THIS HAS
       THE EFFECT OF REINTRODUCING THE PROBLEM WHERE A TGET NOWAIT
       DOES NOT FORCE THE KEYBOARD TO BECOME UNLOCKED, BUT THIS CAN
       BE CIRCUMVENTED BY THE APPLICATION SETTING THE X'02' BIT IN
       THE WCC WHEN APPROPRIATE.

       THE TSO/VTAM TGET HANDLER IS ALSO CHANGED TO ADD THE TGET MACRO
       RETURN CODES 24 AND 28 WHICH MAY BE GIVEN WHEN NOEDIT INPUT
       MODE IS IN EFFECT, THEREBY IMPROVING COMPATIBILITY WITH TSO/E.

       THE TSO/VTAM INITIALIZATION ROUTINE FOR THE TSO INPUT MANAGER
       AND TSO OUTPUT MANAGER HAS BEEN CHANGED TO NOT REGARD TERMINALS
```

WITH BUFFER SIZES LARGER THAN 1920 BYTES AS MODEL-1 TERMINALS.
THIS WILL HELP AVOID LINE MODE SCREEN HANDLING ERRORS AFTER
LOGON RECONNECT PROCESSING.

THE TSO/VTAM LOGON RECONNECT ROUTINE HAS BEEN CHANGED TO
INCLUDE THE PRIMARY AND ALTERNATE SCREEN DIMENSIONS IN THE
DATA PERTAINING TO THE NEW TERMINAL PROPAGATED TO CONTROL
BLOCKS WHEN A LOGON RECONNECT IS PERFORMED, THUS ALLOWING TSO
APPLICATIONS TO DETECT DYNAMIC CHANGES TO THE SCREEN SIZE.

THE TSO/VTAM 3270 TERMINAL SCREEN MANAGER IS ALTERED TO SKIP
ANY DATA TRANSLATION FOR NOEDIT TPUTS. FURTHER, IN KEEPING
WITH 3270 ARCHITECTURE DATA INTEGRITY FOR DISPLAYABLE CODE
POINTS (WHERE ALL CODE POINTS IN THE RANGE X'40' TO X'FE'
ARE CONSIDERED "DISPLAYABLE", AND REGARDLESS OF THE TERMINAL'S
ABILITY TO DISPLAY THE CHARACTER, WHEN SUCH A CODE POINT IS
WRITTEN TO THE TERMINAL, IT CAN BE READ BACK UNALTERED) ALL
TPUTS TO 3270 EBCDIC TERMINALS WILL NO LONGER ALTER ANY DATA
CODE POINTS IN THE X'40' TO X'FE' RANGE. (THE X'40' CODE POINT
IS RESERVED FOR A BLANK IN ALL SINGLE-BYTE CHARACTER SETS.)

THE TSO/VTAM 3270 TERMINAL SCREEN MANAGER IS ALSO ALTERED TO
SUPPORT DIFFERENT PRIMARY AND ALTERNATE SCREEN SIZES OF ANY
SIZE SUBJECT TO THE 3270 ARCHITECTURE LIMITATIONS, AND ALSO
THAT THE ALTERNATE SCREEN SIZE NEVER HAS FEWER COLUMNS NOR
FEWER LINES THAN THE PRIMARY SCREEN SIZE. TSO/VTAM LINE MODE
HOUSEKEEPING WILL NOW USE 14-BIT ADDRESSING FOR ALL BUFFER
LOCATIONS GREATER THAN 4095, BUT WILL STILL USE 12-BIT
ADDRESSING FOR LOCATIONS FROM 0 TO 4095 INCLUSIVE. THIS
CHANGE HAS THE EFFECT OF INCREASING THE MAXIMUM TSO/VTAM 3270
SCREEN SIZE SUPPORTED FROM 4096 LOCATIONS TO 16384 LOCATIONS.

THE TSO/VTAM 3270 TERMINAL SCREEN MANAGER NOW HANDLES TPUT
FULLSCR DIFFERENTLY TO THE EXTENT THAT A STANDARD WRITE (X'F1')
WITH A NO-OP WCC (X'40') WILL NOT FORCE THE INCLUSION OF AN
INSERT CURSOR ORDER AS THE TPUT MAY BE SENDING AN ASYNCHRONOUS
PARTIAL SCREEN UPDATE WHICH DOES NOT OVERWRITE AN ACTIVE INPUT
AREA WHERE SOME TEXT MAY BE BEING TYPED IN.

THE TSO/VTAM 3270 INPUT DATA HANDLER HAS BEEN ALTERED TO NOT
PROCESS FIELD MARK CHARACTERS INPUT WHEN NOEDIT MODE IS IN
EFFECT. FURTHER, THE ACTUAL NUMBER OF COLUMNS AND LINES ON
THE SCREEN IS USED IN LINE COUNT CALCULATIONS.

THE TSO/VTAM SVC 94 ROUTER IS ALTERED TO PASS CONTROL TO A NEW
CSECT FOR TSO TERMINAL CONTROL FUNCTION 17 (GTTERM). A TSO
APPLICATION CAN NOW ISSUE A GTTERM MACRO TO DETERMINE IF THE
QUERY BIT IS ON, AND CAN GET THE DIMENSIONS OF THE PRIMARY AND
ALTERNATE SCREEN SIZES. NOEDIT TPUT/TPG MACROS CAN BE USED
TO ISSUE WRITE STRUCTURED FIELD COMMANDS TO GAIN ACCESS TO
VARIOUS 3270 EXTENSIONS INCLUDING GRAPHICS. QUERY SUPPORT IS
NOT NEEDED FOR A READ BUFFER COMMAND WHICH CAN NOW ALSO BE
ISSUED VIA A NOEDIT TPUT/TPG MACRO. GTTERM RETURN CODES AND
OUTPUT IS COMPATIBLE WITH TSO/E, EXCEPT THAT THE TERMID OUTPUT
AREA IS CURRENTLY LIMITED TO 8 BYTES.

THE TERMINAL CONTROL MACRO ROUTINE FOR THE STFSMODE MACRO HAS
BEEN CHANGED TO SUPPORT THE NOEDIT OPERAND, AND RESHOW KEY CODES
CAN NOW BE IN THE RANGE OF FROM 1 TO 24 INCLUSIVE (REPRESENTING
THE VALID PFK NUMBERS).

```
    THE TERMINAL CONTROL MACRO ROUTINE FOR THE STLINENO MACRO HAS
    BEEN CHANGED TO SUPPORT THE SPECIFICATION OF ANY VALID LINE
    NUMBER THAT EXISTS ON THE SCREEN.  IT HAS ALSO BEEN CHANGED TO
    SUPPORT NOEDIT INPUT MODE.

    THE TERMINAL CONTROL MACRO ROUTINE FOR THE STSIZE MACRO HAS
    BEEN CHANGED TO INDICATE THAT ANY REQUESTED SCREEN SIZE WHICH
    MATCHES EITHER THE PRIMARY OR ALTERNATE SIZE OF THE SCREEN IS
    CONSIDERED A STANDARD SIZE, EVEN IF IT IS NOT THE SIZE OF A
    MODEL-1 OR MODEL-2 SCREEN.  THIS IS DONE WITH A RETURN CODE
    OF ZERO INSTEAD OF A RETURN CODE OF 12 WHICH INDICATES A
    NON-STANDARD SCREEN SIZE.  (THE FLAGGING OF NON-STANDARD
    SCREEN SIZES IS INTENDED TO WARN OF THE POSSIBILITY OF
    SCREEN CONTROL ERRORS.)

    THE MAPPING MACRO FOR THE TSO/VTAM WORK AREA IKTTVWA IS
    UPDATED TO ADD BIT TVWAALTS WHICH IS SET WHEN THE TSO/VTAM
    SCREEN MANAGER SETS THE SCREEN TO ITS ALTERNATE SIZE.
    (THE MAPPING OF THIS BIT IS INCOMPATIBLE WITH TSO/E.)

    THE STFSMODE TERMINAL CONTROL MACRO FOR TSO FULLSCREEN
    APPLICATIONS HAS BEEN UPDATED TO ADD THE NOEDIT OPERAND,
    WHICH CAN BE ASSIGNED THE VALUE OF YES OR NO.  NO IS THE
    DEFAULT.  NOEDIT=YES IS USED TO ALLOW BYTES WITH A VALUE OF
    X'1E' TO BE RETURNED TO AN APPLICATION AS INPUT DATA
    FROM THE TERMINAL WITHOUT EACH SUCH BYTE BEING PROCESSED AS
    A FIELD MARK.

SPECIAL CONDITIONS:
  ACTION:
    A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
    BECOME ACTIVE.

COMMENTS:
  PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 9.

  REWORK HISTORY:
    2003-02-01: INITIAL RELEASE.
    2003-03-05: KBD (UN)LOCK ASYNC MSGS DURING NOEDIT TPUTS.
    2003-03-30: DO NOT FORCE IC IF WRT WITH NO-OP WCC.
    2005-08-14: DO NOT FORCE LINE-WRAP AFTER COLUMN 80.
    2009-06-01: USE SCREEN SIZES AND QUERY BIT FROM SNA BIND.
    2009-11-07: CHANGE IKTIIOM AND ADD IKTLOGR ZAPS FOR RECONNECT.
    2012-04-28: IMPROVE THE INTEROPERABILITY OF TPUT NOEDIT (WITH
                "UNLOCK KEYBOARD" SET IN THE WCC) AND TGET NOWAIT
                TO MATCH THAT OF TPUT FULLSCR AND TGET NOWAIT.
    2019-04-22: CHANGE IKTVTGET SO THAT TGET NOWAIT REQUESTS DO
                NOT INHIBIT WRITES TO THE TERMINAL UNTIL SOME
                INBOUND DATA IS FIRST RECEIVED FROM THE TERMINAL.
                REMOVE DEBUG CODE AND FLAGS FROM IKT3270O CSECT.
                REMOVE FLSCRTAB EDITING OF TPUT FULLSCR DATA.
    2020-06-21: CHANGE IKT3270I TO FIX LINE COUNT OF INPUT WIDTH.
    2022-11-26: FIX 2019 IKTVTGET SOURCE CODE UPDATES TO CORRECTLY
                IMPLEMENT THE ZAP PREVIOUSLY USED, THEREBY FIXING
                TPUT HOLD BEHAVIOUR.  MAKE THE CORRECT IKTVTGET
                SOURCE CODE CHANGES SO THAT TGET NOWAIT REQUESTS
                DO NOT INHIBIT WRITES TO THE TERMINAL UNTIL SOME
                INBOUND DATA IS FIRST RECEIVED FROM THE TERMINAL.
    2024-03-11: FIX IKT3270I TO IGNORE FIELD MARKS (X'1E' BYTES)
                WITHIN SBA ORDERS TO FIX OVERLAYING INPUT FIELDS
                WITH DATA INTENDED FOR OTHER INPUT FIELDS.
```

```
                    FIX IKT09412 TO RESET NOEDIT INPUT MODE WHEN
                    STFSMODE ON,NOEDIT=NO IS ISSUED.
                    UPDATE IKTXLOG TO EXTRACT THE CGCSGID FROM THE
                    CHARACTER SETS QUERY SUB-FIELD AND STORE IT IN
                    THE UNUSED LAST 4 BYTES OF THE TSBX (TSBX+74X).
                    UPDATE IKT09411 TO ADD GTTERM SUPPORT FOR THE
                    NETWORK NAME OF THE SMF IDENTIFIER WITH 'VTAM'
                    APPENDED IF THE GTTERM TERMID VALUE WAS REQUESTED
                    (IF SMF HAS NOT STARTED THE NANE WILL BE 'MVS VTAM')
                    AND ALSO TO SUPPORT THE 39-BYTE 'CODEPG' FORMAT
                    OF DATA RETURNED TO THE AREA NAMED IN THE TERMID
                    PARAMETER AS DOCUMENTED IN TSO/E PROGRAMMING
                    SERVICES.  (THE IP ADDRESSES WILL NOT BE LOADED.)

     TSO/VTAM IS A VTAM APPLICATION.  THIS SYSMOD DOES NOT IMPLY
     THAT VTAM CAN CORRECTLY PROCESS THE DATA THAT CAN NOW BE
     GENERATED BY TSO APPLICATIONS, EVEN IF THE DATA CONSISTS OF
     A PERFECTLY VALID 3270 DATA STREAM.

     EVT0108 LOCAL NON-SNA SUPPORT IS PROVIDED BY USERMOD ZP60008.

     USERMOD ZP60032 UPGRADES THE GTTERM MACRO TO BE ABLE TO EXPLOIT
     NEW FUNCTION DELIVERED IN THIS SYSMOD.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKT0009C
       IKTVTPUT
       IKTIIOM
       IKTLOGR
       IKTVTGET
       IKT3270O
       IKT0009D
       IKTXLOG
       IKT3270I
       IKT09412
       IKT09413
       IKT0940A
     MACROS:
       IKTTVWA
       STFSMODE
 */.
++ZAP(IKT0009C) DISTLIB(AOST3).
++ZAP(IKTVTPUT) DISTLIB(AOST3).
++ZAP(IKTIIOM) DISTLIB(AOST4).
++ZAP(IKTLOGR) DISTLIB(AOST4).
++MOD(IKTVTGET) DISTLIB(AOST3) TXLIB(IKTVTGET).
++MOD(IKT3270O) DISTLIB(AOST3) TXLIB(IKT3270O).
++MOD(IKT0009D) DISTLIB(AOST3) TXLIB(IKT0009D).
++MOD(IKTXLOG) DISTLIB(AOST4)  TXLIB(IKTXLOG).
++MOD(IKT3270I) DISTLIB(AOST3) TXLIB(IKT3270I).
++MOD(IKT09412) DISTLIB(AOST3) TXLIB(IKT09412).
++MOD(IKT09413) DISTLIB(AOST3) TXLIB(IKT09413).
++MOD(IKT0940A) DISTLIB(AOST3) TXLIB(IKT0940A).
++MACUPD(IKTTVWA) DISTLIB(ATSOMAC).
++MACUPD(STFSMODE) DISTLIB(ATSOMAC).
```

ZP60011

```
++USERMOD(ZP60011)            /* TRACE SIO CHANNEL PROGRAM */  .
++VER(Z038) FMID(FBB1221)
 /*
   PROBLEM DESCRIPTION:
     GTF CANNOT TRACE ANY CCWS USED IN A CHANNEL PROGRAM.
       GTF DOES NOT PROVIDE A FACILITY FOR PERFORMING A CCW TRACE.
       CCW TRACES ARE A SIGNIFICANT TOOL FOR DIAGNOSING I/O PROBLEMS.

       THIS USERMOD CHANGES THE SIO RECORD BUILD ROUTINE TO CAPTURE
       UP TO 25 CCWS IN AN I/O PROGRAM PROCESSED BY SIO, AND PLACE
       THE CONTENTS INTO THE GTF SIO TRACE RECORD.  STRICTLY
       SPEAKING, THIS IS NOT A CCW TRACE AS THERE IS NO GUARANTEE
       THAT ALL OF THE CAPTURED CCWS WERE EXECUTED BY THE CHANNEL.
       UP TO 8 BYTES OF WRITE DATA MAY BE CAPTURED FOR NON-DASD
       DEVICES WHICH IS STORED IN THE SEEK ADDRESS TRACE FIELD.

       ADDITIONALLY THE SIO TRACE RECORD FORMAT ROUTINE IS ALTERED
       TO FORMAT CAPTURED CCWS, EACH ONE ON ITS OWN PRINT LINE.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 11.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       AHLTSIO
       AMDSYS00
 */.
++MOD(AHLTSIO) DISTLIB(AOS11) TXLIB(AHLTSIO).
++MOD(AMDSYS00) DISTLIB(AOS12) TXLIB(AMDSYS00).
```

ZP60012

```
++USERMOD(ZP60012)      /* REPORT PIC FOR S0CX OR SODX ABEND */  .
++VER(Z038) FMID(EBB1102) PRE(UZ83396,UY02947)
 /*
   PROBLEM DESCRIPTION:
     THE CONTENTS OF GPR15 IS REPORTED AS THE REASON CODE.
       IN THE ABSENCE OF A "REASON" PARAMETER OF THE ABEND MACRO
       THE VALUE STORED IN GENERAL PURPOSE REGISTER 15 IS INSPECTED
       AND IF (LOGICALLY) LESS THAN 4096 IS THEN ARBITRARILY
       REPORTED AS THE REASON CODE OF THE ABEND.  THIS IS NOT
       APPROPRIATE FOR PROGRAM CHECK ABENDS WHERE IT CAN BE MORE
       USEFUL TO REPORT THE PROGRAM INTERRUPT CODE (PIC).

       THIS USERMOD CHANGES THE TSO TMP ESTAI EXIT ROUTINE IKJEFT04
       AND THE TSO TMP ESTAE EXIT ROUTINE IKJEFT05 SO THAT THE PIC
       IS REPORTED AS THE REASON CODE IN MESSAGE IKJ56641I.  AS A
       RESULT, THE DETERMINATION OF WHETHER THE PSW POINTS TO THE
       FAILING INSTRUCTION (AS FOR PIC10, PIC11 AND PIC12) OR THE
       NEXT INSTRUCTION WILL BE EASIER TO MAKE.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 12.

     A TYPICAL USAGE SCENARIO MIGHT CONSIST OF THE FOLLOWING STEPS:
     1) A PROGRAM OR COMMAND ABENDS RESULTING IN:
           IKJ56641I PGM-NAME ENDED DUE TO ERROR+
           READY
     2) THE USER ENTERS A QUESTION MARK RESULTING IN:
           IKJ56641I SYSTEM ABEND CODE 0C4   REASON CODE 011
           READY
     3) THE USER INITIATES THE TEST COMMAND TO COMMENCE DEBUGGING
        KNOWING THAT THE CURRENT LOCATION CONTAINS THE INSTRUCTION
        CAUSING THE PROGRAM CHECK.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJEFT04
       IKJEFT05
 */.
++ZAP(IKJEFT04) DISTLIB(AOST4).
++ZAP(IKJEFT05) DISTLIB(AOST4).
```

ZP60013

```
++USERMOD(ZP60013)                     /* COUNT SVC EVENTS */  .
++VER(Z038) FMID(FBB1221)
 /*
   PROBLEM DESCRIPTION:
     THE NUMBER OF SVCS ISSUED IS NOT ACCURATELY KNOWN.
       THE SYSTEM DOES NOT PROVIDE A METHOD FOR TRACKING THE
       FREQUENCY OF SUPERVISOR CALLS (SVC INSTRUCTIONS) WITHOUT
       A GTF TRACE.

       THIS USERMOD CHANGES THE SVC FIRST LEVEL INTERRUPT HANDLER
       TO MAINTAIN A FULLWORD COUNTER FOR EACH OF THE 256 SVC
       NUMBERS (0 TO 255) IN A CONTIGUOUS TABLE.  THIS TABLE IS
       AVAILABLE TO MONITORS FOR TRACKING SVC ACTIVITY.  ACCESS
       TO THE TABLE IS VIA THE SECOND WORD OF THE SVC NEW PSW
       FLCSNPSW WHICH POINTS TO THE SVC FLIH.  AFTER THE SYSTEM
       IS REIPLED WITH THIS SYSMOD APPLIED, THE TWELVE BYTES
       BEFORE THE SVC FLIH ENTRY POINT CONTAIN THE EIGHT-BYTE
       LITERAL 'SVCCTTBL' AND A FOUR-BYTE POINTER TO THE TABLE.
       THE PRESENCE OF THE LITERAL SHOULD BE VERIFIED BEFORE
       AN ATTEMPT IS MADE TO ACCESS THE TABLE.

       ADDITIONALLY THE SVC FLIH WILL ABEND (S0F8) ISSUERS OF
       THE SVC INSTRUCTION WHICH ARE IN CROSS-MEMORY MODE.

   SPECIAL CONDITIONS:
     ACTION:
       AN IPL MUST BE PERFORMED FOR THIS SYSMOD TO BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 13.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVESVC
 */.
++MOD(IEAVESVC) DISTLIB(AOSC5) TXLIB(IEAVESVC).
```

ZP60014

```
++USERMOD(ZP60014)    REWORK(20201207)    /* ADD CLIST EXTENSIONS */.
++VER(Z038) FMID(EBB1102)
  PRE(UY16532,UY17021)
 /*
   PROBLEM DESCRIPTION:
     VARIOUS CLIST FACILITIES PRESENT IN TSO/E ARE NOT AVAILABLE.
       MANY USEFUL CLIST FACILITIES SUCH AS VARIOUS DATE AND TIME
       FORMATS, ADDITIONAL ENVIRONMENTAL SYMBOLS, AND THE ABILITY
       TO CAPTURE TERMINAL OUTPUT ARE NOT SUPPLIED AS PART OF TSO.

       THIS USERMOD CHANGES SEVERAL TSO MODULES.

       THE EXEC COMMAND HAS BEEN CHANGED TO DEFINE AND RESOLVE AN
       ADDITIONAL 21 CONTROL VARIABLES AND BUILT-IN FUNCTIONS AS
       WELL AS THE ORIGINAL 19.

       PUTLINE HAS BEEN ALTERED TO SUPPORT THE CAPTURE OF LINE-MODE
       TERMINAL OUTPUT INTO CLIST VARIABLES.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

     DOC:
       TSO PROVIDES THE FOLLOWING CLIST BUILT-IN FUNCTIONS:

         DATATYPE   - DETERMINE DATA TYPE: 'CHAR' OR 'NUM'
         EVAL       - FORCE ARITHMETIC EVALUATION
         LENGTH     - DETERMINE LENGTH OF EXPRESSION IN BYTES
         STR        - DEFINE CHARACTER STRING
         SUBSTR     - DEFINE SUBSTRING

       THIS SYSMOD ADDS THE FOLLOWING CLIST BUILT-IN FUNCTIONS:

         NRSTR      - SCAN DATA ONCE AND RETAIN DOUBLE AMPERSANDS
           EXAMINE THE FOLLOWING SAMPLE CLIST AND ITS OUTPUT TO
           DETERMINE THE APPROPRIATE USES OF NRSTR:
               PROC 0
               SET A = &&B
               SET B = FRED
               SET C = &NRSTR(&A)
               WRITE C IS &C
               WRITE C IS &NRSTR(&C)
               SET DDSTMT = &NRSTR(//SYSUT1 DD DSN=&&UT1,SPACE=(TRK,3),)
               WRITE &DDSTMT
               WRITE &NRSTR(&DDSTMT)

         SYSDSN     - DETERMINE DATA SET AVAILABILITY
           EG. SET ANS = &SYSDSN(&DSNAME)
             &ANS WILL EVALUATE TO ONE OF THE FOLLOWING:
               'OK'
               'UNAVAILABLE DATASET'
               'DATASET NOT FOUND'
               'MEMBER NOT FOUND'
               'MEMBER SPECIFIED, BUT DATASET IS NOT PARTITIONED'
```

```
            'VOLUME NOT ON SYSTEM'
            'MISSING DATASET NAME'
            'ERROR PROCESSING REQUESTED DATASET'
            'INVALID DATASET NAME, INPUTDSNAME'

      TSO PROVIDES THE FOLLOWING CLIST CONTROL VARIABLES:

        LASTCC     - LATEST TSO COMMAND RETURN CODE
        MAXCC      - HIGHEST TSO COMMAND RETURN CODE

        SYSDLM     - TERMIN DELIMITER
        SYSDVAL    - DEFAULT INPUT VALUE

        SYSNEST    - DETERMINE CLIST NESTING: 'NO' OR 'YES'
        SYSSCAN    - SYMBOLIC SUBSTITUTION SCAN LIMIT
        SYSICMD    - IMPLICIT COMMAND NAME
        SYSPCMD    - MOST RECENT TSO PRIMARY COMMAND
        SYSSCMD    - MOST RECENT TSO SUBCOMMAND

        SYSUID     - TSO USERID
        SYSPREF    - CURRENT DATA SET NAME PREFIX
        SYSPROC    - NAME OF THE TSO LOGON PROCEDURE

        SYSDATE    - CURRENT DATE:     'MM/DD/YY'
        SYSTIME    - CURRENT TIME:     'HH:MM:SS'

      THIS SYSMOD ADDS THE FOLLOWING CLIST CONTROL VARIABLES:

        SYSSTIME   - SHORTENED TIME:   'HH:MM'
        SYS4DATE   - CURRENT DATE:     'MM/DD/YYYY'
        SYSSDATE   - SORTABLE DATE:    'YY/MM/DD'
        SYS4SDATE  - SORTABLE DATE:    'YYYY/MM/DD'
        SYSJDATE   - JULIAN DATE:      'YY.DDD'
        SYS4JDATE  - JULIAN DATE:      'YYYY.DDD'
        SYS4IDATE  - ISO-FORMAT DATE:  'YYYY-MM-DD'

        SYSENV     - CLIST ENVIRONMENT: 'FORE' OR 'BACK'
        SYSISPF    - ISPF ENVIRONMENT: 'ACTIVE' OR 'NOT ACTIVE'
        SYSSMFID   - SYSTEM SMF IDENTIFIER
        SYSOPSYS   - OPERATING SYSTEM NAME: 'OS/VS2 3.8 EBB1102'
        SYSJES     - NAME OF SUBSYSTEM PROVIDING JOB ID
        SYSTERMID  - NAME OF TSO TERMINAL WHERE CLIST STARTED

        SYSLTERM   - CURRENT LINE COUNT OF TSO TERMINAL
        SYSWTERM   - CURRENT LINE WIDTH OF TSO TERMINAL

        SYSCPU     - CURRENT TCB TIME ACCUMULATED BY TSO SESSION
        SYSSRV     - CURRENT SERVICE ACCUMULATED BY TSO SESSION

        SYSOUTLINE - NUMBER OF DISPLAY LINES HELD IN VARIABLES
        SYSOUTTRAP - MAXIMUM NUMBER OF DISPLAY LINES TO CAPTURE

          CAPTURED LINES ARE HELD IN VARIABLES CALLED
          SYSOUTLINE1, SYSOUTLINE2, SYSOUTLINE3, ETC.

    COMMENTS:
      PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 14.

      REWORK HISTORY:
        2005-09-18: SKIP OUTTRAP CHECK FOR MESSAGES FROM EXEC (S0C4).
        2005-11-11: SKIP OUTTRAP CHECK FOR MESSAGES FROM COMMAND
```

```
                SCAN/PARSE AND PUTLINE/GETLINE/PUTGET SERVICES.
       2006-07-18: REMOVE MSGID TESTING OF PREVIOUS REWORKS, AND
                   SKIP OUTTRAP CHECK IF CLIST ACTIVE FLAG NOT SET.
       2009-06-13: CORRECT RESUME SCAN DATA ADDRESS AFTER SYSDSN.
       2009-08-23: ADD NRSTR "NO RESCAN STRING".
       2020-12-07: ADD SYSISPF.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJCT431
       IKJCT433
       IKJEFT56
 */.
++MOD(IKJCT431) DISTLIB(AOST4) TXLIB(IKJCT431).
++MOD(IKJCT433) DISTLIB(AOST4) TXLIB(IKJCT433).
++MOD(IKJEFT56) DISTLIB(AOST4) TXLIB(IKJEFT56).
```

ZP60015

```
++USERMOD(ZP60015)          /* EXTEND JES2 TSO STATUS SEARCH */  .
++VER(Z038) FMID(EJE1103)
  PRE(UZ31176,UZ33158,UZ35334,UZ37263,UZ52543,UZ54837,UZ57911,
      UZ63374,UZ65742,UZ68537,UZ71437,UZ76165)
 /*
   PROBLEM DESCRIPTION:
     TSO STATUS ONLY LOOKS FOR JOB NAMES OF USERID PLUS ONE CHARACTER.
       WHEN THE TSO STATUS COMMAND IS ISSUED WITHOUT ANY OPERAND
       THE SYSTEM LOOKS FOR ALL JOBS WITH NAMES BEGINNING WITH THE
       USERID PLUS ONE CHARACTER.  IF THE USERID IS SHORTER THAN
       SEVEN CHARACTERS THEN OTHER JOBS WITH NAMES BEGINNING WITH
       THE USERID BUT HAVING MORE THAN ONE EXTRA CHARACTER ARE NOT
       REPORTED BY THE STATUS COMMAND.

       THIS USERMOD ALTERS JES2 SO THAT ANY JOB WITH A NAME WHICH
       STARTS WITH THE REQUESTING USERID IS REPORTED.

   SPECIAL CONDITIONS:
     ACTION:
       JES2 MUST BE RESTARTED FOR THIS ZAP TO BECOME ACTIVE.
       A HOT START IS SUFFICIENT.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 15.

     USERMODS ZP60015 AND ZP60016 ARE INTENDED TO BE OPERATIONAL
     CONCURRENTLY.  NOTE THE FOLLOWING BEHAVIOUR TABLE:

       WHICH USERMODS ACTIVE      I  STATUS DEFAULT SEARCH
       ========================================================
       NEITHER 15 NOR 16 APPLIED  I  FIND USERID+1 ONLY
       --------------------------------------------------------
       15 APPLIED BUT NOT 16      I  FIND USERID+0,1,2,3 BUT
                                  I  NAME REPORTED AS USERID+1
       --------------------------------------------------------
       16 APPLIED BUT NOT 15      I  FIND USERID+1 ONLY BUT
                                  I  MESSAGE HAS NULLS AFTER NAME
       --------------------------------------------------------
       BOTH 15 AND 16 APPLIED     I  FIND USERID+0,1,2,3
       --------------------------------------------------------

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       HASPXEQ
 */.
++ SRCUPD   (HASPXEQ)  DISTLIB(HASPSRC ).
```

ZP60016

```
++USERMOD(ZP60016)     /* REPORT JES2 STATUS SEARCH RESULTS */  .
++VER(Z038) FMID(EBB1102) PRE(UZ48744)
 /*
   PROBLEM DESCRIPTION:
     TSO STATUS ONLY LOOKS FOR JOB NAMES OF USERID PLUS ONE CHARACTER.
       WHEN THE TSO STATUS COMMAND IS ISSUED WITHOUT ANY OPERAND
       THE SYSTEM LOOKS FOR ALL JOBS WITH NAMES BEGINNING WITH THE
       USERID PLUS ONE CHARACTER.  IF THE USERID IS SHORTER THAN
       SEVEN CHARACTERS THEN OTHER JOBS WITH NAMES BEGINNING WITH
       THE USERID BUT HAVING MORE THAN ONE EXTRA CHARACTER ARE NOT
       REPORTED BY THE STATUS COMMAND.

       THIS USERMOD ALTERS THE STATUS COMMAND TO REPORT UP TO
       THREE EXTRA CHARACTERS AFTER THE USERID IN THE JOB NAME.
       THESE JOBS WILL HAVE BEEN RETURNED BY JES2 PROCESSING AFTER
       THE ACTIVATION OF ZP60015.  WITHOUT THIS SYSMOD SUCH JOBS
       WILL BE REPORTED WITHOUT THE UP TO TWO EXTRA CHARACTERS
       IN THE JOB NAME.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 16.

     USERMODS ZP60015 AND ZP60016 ARE INTENDED TO BE OPERATIONAL
     CONCURRENTLY.  NOTE THE FOLLOWING BEHAVIOUR TABLE:

       WHICH USERMODS ACTIVE      I  STATUS DEFAULT SEARCH
       ========================================================
       NEITHER 15 NOR 16 APPLIED  I  FIND USERID+1 ONLY
       --------------------------------------------------------
       15 APPLIED BUT NOT 16      I  FIND USERID+0,1,2,3 BUT
                                  I  NAME REPORTED AS USERID+1
       --------------------------------------------------------
       16 APPLIED BUT NOT 15      I  FIND USERID+1 ONLY BUT
                                  I  MESSAGE HAS NULLS AFTER NAME
       --------------------------------------------------------
       BOTH 15 AND 16 APPLIED     I  FIND USERID+0,1,2,3
       --------------------------------------------------------

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJEFF52
 */.
++ZAP(IKJEFF52) DISTLIB(AOST4).
```

ZP60017

```
++USERMOD(ZP60017)       /* MASTER TRACE TABLE SUBPOOL */  .
++VER(Z038) FMID(FBB1221)
 /*
   PROBLEM DESCRIPTION:
     IT IS DIFFICULT TO ACCESS THE MASTER TRACE TABLE CONTENTS.
       THE MASTER TRACE TABLE IS A WRAP-AROUND BUFFER CONTAINING
       THE MOST RECENT WTO MESSAGES PROCESSED BY COMMTASK, EVEN
       INCLUDING MESSAGES WHICH WERE NOT LOGGED OR DISPLAYED
       ANYWHERE ELSE.  BEING ABLE TO BROWSE THE MASTER TRACE TABLE
       CONTENTS WITHOUT TAKING A DUMP INCLUDING ASID 1 AND WITHOUT
       THE NEED FOR ASYNCHRONOUS CROSS-MEMORY COMMUNICATION IS A
       USEFUL DIAGNOSIS TOOL AND OPERATIONAL AID.

       THIS USERMOD UPDATES THE NIP INITIALIZATION ROUTINE WHICH
       SETS THE MASTER TRACE TABLE SUBPOOL VALUE INTO THE MASTER
       SCHEDULER RESIDENT DATA AREA.  THE ORIGINAL SUBPOOL OF
       229 IS CHANGED TO 231 WHICH IS A CSA SUBPOOL WITH SIMILAR
       ATTRIBUTES.

   SPECIAL CONDITIONS:
     ACTION:
       AN IPL MUST BE PERFORMED FOR THIS SYSMOD TO BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 17.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVNP13
 */.
++ZAP(IEAVNP13) DISTLIB(AOSC5).
```

ZP60018

```
++USERMOD(ZP60018)           /* REPORT SOME PLPA MODULE NAMES */  .
++VER(Z038) FMID(EBB1102)
 /*
   PROBLEM DESCRIPTION:
     SYSTEM TRACE DOES NOT CAPTURE THE MODULE NAME OF THE EVENT.
       PROGRAM INTERRUPTS, INCLUDING THOSE CAUSED BY MONITOR CALL
       (MC) INSTRUCTIONS HAVE THE PSW CONTENTS REPORTED BUT FURTHER
       DATA ANALYSIS IS NEEDED TO OBTAIN THE MODULE NAME WHERE THE
       EVENT TOOK PLACE.

       THIS USERMOD OVERLAYS THE R0 CONTENTS IN THE SYSTEM TRACE
       DATA FORMATTED IN A DUMP IN CASES WHERE
         (1) THE TRACE EVENT IS A PROGRAM INTERRUPT, AND
         (2) THE PSW ADDRESS CORRESPONDS TO A PLPA MODULE.

       THE 'R0' LABEL IS OVERLAID WITH 'EP' WHEN THE ADDRESS
       CORRESPONDS TO THE DISPLAYED ENTRY POINT, AND 'R0' IS
       OVERLAID WITH 'NM' WHEN THE ADDRESS HAS ONLY BEEN RESOLVED
       TO RESIDE IN THE EXTENT OF THE NAMED MODULE.

       SVC INTERRUPT TRACE ENTRIES ARE NOW FORMATTED TO SHOW THE
       DECIMAL SVC NUMBER.

       PER PROGRAM CHECKS ARE FLAGGED WITH THE LITERAL 'PER'.  MC
       INSTRUCTION PROGRAM CHECKS ARE FLAGGED WITH THE LITERAL 'MC'.
       OTHER PROGRAM CHECKS (EXCEPT PAGE FAULTS) ARE FLAGGED WITH
       THE LITERAL '**'.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 18.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVAD0C
 */.
++MOD(IEAVAD0C) DISTLIB(AOSC5) TXLIB(IEAVAD0C).
```

ZP60019

```
++USERMOD(ZP60019)       /* RECORD CPU TIME WHEN TIME=1440 */  .
++VER(Z038) FMID(FBB1221) PRE(UZ67391)
 /*
   PROBLEM DESCRIPTION:
     NO RECORD IS KEPT OF THE CPU TIME USED WHEN TIME=1440 IS USED.
       SPECIFYING TIME=1440 ON THE JOB OR EXEC JCL STATEMENT IS
       A METHOD OF INDICATING TO THE SYSTEM THAT THERE IS NO LIMIT
       TO BE APPLIED BY THE SYSTEM TO THE STEP'S ACCUMULATION OF
       CPU TIME OR WAIT TIME.  THIS FACILITY WAS CONCEPTUALLY
       EXTENDED TO MEAN THAT SUCH JOBS WERE NOT TO BE SUBJECT TO
       CHARGEBACK, AND SO CPU TIME USED BY SUCH JOBS WAS "FREE".
       AS A RESULT, THE CPU TIME USED BY JOB STEPS WHEN TIME=1440
       IN EFFECT IS NOT RECORDED, AND ZERO TIME IS REPORTED IN THE
       STEP (IEF374I) AND JOB (IEF376I) END MESSAGES, AND IN SMF
       (RECORD TYPES 4, 5, 34 AND 35) THUS EFFECTIVELY FAILING TO
       CAPTURE SIGNIFICANT JOB AND SYSTEM PERFORMANCE DATA.

       THIS USERMOD UPDATES THE INITIATOR ATTACH ROUTINE TO MOVE
       THE TEST TO SEE IF JOB/STEP TIMING LIMITS ARE IN EFFECT
       UNTIL AFTER THE TCB AND SRB CPU TIMES USED BY THE STEP HAVE
       BEEN SAVED.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 19.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEFSD263
 */.
++ZAP(IEFSD263) DISTLIB(AOSB3).
```

ZP60020

```
++USERMOD(ZP60020)       /* REMOVE SYSLIN BLKSIZE 3200 LIMIT */  .
++VER(Z038) FMID(EPM1102) PRE(UZ48373,UZ69717)
 /*
   PROBLEM DESCRIPTION:
     THE LINKAGE EDITOR HAS A BLOCK SIZE LIMIT OF 3200 FOR SYSLIN.
       WHEN READING CONTROL STATEMENTS AND OBJECT DECKS FROM
       THE SYSLIN FILE THE LINKAGE EDITOR CANNOT PROCESS 80-BYTE
       RECORDS WITH A BLOCKING FACTOR OF MORE THAN FORTY.

       THIS USERMOD INCREASES THE LIMIT TO 32720 OR A BLOCKING
       FACTOR OF 409 WHICH IS THE MAXIMUM SUPPORTED BY MVS
       ACCESS METHODS.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 20.

       THIS USERMOD IS A REFIT OF THE USERMOD PUBLISHED IN SAM
       GOLOB'S MVS TOOLS AND TRICKS OF THE TRADE COLUMN IN NASPA'S
       TECHNICAL SUPPORT MAGAZINE IN SEPTEMBER 1996 AND SEPTEMBER
       1998.  THIS REFIT, INCLUDING THE DEVELOPMENT OF THE CHANGE
       OF THE DEFAULT SIZE SETTING WAS PERFORMED AND FIRST PUBLISHED
       BY ENRICO SORICHETTI.


     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       HEWLFINT
       HEWLFAPT
 */.
++ZAP(HEWLFINT) DISTLIB(AOS04).
++ZAP(HEWLFAPT) DISTLIB(AOS04).
```

ZP60021

```
++USERMOD(ZP60021)       /* SHOW KEYBOARD CHARACTERS IN DUMP */  .
++VER(Z038) FMID(EBB1102) PRE(UZ61115)
 /*
   PROBLEM DESCRIPTION:
     DUMPS SHOW PERIODS OBSCURING LOWER CASE AND OTHER CHARACTERS.
       WHEN A DUMP SUCH AS A SYSUDUMP FORMATS STORAGE CONTENTS
       INTO HEXADECIMAL AND CHARACTER DATA, THE CHARACTER DATA
       WRITTEN IS ALL PERIODS EXCEPT FOR SPACES, UPPER CASE
       ALPHABETIC AND NUMERIC EBCDIC CHARACTERS.

       THIS USERMOD REPLACES THE PERIODS TO BE USED FOR THE OTHER
       US KEYBOARD CHARACTERS IN THE RELEVANT TRANSLATE TABLE
       WITH THE CODE POINTS THEMSELVES SO THAT THESE CHARACTERS
       CAN APPEAR IN STORAGE DUMP.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 21.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVAD51
 */.
++ZAP(IEAVAD51) DISTLIB(AOSC5).
```

ZP60022

```
++USERMOD(ZP60022)       /* SUPPORT FORMAT 1 STAX PLIST */  .
++VER(Z038) FMID(EBB1102) PRE(UZ51847)
 /*
   PROBLEM DESCRIPTION:
     STAX MACROS FROM LATER MVS VERSIONS CAUSE ABENDS UNDER MVS/370.
       WHEN PROGRAMS WITH STAX MACROS ASSEMBLED WITH MACLIB FROM
       MVS/XA OR LATER WITHOUT SPLEVEL SET TO 1 RUN ON MVS/370,
       THE SVC PARAMETER LIST HAS A DIFFERENT FORMAT WHICH IS NOT
       CORRECTLY PROCESSED, AND WHICH CAN CAUSE ABENDS SUCH AS
       S0C4.

       THIS USERMOD CHANGES THE STAX SVC SERVICE ROUTINE TO CHECK
       FOR A FORMAT 1 STAX PARAMETER LIST DURING PARAMETER VALIDITY
       TESTING AND WHEN THE PARAMETER LIST IS COPIED FOR PROCESSING.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 22.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVAX00
 */.
++ZAP(IEAVAX00) DISTLIB(AOSC5).
```

ZP60023

```
++USERMOD(ZP60023)             /* SUPPORT DAS AT THE TASK LEVEL */  .
++VER(Z038) FMID(FBB1221) PRE(UZ61148,UZ36571,UZ30139,UZ25668)
 /*
   PROBLEM DESCRIPTION:
     NO OPERATING SYSTEM SUPPORT FOR THE DUAL ADDRESS SPACE FACILITY.
       IN ORDER TO EXPLOIT THE DUAL ADDRESS SPACE FACILITY (DAS)
       APPLICATIONS MUST USE DISABLEMENT FOR SERIALIZATION AND
       MANAGE THE CONTENTS OF THE RELEVANT CONTROL REGISTERS.
       THIS IS NOT CONDUCIVE TO GOOD SYSTEM STABILITY, RELIABLITY
       AND PERFORMANCE.

       THIS USERMOD UPDATES THE PROGRAM CHECK FIRST LEVEL INTERRUPT
       HANDLER (PCFLIH) SUCH THAT IF A SPECIAL-OPERATION EXCEPTION
       IS CAUSED BY AN SSAR INSTRUCTION WHEN RUNNING UNDER A TASK,
       THE SPECIFIED SECONDARY ADDRESS SPACE NUMBER (SASN) IS
       VALIDATED, AND IF VALID IS SET UP TO BE THE TASK'S SECONDARY
       ADDRESS SPACE.

       THE PCFLIH STORES THE SECONDARY ASID IN THE PREVIOUSLY
       RESERVED FIELD TCBRV326.

       ALL TASKS CAN USE SSAR TO SET SASN=PASN.  ALL TASKS CAN
       ISSUE SSAR WITH THE SPECIAL SASN VALUE OF ZERO WHICH CAUSES
       ALL DAS SETTINGS TO BE CLEARED FROM CONTROL REGISTERS.
       (SPECIFYING A SASN OF ZERO IS DIFFERENT FROM USING GENERAL
       PURPOSE REGISTER 0 IN THE SSAR INSTRUCTION.)

       SETTING THE SECONDARY ADDRESS SPACE TO ONE OTHER THAN THE
       CURRENT PRIMARY ADDRESS SPACE REQUIRES THAT THE SSAR
       INSTRUCTION IS EXECUTED IN SUPERVISOR STATE.

       THIS USERMOD ALSO CHANGES THE DISPATCHER TO RESTORE THE
       SECONDARY ASID OF A TASK EACH TIME IT IS DISPATCHED.  THE
       DISPATCHER WILL RESET THE DAS ENVIRONMENT, AND REVALIDATE
       THE ASID STORED IN TCBRV326, AND IF FOUND TO BE VALID WILL
       SET THAT ASID AS THE TASK'S SECONDARY ASID BEFORE THE TASK
       RESUMES PROCESSING.

       THE ASID IS CONSIDERED VALID IF IT SPECIFIES AN ASSIGNED
       SWAPPED-IN ADDRESS SPACE.  WHEN A SECONDARY ASID IS SET
       UP FOR A TASK BY THE PCFLIH, OR RESTORED BY THE DISPATCHER,
       THE SECONDARY ASN IS SET INTO CONTROL REGISTER 3, THE
       PRIMARY ASN IS SET INTO CONTROL REGISTER 4, THE SECONDARY
       SEGMENT TABLE ORIGIN AND LENGTH ARE SET INTO CONTROL
       REGISTER 7, AND THE EXTRACTION-AUTHORITY CONTROL AND THE
       SECONDARY-SPACE CONTROL BITS ARE SET ON IN CONTROL REGISTER 0.

   SPECIAL CONDITIONS:
     ACTION:
       AN IPL MUST BE PERFORMED FOR THIS SYSMOD TO BECOME ACTIVE.

     DOC:
       SYSTEM ABEND 0D7 INDICATES THAT THE PC FLIH FOUND AN ADDRESS
       SPACE TO NOT BE BOTH ASSIGNED AND SWAPPED IN.  THE VALUE OF
       GENERAL PURPOSE REGISTER 15 IS 1 IF THE PRIMARY ADDRESS
       SPACE WAS FOUND TO BE INVALID AFTER A PAGE FAULT IN THE
```

```
       SECONDARY ADDRESS SPACE WAS RESOLVED, AND 2 IF A PAGE-
       TRANSLATION EXCEPTION OCCURRED FOR AN INVALID SECONDARY
       ADDRESS SPACE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 23.

     REWORK HISTORY:
       2008-11-01: INITIAL RELEASE.
       2012-01-07: SAVE FLOATING POINT REGISTER CONTENTS CORRECTLY.
       2015-06-09: FIX CONDITION CODE SETTING AND BRCL BRANCH ADDRESS.
                   ALSO ADD TRTT, TRTO, TROT, TROO, MSFI AND TP.
       2016-08-06: REMOVE NON-370 INSTRUCTION OPCODE SUPPORT RESIDENT
                   IN THE PCFLIH OPERATION EXCEPTION HANDLER, AND SO
                   PSARV022 IS NO LONGER USED AS A RECURSION FLAG.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVEDS0
       IEAVEPC
     MACROS:
       IKJTCB
 */.
++MACUPD(IKJTCB) DISTLIB(AMODGEN).
++MOD(IEAVEPC) DISTLIB(AOSC5) TXLIB(IEAVEPC).
++MOD(IEAVEDS0) DISTLIB(AOSC5) TXLIB(IEAVEDS0).
```

ZP60024

```
++USERMOD(ZP60024)            /* INCREASE ASSEMBER XF ESD LIMIT */  .
++VER(Z038) FMID(EAS1102) PRE(UZ81148)
 /*
   PROBLEM DESCRIPTION:
     THE ESD LIMIT OF 399 PREVENTED THE ASSEMBLEY OF A PROGRAM.
       WHEN ASSEMBLING A PARTICULAR PROGRAM (WHICH MAY HAVE BEEN
       A C COMPILER OR A COMPONENT THEREOF) THE MAXIMUM EXTERNAL
       SYMBOL COUNT OF 399 WAS FOUND TO BE INADEQUATE.

       THIS USERMOD SHIPS NEW VERSIONS OF THE PHASE 4 MODULES
       WHICH HAVE BEEN ASSEMBLED WITH ALTERED ICOMMON AND XDICT
       MACROS TO ALLOW AN INCREASED MAXIMUM EXTERNAL SYMBOL COUNT
       OF 511.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 24.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IFNX4D
       IFNX4E
       IFNX4M
       IFNX4N
       IFNX4S
       IFNX4T
       IFNX4V
 */.
++MOD(IFNX4D) DISTLIB(AOS03).
++MOD(IFNX4E) DISTLIB(AOS03).
++MOD(IFNX4M) DISTLIB(AOS03).
++MOD(IFNX4N) DISTLIB(AOS03).
++MOD(IFNX4S) DISTLIB(AOS03).
++MOD(IFNX4T) DISTLIB(AOS03).
++MOD(IFNX4V) DISTLIB(AOS03).
```

ZP60025

```
++USERMOD(ZP60025)          /* ADD BAS AND BASR TO ASSEMBLER XF */  .
++VER(Z038) FMID(EAS1102) PRE(UZ52227)
 /*
   PROBLEM DESCRIPTION:
     THE BAS AND BASR INSTRUCTIONS ARE UNKNOWN TO ASSEMBLER XF.
       THE BAS AND BASR INSTRUCTIONS WERE ADDED TO THE SYSTEM/360
       INSTRUCTION SET FOR THE MODEL 67, BUT WERE REMOVED FROM
       THE ORIGINAL SYSTEM/370 INSTRUCTION SET, ONLY TO BE ADDED
       AGAIN WITH THE DUAL ADDRESS SPACE (DAS) FACILITY.

       THIS USERMOD SHIPS NEW ASSEMBLER XF MODULES WHICH WILL
       RECOGNIZE THE BAS AND BASR MNEMONICS, AND WILL BE ABLE
       GENERATE THE APPROPRIATE OBJECT CODE.  THE RELEVANT
       PHASE 1 AND PHASE 3 MODULES HAVE BEEN ASSEMBLED WITH
       AN UPDATED GENOP MACRO, AND THE RELEVANT PHASE 5
       MODULE HAS BEEN UPDATED.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 25.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IFNX1K
       IFNX3K
       IFNX5M
 */.
++MOD(IFNX1K) DISTLIB(AOS03).
++MOD(IFNX3K) DISTLIB(AOS03).
++MOD(IFNX5M) DISTLIB(AOS03).
```

ZP60026

```
++USERMOD(ZP60026)       /* ADD REUSE OPERAND TO ALLOCATE */  .
++VER(Z038) FMID(EBB1102) PRE(UZ80347,UZ69512,UZ58132,UZ65229,UZ52701)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO WAY TO INFORM ALLOCATE TO REUSE A DDNAME IN USE.
       AN ALLOCATE COMMAND IS SOMETIMES ISSUED WHICH SPECIFIES A
       FILE OR DD NAME OF AN EXISTING ALLOCATION.  THERE IS NO
       METHOD OF SPECIFYING IN THE INITIAL REQUEST THAT ALLOCATE
       SHOULD FREE THE EXISTING ALLOCATION BEFORE PROCEDING WITH
       THE REQUESTED ALLOCATION.  SUCH A SCENARIO TRIGGERS A
       PROMPT FOR 'FREE' (TO PROCEED) OR 'END' (TO TERMINATE).
       CLISTS WHICH ALLOCATE SPECIFIC DDNAMES SHOULD ISSUE FREE
       COMMANDS FOR THOSE DDNAMES BEFORE THE ALLOCATE COMMANDS,
       WHICH CAN THEN TRIGGER UNWANTED MESSAGES WHICH ARE OFTEN
       SUPPRESSED WITH CLIST 'CONTROL NOMSG' STATEMENTS.

       THIS USERMOD ADDS A 'REUSE' KEYWORD OPERAND TO THE TSO
       ALLOCATE COMMAND.  THE USE OF THIS OPERAND ON AN ALLOCATE
       COMMAND CAUSES ALLOCATE TO BYPASS THE PROMPT FOR 'FREE' OR
       'END' AND TO PROCEED AS IF 'FREE' HAS BEEN ENTERED.

       THIS OPERAND IS COMPATIBLE WITH TSO/E.  CLISTS FROM TSO/E
       ENVIRONMENTS WILL NOT NEED EXTRA CONTROL/FREE/CONTROL
       STATEMENTS ADDED AND ALLOCATE 'REUSE' OPERANDS REMOVED IN
       ORDER TO RUN IN AN ENVIRONMENT WITH THIS USERMOD APPLIED.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 26.

     REWORK HISTORY:
       2010-02-27: UPDATE ALLOCATE TSO HELP MEMBER.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJEFD30
       IKJEFD31
       IKJEFD32
       IKJEFD33
       IKJEFD34
       IKJEFD35
       IKJEFD36
       IKJEFD37
     MACROS:
       ALLOCATE
 */.
++MACUPD(ALLOCATE) DISTLIB(AHELP).
++MOD(IKJEFD30) DISTLIB(AOST4) TXLIB(IKJEFD30).
++MOD(IKJEFD31) DISTLIB(AOST4) TXLIB(IKJEFD31).
++MOD(IKJEFD32) DISTLIB(AOST4) TXLIB(IKJEFD32).
++MOD(IKJEFD33) DISTLIB(AOST4) TXLIB(IKJEFD33).
++MOD(IKJEFD34) DISTLIB(AOST4) TXLIB(IKJEFD34).
++MOD(IKJEFD35) DISTLIB(AOST4) TXLIB(IKJEFD35).
++MOD(IKJEFD36) DISTLIB(AOST4) TXLIB(IKJEFD36).
```

```
++MOD(IKJEFD37) DISTLIB(AOST4) TXLIB(IKJEFD37).
```

ZP60027

```
++USERMOD(ZP60027)    /* ADD TIME OF DAY TO LINK EDIT IDR */  .
++VER(Z038) FMID(EPM1102) PRE(UZ52497,UZ75398)
 /*
   PROBLEM DESCRIPTION:
     THE IDR CREATED BY THE LINKAGE EDITOR DOES NOT CONTAIN A TIME.
       THE ORIGINAL IDENTIFICATION RECORD (IDR) CREATED BY THE
       LINKAGE EDITOR CONTAINS THE DATE OF THE LINK EDIT BUT NOT
       THE TIME.  WITH APAR OW29593 IBM EXTENDED THE IDR CREATED
       BY THE PROGRAM BINDER TO INCLUDE THE TIME.

       THIS USERMOD UPDATES THE LINKAGE EDITOR INTERMEDIATE
       OUTPUT PROCESSOR HEWLFOUT TO EXTEND THE IDR BY FOUR BYTES
       TO APPEND THE TIME-OF-DAY IN PACKED DECIMAL FORMAT.

       FURTHER, THE IDR LISTING PROCESSOR HMBLKIDR OF THE AMBLIST
       SERVICE AID IS ALSO UPDATED TO PRINT THIS TIME IN ITS
       LISTIDE REPORT.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 27.
     THIS USERMOD WAS CONTRIBUTED BY TOM ARMSTRONG.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       HEWLFOUT
       AMBLKIDR
 */.
++ZAP(HEWLFOUT) DISTLIB(AOS04).
++ZAP(HMBLKIDR) DISTLIB(AOS12).
```

ZP60028

```
++USERMOD(ZP60028)            /* IMPROVE MODULE HEADER FORMAT */  .
++VER(Z038) FMID(EBB1102) PRE(UZ60132)
 /*
   PROBLEM DESCRIPTION:
     DUMP FORMAT OF MODULE HEADER HIDES SOME USEFUL CHARACTERS.
       UZ60132 SUPPRESSED THE OUTPUT OF UNPRINTABLE CHARACTERS
       IN THE FORMATTING OF MODULE HEADERS BY INPLEMENTING
       TRANSLATION OF THE ORIGINAL DATA.  THE SUPPLIED TRANSLATE
       TABLE CONVERTS ALL CHARACTERS TO PERIODS EXCEPT EBCDIC
       DECIMAL DIGITS AND UPPER CASE LETTERS.

       THIS USERMODS ALLOWS THE OUTPUT OF ALL STANDARD KEYBOARD
       CHARACTERS WHILE TRANSLATING THE REST TO THE TILDE OR
       "SQUIGGLE" CHARACTER.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 28.
     THIS USERMOD WAS CONTRIBUTED BY TOM ARMSTRONG.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVAD07
 */.
++MOD(IEAVAD07) DISTLIB(AOSC5) TXLIB(IEAVAD07).
```

ZP60029

```
++USERMOD(ZP60029)           /* XLATE TRANSLATE TABLES */  .
++VER(Z038) FMID(EDM1102) PRE(UZ54016)
 /*
   PROBLEM DESCRIPTION:
     MVS TRANSLATION BETWEEN EBCDIC AND ASCII IS INADEQUATE.
       CHARACTER SET TRANSLATION BETWEEN EBCDIC AND ASCII CAN
       BE REQUESTED BY THE XLATE MACRO (SVC 103) WHICH IS USED
       BY THE SYSTEM WHEN PROCESSING ASCII TAPE LABLES AND WHEN
       OPTCD=Q IS SET IN THE DCB FOR ASCII TAPE PROCESSING.

       THE EBCDIC-TO-ASCII AND ASCII-TO-EBCDIC TRANSLATE TABLES
       ARE HARD-CODED IN SVC 103, BUT THEY TREAT ASCII AS A
       7-BIT CHARACTER SET WITH ONLY 128 CODE POINTS.  THIS IS
       INADEQUATE FOR MOST CURRENT PROCESSING NEEDS WHERE ANSI
       IS USUALLY USED.  ANSI IS BASED ON ASCII BUT HAS 256
       SINGLE-BYTE CODE POINTS (AS DOES EBCDIC).

       WHEN CONSTRUCTING TRANSLATE TABLES BETWEEN THE TWO
       CHARACTER SETS, ONE DESIGN GOAL NORMALLY ADOPTED
       IS THAT THE APPLICATION OF BOTH TRANSLATE TABLES
       (IN EITHER ORDER) WILL LEAVE ALL POSSIBLE 256 CODE
       POINTS UNCHANGED.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 29.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IGC0010C
         THE ORIGINAL SOURCE CODE OF THE TRANSLATE TABLES IS
         INCLUDED BELOW.  NOTE THAT X'1A' IS THE ASCII SUBSTITUTE
         CHARACTER, AND X'3F' IS THE EBCDIC SUBSTITUTE CHARACTER.

            *
            *        TABLE FOR TRANSLATING FROM EBCDIC TO ASCII
            *
            TABA     DC    X'000102031A091A7F'      ASCII TABLE
            ENT080FA DC    X'1A1A1A0B0C0D0E0F'        *
            ENT1017A DC    X'101112131A1A081A'        *
            ENT181FA DC    X'18191A1A1C1D1E1F'        *
            ENT2027A DC    X'1A1A1A1A1A0A171B'        *
            ENT282FA DC    X'1A1A1A1A1A050607'        *
            ENT3037A DC    X'1A1A161A1A1A1A04'        *
            ENT383FA DC    X'1A1A1A1A14151A1A'        *
            ENT4047A DC    X'201A1A1A1A1A1A1A'        *
            ENT484FA DC    X'1A1A5B2E3C282B21'        *
            ENT5057A DC    X'261A1A1A1A1A1A1A'        *
            ENT585FA DC    X'1A1A5D242A293B5E'        *
            ENT6067A DC    X'2D2F1A1A1A1A1A1A'        *
            ENT686FA DC    X'1A1A7C2C255F3E3F'        *
            ENT7077A DC    X'1A1A1A1A1A1A1A1A'        *
```

```
            ENT787FA DC    X'1A603A2340273D22'        *
            ENT8087A DC    X'1A61626364656667'        *
            ENT888FA DC    X'68691A1A1A1A1A1A'        *
            ENT9097A DC    X'1A6A6B6C6D6E6F70'        *
            ENT989FA DC    X'71721A1A1A1A1A1A'        *
            ENTA0A7A DC    X'1A7E737475767778'        *
            ENTA8AFA DC    X'797A1A1A1A1A1A1A'        *
            ENTB0B7A DC    X'1A1A1A1A1A1A1A1A'        *
            ENTB8BFA DC    X'1A1A1A1A1A1A1A1A'        *
            ENTC0C7A DC    X'7B41424344454647'        *
            ENTC8CFA DC    X'48491A1A1A1A1A1A'        *
            ENTD0D7A DC    X'7D4A4B4C4D4E4F50'        *
            ENTD8DFA DC    X'51521A1A1A1A1A1A'        *
            ENTE0E7A DC    X'5C1A535455565758'        *
            ENTE8EFA DC    X'595A1A1A1A1A1A1A'        *
            ENTF0F7A DC    X'3031323334353637'        *
            ENTF8FFA DC    X'38391A1A1A1A1A1A'        *
            *
            *        TABLE FOR TRANSLATING FROM ASCII TO EBCDIC
            *
            TABE     DC    X'00010203372D2E2F'      EBCDIC TABLE
            ENT080FE DC    X'1605250B0C0D0E0F'        *
            ENT1017E DC    X'101112133C3D3226'        *
            ENT181FE DC    X'18193F271C1D1E1F'        *
            ENT2027E DC    X'404F7F7B5B6C507D'        *
            ENT282FE DC    X'4D5D5C4E6B604B61'        *
            ENT3037E DC    X'F0F1F2F3F4F5F6F7'        *
            ENT383FE DC    X'F8F97A5E4C7E6E6F'        *
            ENT4047E DC    X'7CC1C2C3C4C5C6C7'        *
            ENT484FE DC    X'C8C9D1D2D3D4D5D6'        *
            ENT5057E DC    X'D7D8D9E2E3E4E5E6'        *
            ENT585FE DC    X'E7E8E9ADE0BD5F6D'        *
            ENT6067E DC    X'7981828384858687'        *
            ENT686FE DC    X'8889919293949596'        *
            ENT7077E DC    X'979899A2A3A4A5A6'        *
            ENT787FE DC    X'A7A8A9C06AD0A107'        *
            ENT8087E DC    X'3F3F3F3F3F3F3F3F'        *
            ENT888FE DC    X'3F3F3F3F3F3F3F3F'        *
            ENT9097E DC    X'3F3F3F3F3F3F3F3F'        *
            ENT989FE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTA0A7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTA8AFE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTB0B7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTB8BFE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTC0C7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTC8CFE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTD0D7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTD8DFE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTE0E7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTE8EFE DC    X'3F3F3F3F3F3F3F3F'        *
            ENTF0F7E DC    X'3F3F3F3F3F3F3F3F'        *
            ENTF8FFE DC    X'3F3F3F3F3F3F3F3F'        *

         DATA POINTS WHICH ARE EXPECTED TO BE UNCHANGED BY ANY
         LOCAL CUSTOMIZATION ARE USED TO VERIFY THE LOCATION
         OF THE TRANSLATE TABLES IN ORDER TO FACILITATE A
         REAPPLY WITHOUT THE NEED FOR AN ACTUAL RESTORATION
         OF THE ORIGINAL MODULE.
 */.
++ZAP(IGC0010C) DISTLIB(AOSD0).
```

ZP60030

```
++USERMOD(ZP60030)       /* FIX MF/1 CHANNEL MEASUREMENT */  .
++VER(Z038) FMID(EMF1102)
 /*
   PROBLEM DESCRIPTION:
     MF/1 DOES NOT CORRECTLY ACCESS THE CHANNEL AVAILABILITY TABLE.
       THE CHANNEL AVAILABILITY TABLE (CAT) HAS MOVED FROM THE
       PCCA (WHERE THERE WAS ONE FOR EACH ACTIVE CPU) TO COMMON
       STORAGE (SQA).  FURTHER, CAT ENTRIES HAVE BEEN EXTENDED
       FROM EIGHT BYTES IN LENGTH TO SIXTEEN BYTES IN LENGTH.

       THIS USERMOD UPDATES THE MF/1 CHANNEL SAMPLING MODULE
       IRBMFECH AND THE MF/1 CHANNEL INITIALIZATION MODULE
       IRBMFIHA TO CORRECT ACCESS CAT ENTRIES.

       A CONSEQUENCE OF THIS IS THAT TYPE 73 SMF RECORDS WILL
       NOW CONTAIN NON-ZERO CHANNEL DATA.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 30.

     REWORK HISTORY:
       2011-01-30: INITIAL VERSION.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IRBMFECH
       IRBMFIHA
 */.
++MOD(IRBMFECH) DISTLIB(ALPALIB) TXLIB(IRBMFECH).
++MOD(IRBMFIHA) DISTLIB(AOSC5) TXLIB(IRBMFIHA).
```

ZP60031

```
++USERMOD(ZP60031)            /* ALLOW STC SMF TYPE 6 AND 26 */  .
++VER(Z038) FMID(EJE1103)
  PRE(UZ31176,UZ33158,UZ35334,UZ37263,UZ52543,UZ54837,UZ57911,
      UZ60375,UZ63374,UZ65742,UZ68537,UZ71437,UZ76165,TJES801)
 /*
   PROBLEM DESCRIPTION:
     NO SMF TYPE 6 AND TYPE 26 RECORDS ARE WRITTEN FOR STARTED TASKS.
       SMF CANNOT BE USED TO MONITOR ALL PRINTER AND PUNCH ACTIVITY
       BECAUSE NO TYPE 6 SMF RECORDS CAN BE CREATED TO TRACK STARTED
       TASK OUTPUT.  JES2 PHASE ANALYSIS FROM SMF TYPE 26 RECORD DATA
       CANNOT INCLUDE STARTED TASKS BECAUSE NO CORRESPONDING TYPE 26
       RECORDS CAN BE CREATED.

       THIS USERMOD ALTERS JES2 SO THAT SETTINGS FROM JES2 PARAMETERS
       WHICH CAN REQUEST TYPE 6 AND TYPE 26 SMF RECORDS ARE NOT
       OVERLAID BY HARD-CODED LOGIC.  SPECIFICALLY, NOTYPE6 AND
       NOTYPE26 ARE NO LONGER FORCED ON THE &STC JOB CLASS PARAMETER.
       ALSO, THE NOUSO AND NOUJP SETTINGS ARE NO LONGER FORCED,
       THEREBY ALLOWING AN INSTALLATION TO USE THE IEFUSO AND IEFUJP
       SMF EXITS FOR STARTED TASKS.

       NOTE THAT JOB CLASS SETTINGS SUCH AS THESE ARE ASSIGNED AT
       JCL CONVERSION TIME AND NOT DURING LATER PHASES SUCH AS
       OUTPUT, PRINT AND PURGE.


   SPECIAL CONDITIONS:
     ACTION:
       JES2 MUST BE WARM STARTED FOR THIS CHANGE TO BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 31.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       HASPINIT
 */.
++ SRCUPD   (HASPINIT)  DISTLIB(HASPSRC ).
```

ZP60032

```
++USERMOD(ZP60032)         /* ADD TERMID TO THE GTTERM MACRO */  .
++VER(Z038) FMID(ETI1106) PRE(UZ44753)
 /*
   PROBLEM DESCRIPTION:
     THE GTTERM MACRO CANNOT EXPLOIT ALL FUNCTIONS OF THE INTERFACE.
       THE ZP60009 USERMOD ENHANCED TSO/VTAM TO ALLOW THE SVC 94
       GTTERM INTERFACE TO RETURN THE 8-BYTE VTAM LU NAME OF THE
       TSO TERMINAL, BUT THE GTTERM MACRO OWNED BY TIOC DOES NOT
       SUPPORT THE TERMID OPERAND.

       THIS USERMOD ADDS THE TERMID OPERAND TO THE GTTERM MACRO
       IN A WAY WHICH IS COMPATIBLE WITH TSO/E.


   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 32.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       GTTERM
 */.
++MAC(GTTERM) DISTLIB(ATSOMAC) TXLIB(GTTERM).
```

ZP60033

```
++USERMOD(ZP60033)         /* ADD LOC= TO THE GETMAIN MACRO */  .
++VER(Z038) FMID(EBB1102)
 /*
   PROBLEM DESCRIPTION:
     THE GETMAIN MACRO DOES NOT TOLERATE A LOC VALUE SPECIFICATION.
       MANY PROGRAMS SPECIFY VIRTUAL STORAGE LOCATIONS OF 24-BIT
       OR 31-BIT WHEN REQUESTING MORE STORAGE FROM THE SYSTEM.
       FURTHER, SOME PROGRAMS SPECIFY THAT WHEN PAGE-FIXED, THE
       NEW STORAGE MAY BE BACKED IN 24-BIT, 31-BIT OR 64-BIT
       ADDRESSABLE REAL STORAGE.  PROGRAMS WITH SUCH LOC VALUES
       CODED WILL NOT BE ASSEMBLED CORRECTLY ON MVS 3.8.

       THIS USERMOD ADDS SUPPORT FOR THE LOC VALUE TO THE GETMAIN
       MACRO.  THE LOC PARAMETER MAY BE SPECIFIED WITH THE RU AND
       RC FORMS OF GETMAIN.

       THE FIRST VALUE OF LOC MAY BE ONE OF THE FOLLOWING LITERALS:
            'BELOW', '24', 'ANY' OR '31'.

       USE 'BELOW' OR '24' TO REQUEST 24-BIT ADDRESSABLE STORAGE.
       USE 'ANY' OR '31' TO REQUEST 31-BIT ADDRESSABLE STORAGE.

       IF SPECIFIED, THE SECOND VALUE OF LOC MAY BE ONE OF:
            'ANY', '31' OR '64'.

       ANY ONE OF THESE THREE VALUES REQUESTS AN OVERRIDE TO THE
       SYSTEM DEFAULT OF BACKING THE STORAGE BELOW THE 16MB LINE
       IN REAL STORAGE IF THE STORAGE IS EVER PAGE-FIXED.

       THIS VERSION OF GETMAIN WILL GENERATE FLAG SETTINGS COMPATIBLE
       WITH MVS/XA.  A SECOND LOC VALUE OF '64' IS TOLERATED BUT IS
       TREATED AS IF '31' HAD BEEN SPECIFIED.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NO. 33.

     REWORK HISTORY:
       2017-01-26: FIRST SMP VERSION OF THE AUGUST 2016 REVISION
                   OF THE MVS/380 VERSION.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MACROS:
       GETMAIN
 */.
++MAC(GETMAIN) DISTLIB(AMACLIB) TXLIB(GETMAIN).
```

ZP60034

```
++USERMOD(ZP60034)                 /* RESOLVE &SYSUID IN JCL */  .
++VER(Z038) FMID(EBB1102) SUP(ZJW0001)
 /*
   PROBLEM DESCRIPTION:
     THE &SYSUID SYSTEM SYMBOL IS NOT RESOLVED IN SUBMITTED JCL.
       THE &SYSUID SYSTEM SYMBOL CAN BE VERY USEFUL IN REDUCING
       THE CUSTOMIZATION THAT SHIPPED SAMPLE JCL REQUIRES BEFORE
       BEING SUBMITTED, BUT THIS IS NOT SUPPORTED BY MVS 3.8.
     JOBS SUBMITTED BY TSO USERS DO NOT INHERIT THE USER ID.
       USER= AND PASSWORD= MUST MANUALLY BE SUPPLIED BY A TSO USER
       SUBMITTING BATCH JOBS FOR THE JOBS TO RUN WITH THE USER'S
       SECURITY PROFILE, WHICH INCREASES THE RISK THAT THE SECRECY
       OF THE USER'S PASSWORD CAN BECOME COMPROMISED.

       THIS USERMOD SHIPS A VERSION OF THE IKJEFF10 EXIT FOR THE
       TSO SUBMIT COMMAND WHICH APPENDS THE USER AND PASSWORD
       PARAMETERS TO THE JOB JCL STATEMENT IF NOT ALREADY ADDED
       IN AN ENVIRONMENT WHERE A SECURITY PRODUCT IS ACTIVE.
       THIS EXIT HAS BEEN ENHANCED TO RESOLVE THE &SYSUID SYSTEM
       SYMBOL (WITH TRAILING PERIOD IF PRESENT) WHEN FOUND IN THE
       OPERANDS (MEANING NOT IN LABELS OR VERBS) OF THE FOLLOWING
       TYPES OF JCL STATEMENT:

         - JOB
         - DD
         - COMMENT
         - COMMAND

       THE FOLLOWING TYPES OF JCL STATEMENT ARE IGNORED BY THIS EXIT:
         - EXEC
         - JES2 JECL
         - NULL

       NOTE THAT &&SYSUID WILL BE LEFT UNALTERED.

       &SYSUID RESOLUTION DOES NOT REQUIRE AN ACTIVE SECURITY PRODUCT.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 34.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJEFF10
 */.
++MOD(IKJEFF10) DISTLIB(ACMDLIB) TXLIB(IKJEFF10).
```

ZP60035

```
++USERMOD(ZP60035)          /* FIX LOGREC DEVICE TYPE SUPPORT */  .
++VER(Z038) FMID(EBB1102) PRE(UZ42622)
 /*
   PROBLEM DESCRIPTION:
     MVS DOES NOT SUPPORT SYS1.LOGREC ON ALL DASD DEVICE TYPES.
       THE DASD DEVICE TYPES THAT THE LOGREC WRITER (SVC 76)
       SUPPORTS IS HARD-CODED WITHIN THE MODULE.  THIS MEANS THAT
       IN ORDER MAINTAIN A FUNCTIONING LOGREC FACILTY THE SYSTEM
       RESIDENCE VOLUME IS LIMITED TO THE ORIGINAL SET OF DASD
       DEVICE TYPES AND CANNOT BE MIGRATED TO EXPLOIT LARGER VOLUME
       GEOMETRIES AS SUPPORT FOR NEWER DEVICES IS ADDED TO MVS.

       THIS USERMOD SHIPS A VERSION OF IFBSVC76 WHICH USES THE MVS
       TRKCALC SERVICE TO OBTAIN DASD GEOMETRY DEPENDENT DETAILS
       INSTEAD OF PRE-CODED VALUES SO THAT NOW IT SUPPORTS ANY
       DASD DEVICE TYPE SUPPORTED BY THE SYSTEM.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 35.

     THIS IS SYSMOD NUMBER 1 OF 3 IN A PACKAGE TO GENERALIZE LOGREC
     DASD SUPPORT WRITTEN BY TOM ARMSTRONG.  ALL 3 SYSMODS SHOULD BE
     ACTIVATED IN THE SAME IPL.  THE SYSMOD DETAILS ARE:
      +---------+----------+---------+------+-----------------------+
      | USERMOD | MODULE   | FMID    | COMP | MODULE FUNCTION       |
      +---------+----------+---------+------+-----------------------+
      | ZP60035 | IFBSVC76 | EBB1102 | BCP  | LOGREC WRITER         |
      | ZP60036 | IFCDIP00 | FBB1221 | SU64 | LOGREC INITIALIZATION |
      | ZP60037 | IFCIOHND | EER1400 | EREP | EREP I/O SERVICES     |
      +---------+----------+---------+------+-----------------------+

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IFBSVC76
 */.
++MOD(IFBSVC76) DISTLIB(ALPALIB) TXLIB(IFBSVC76).
```

ZP60036

```
++USERMOD(ZP60036)          /* FIX LOGREC DEVICE TYPE SUPPORT */  .
++VER(Z038) FMID(FBB1221) PRE(UZ53051)
 /*
   PROBLEM DESCRIPTION:
     MVS DOES NOT SUPPORT SYS1.LOGREC ON ALL DASD DEVICE TYPES.
       THE DASD DEVICE TYPES THAT THE LOGREC INITIALIZATION
       SUPPORTS IS HARD-CODED WITHIN THE MODULE.  THIS MEANS THAT
       IN ORDER MAINTAIN A FUNCTIONING LOGREC FACILTY THE SYSTEM
       RESIDENCE VOLUME IS LIMITED TO THE ORIGINAL SET OF DASD
       DEVICE TYPES AND CANNOT BE MIGRATED TO EXPLOIT LARGER VOLUME
       GEOMETRIES AS SUPPORT FOR NEWER DEVICES IS ADDED TO MVS.

       THIS USERMOD SHIPS A VERSION OF IFCDIP00 WHICH USES THE MVS
       TRKCALC SERVICE TO OBTAIN DASD GEOMETRY DEPENDENT DETAILS
       INSTEAD OF PRE-CODED VALUES SO THAT NOW IT SUPPORTS ANY
       DASD DEVICE TYPE SUPPORTED BY THE SYSTEM.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 36.

     THIS IS SYSMOD NUMBER 2 OF 3 IN A PACKAGE TO GENERALIZE LOGREC
     DASD SUPPORT WRITTEN BY TOM ARMSTRONG.  ALL 3 SYSMODS SHOULD BE
     ACTIVATED IN THE SAME IPL.  THE SYSMOD DETAILS ARE:
      +---------+----------+---------+------+-----------------------+
      | USERMOD | MODULE   | FMID    | COMP | MODULE FUNCTION       |
      +---------+----------+---------+------+-----------------------+
      | ZP60035 | IFBSVC76 | EBB1102 | BCP  | LOGREC WRITER         |
      | ZP60036 | IFCDIP00 | FBB1221 | SU64 | LOGREC INITIALIZATION |
      | ZP60037 | IFCIOHND | EER1400 | EREP | EREP I/O SERVICES     |
      +---------+----------+---------+------+-----------------------+

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IFCDIP00
 */.
++MOD(IFCDIP00) DISTLIB(AOSCD) TXLIB(IFCDIP00).
```

ZP60037

```
++USERMOD(ZP60037)          /* FIX LOGREC DEVICE TYPE SUPPORT */  .
++VER(Z038) FMID(EER1400)
 /*
   PROBLEM DESCRIPTION:
     MVS DOES NOT SUPPORT SYS1.LOGREC ON ALL DASD DEVICE TYPES.
       THE DASD DEVICE TYPES THAT EREP I/O SERVICES SUPPORTS IS
       HARD-CODED WITHIN THE MODULE.  THIS MEANS THAT IN ORDER TO
       MAINTAIN A FUNCTIONING LOGREC FACILTY THE SYSTEM RESIDENCE
       VOLUME IS LIMITED TO THE ORIGINAL SET OF DASD DEVICE TYPES
       AND CANNOT BE MIGRATED TO EXPLOIT LARGER VOLUME GEOMETRIES
       AS SUPPORT FOR NEWER DEVICES IS ADDED TO MVS.

       THIS USERMOD SHIPS A VERSION OF IFCIOHND WHICH USES THE MVS
       TRKCALC SERVICE TO OBTAIN DASD GEOMETRY DEPENDENT DETAILS
       INSTEAD OF PRE-CODED VALUES SO THAT NOW IT SUPPORTS ANY
       DASD DEVICE TYPE SUPPORTED BY THE SYSTEM.

   SPECIAL CONDITIONS:
     NONE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 37.

     THIS IS SYSMOD NUMBER 3 OF 3 IN A PACKAGE TO GENERALIZE LOGREC
     DASD SUPPORT WRITTEN BY TOM ARMSTRONG.  ALL 3 SYSMODS SHOULD BE
     ACTIVATED IN THE SAME IPL.  THE SYSMOD DETAILS ARE:
      +---------+----------+---------+------+-----------------------+
      | USERMOD | MODULE   | FMID    | COMP | MODULE FUNCTION       |
      +---------+----------+---------+------+-----------------------+
      | ZP60035 | IFBSVC76 | EBB1102 | BCP  | LOGREC WRITER         |
      | ZP60036 | IFCDIP00 | FBB1221 | SU64 | LOGREC INITIALIZATION |
      | ZP60037 | IFCIOHND | EER1400 | EREP | EREP I/O SERVICES     |
      +---------+----------+---------+------+-----------------------+

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IFCIOHND
 */.
++MOD(IFCIOHND) DISTLIB(AOSCD) TXLIB(IFCIOHND).
```

ZP60038

```
++USERMOD(ZP60038) REWORK(20190727)  /* ADD CLIST VARIABLE API */ .
++VER(Z038) FMID(EBB1102)
  PRE(UY01301,ZP60014)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO PROGRAMATIC INTERFACE FOR CLIST VARIABLE PROCESSING.
       APPLICATIONS RUNNING IN A TSO CLIST ENVIRONMENT HAVE NO
       SUPPORTED METHOD OF RETRIEVING OR SETTING THE VALUES OF CLIST
       SYMBOLIC VARIABLES.

       THIS USERMOD SUPPLIES A NEW MODULE CALLED IKJCT441 WHICH
       PROVIDES AN API TO ALLOW PROGRAMS TO PROCESS CLIST SYMBOLIC
       VARIABLES.  THE PARAMETER LIST AND RETURN CODE INTERFACE IS
       COMPATIBLE WITH THAT OF THE IKJCT441 MODULE IN IBM'S TSO/E.


   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

       THE MODULE SUPPLIED IN THIS SYSMOD CALLS AN ENTRY POINT
       CREATED BY SYSMOD ZP60014.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 38.

     REWORK HISTORY:
       2018-01-20: INITIAL AVAILABILITY.
       2019-07-27: ALLOW A RETRIEVE/CREATE REQUEST TO SET A NON-NULL
                   INITIAL VALUE WHEN THE SYMBOL IS BEING CREATED.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IKJCT441
     MACROS:
       SGIKJ441
 */.
++JCLIN.
++MOD(IKJCT441) DISTLIB(AOST4) TXLIB(IKJCT441).
++MACUPD(SGIKJ441) DISTLIB(AGENLIB).
```

ZP60039

```
++USERMOD(ZP60039)   REWORK(20220308)                    .
++VER(Z038) FMID(FBB1221)
  PRE(UZ62088,UZ31484)
  REQ(ZP60040)
  SUP(ZUM0013,TMVS805)
 /*
   PROBLEM DESCRIPTION:
     MESSAGE TEXT SUPPLIED TO THE WTO AND WTOR MACROS MUST BE INLINE.
       APPLICATIONS ISSUING WTO MESSAGES CANNOT SPECIFY DISPLAY
       TEXT WHICH IS REMOTE, THAT IS, NOT PHYSICALLY LOCATED
       WITHIN THE WTO OR WTOR PARAMETER LIST.

       CHANGES MADE BY THIS SYSMOD INCLUDE:
         - ENHANCE THE IEZWPL MACRO TO DESCRIBE THE EXTENDED WTO
           PARAMETER LIST (XWPL).
         - ENHANCE THE WTO MACRO TO ACCEPT THE TEXT= OPERAND AND
           CONSTRUCT A WPL OR XWPL AS REQUIRED.
         - ADD SUPPORT FOR THE XWPL INTO IEAVVWTO (SVC 35) AND
           IEAVMWTO (SVC 35 MULTI-LINE WTO SERVICE ROUTINE).
         - ALWAYS COPY THE WPL OR XWPL TO PROTECTED STORAGE,
           INSTEAD OF ONLY FOR UNAUTHORIZED CALLERS.
         - IMPROVED WPL VALIDATION TO AVOID INTERNAL ERRORS AND
           ISSUE SD23 ABENDS IN ACCORDANCE WITH DOCUMENTATION.
         - IMPROVE WTO MESSAGE CHARACTER RENDERING BY DISPLAYING
           MOST STANDARD KEYBOARD CHARACTERS UNTRANSLATED, AND
           SHOWING OTHER CODE POINTS AS A TILDE INSTEAD OF A BLANK.
         - SUBSUME THE FUNCTION OF USERMOD TMVS805 - ALSO WIDELY
           SHIPPED AS USERMOD ZUM0013 - BY KEVIN LEONARD, MAINLY
           BECAUSE THAT USERMOD WOULD NEED TO BE ADAPTED TO FIT THE
           UPDATES SHIPPED HERE.  THE TMVS805/ZUM0013 FUNCTION IS:
             - ALLOW IEECVXIT TO ACCESS "INTERNAL" MESSAGES, THEREBY
               FACILIATING MORE POWERFUL AUTOMATED OPERATIONS.
             - PREVENT HARDCOPY OF DELETED MESSAGES.
           NOTE THAT THE TMVS805/ZUM0013 CHANGES CAN BE DEACTIVATED
           BY ALTERING A SWITCH IN THE IEAVVWTO SOURCE CODE AND
           RECOMPILING.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 39.

     REWORK HISTORY:
       2018-08-20: INITIAL AVAILABILITY.
       2020-08-18: SILENTLY TRUNCATE EXCESSIVELY LONG TEXT.
       2022-03-08: REMOVE A BLANK LINE FROM THE WTO MACRO.

     THIS IS SYSMOD NUMBER 1 OF 2 IN A PACKAGE TO SUPPORT TEXT= ON
     WTO AND WTOR MACROS DEVELOPED BY TOM ARMSTRONG.  BOTH SYSMODS
     SHOULD BE ACTIVATED IN THE SAME IPL.  THE SYSMOD DETAILS ARE:
      +---------+---------+------+----------+-----------------------+
      I USERMOD I FMID    I COMP I PART     I DESCRIPTION           I
      +---------+---------+------+----------+-----------------------+
```

```
      I ZP60039 I FBB1221 I SU64 I IEAVMWTO I MLWTO SERVICE ROUTINE I
      I         I         I      I IEAVVWTO I WTO/WTOR PROCESSOR    I
      I         I         I      I IEZWPL   I WTO PARAMETER LIST    I
      I         I         I      I WTO      I INVOKE WTO SERVICE    I
      +---------+---------+------+----------+-----------------------+
      I ZP60040 I EBB1102 I BCP  I IGC0203E I WRITE TO PROGRAMMER   I
      I         I         I      I WTOR     I INVOKE WTOR SERVICE   I
      +---------+---------+------+----------+-----------------------+

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVMWTO
       IEAVVWTO
     MACROS:
       IEZWPL
       WTO
 */.
++MAC(IEZWPL) DISTLIB(AMODGEN) TXLIB(IEZWPL).
++MAC(WTO) DISTLIB(AMACLIB)    TXLIB(WTO).
++MOD(IEAVMWTO) DISTLIB(AOSC5) TXLIB(IEAVMWTO).
++MOD(IEAVVWTO) DISTLIB(AOSC5) TXLIB(IEAVVWTO).
++USERMOD(ZP60040)   REWORK(20230509)                    .
++VER(Z038) FMID(EBB1102)
  PRE(UY13810) .
++IF FMID(FBB1221) REQ(ZP60039)
 /*                             ADD TEXT= TO WTO AND WTOR.
   PROBLEM DESCRIPTION:
     MESSAGE TEXT SUPPLIED TO THE WTO AND WTOR MACROS MUST BE INLINE.
       APPLICATIONS ISSUING WTO MESSAGES CANNOT SPECIFY DISPLAY
       TEXT WHICH IS REMOTE, THAT IS, NOT PHYSICALLY LOCATED
       WITHIN THE WTO OR WTOR PARAMETER LIST.

       THIS SYSMOD ENHANCES WTP (WRITE TO PROGRAMMER) TO SUPPORT
       THE EXTENDED WTO PARAMETER LIST (XWPL), AND CHANGES THE
       WTOR MACRO TO ACCEPT THE TEXT= OPERAND AND BUILD A WPL
       OR XWPL AS REQUIRED.

   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 40.

     REWORK HISTORY:
       2018-08-20: INITIAL AVAILABILITY.
       2019-04-22: FIX TPUT OF WTP IN IGC0203E.
       2020-08-18: SILENTLY TRUNCATE EXCESSIVELY LONG TEXT.
       2022-03-08: REMOVE A BLANK LINE FROM THE WTOR MACRO.
       2023-05-09: MOVE LABEL .MFE6C UP 1 LINE TO UNLABELLED ANOP.

     THIS IS SYSMOD NUMBER 2 OF 2 IN A PACKAGE TO SUPPORT TEXT= ON
     WTO AND WTOR MACROS DEVELOPED BY TOM ARMSTRONG.  BOTH SYSMODS
     SHOULD BE ACTIVATED IN THE SAME IPL.  THE SYSMOD DETAILS ARE:
      +---------+---------+------+----------+-----------------------+
      I USERMOD I FMID    I COMP I PART     I DESCRIPTION           I
      +---------+---------+------+----------+-----------------------+
      I ZP60039 I FBB1221 I SU64 I IEAVMWTO I MLWTO SERVICE ROUTINE I
      I         I         I      I IEAVVWTO I WTO/WTOR PROCESSOR    I
      I         I         I      I IEZWPL   I WTO PARAMETER LIST    I
```

```
      I         I         I      I WTO      I INVOKE WTO SERVICE    I
      +---------+---------+------+----------+-----------------------+
      I ZP60040 I EBB1102 I BCP  I IGC0203E I WRITE TO PROGRAMMER   I
      I         I         I      I WTOR     I INVOKE WTOR SERVICE   I
      +---------+---------+------+----------+-----------------------+

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IGC0203E
     MACROS:
       WTOR
 */.
++MAC(WTOR) DISTLIB(AMACLIB)     TXLIB(WTOR).
++MOD(IGC0203E) DISTLIB(AOSB3)   TXLIB(IGC0203E).
```

ZP60040

```
++USERMOD(ZP60040)  /*

       This usermod belongs to the couple ZP60039 and ZP60040

       The function of ZP60040 is described in the coverletter
       of ZP60039

                          */.
```

ZP60041

```
++USERMOD(ZP60041)              /* ADD INDIRECT CATALOGING */  .
++VER(Z038) FMID(FBB1221)
  PRE(UZ50553,UZ56782)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO WAY TO CATALOG A DATA SET ON "THE CURRENT SYSRES".
       CATALOG ENTRIES FOR SINGLE-VOLUME NON-VSAM DATA SETS SPECIFY
       THE DEVICE TYPE AND THE VOLUME SERIAL NUMBER.  THERE IS NO
       WAY TO INDICATE THAT THE DATA SET WILL BE FOUND ON WHICHEVER
       VOLUME HAPPENS TO BE THE CURRENT IPL OR SYSTEM RESIDENCE
       VOLUME.

       THIS USERMOD UPDATES ALLOCATION'S VOLUME/UNIT TABLE COMPLETION
       ROUTINE TO RECOGNISE THAT WHEN THE VOLUME SERIAL IN THE
       CATALOG ENTRY OF A SINGLE-VOLUME NON-VSAM DATA SET IS SIX
       ASTERISKS, THE DEVICE TYPE AND VOLUME SERIAL SHOULD BE
       RESOLVED TO BE THAT OF THE CURRENT SYSTEM RESIDENCE VOLUME.

       NOTE THAT WITH NO CHANGE TO IDCAMS, A COMMAND SIMILAR TO
         DEFINE NONVSAM(NAME(DS.NAME) VOLUME(******) DEVT(3350))
       WILL BE SUCCESSFULLY PERFORMED FOR VSAM (BUT NOT OS SYSCTLG
       OR CVOL) CATALOGS.

       UNLIKE MVS/SP, DEVT(0000) IS NOT SUPPORTED - A VALID DEVICE
       TYPE MUST BE SPECIFIED.  ANY SPECIFIED DEVICE TYPE IS REPLACED
       BY THE IPL VOLUME'S DEVICE TYPE WHEN THE SIX ASTERISKS ARE
       REPLACED BY THE IPL VOLUME'S VOLUME SERIAL NUMBER.

   PROBLEM DESCRIPTION:
     EACH VOLUME MUST BE NAMED IN PARMLIB TO SET MOUNT ATTRIBUTES.
       EVERY VOLUME REQUIRING NON-DEFAULT MOUNT ATTRIBUTES MUST BE
       EXPLICITLY NAMED IN THE ACTIVE VATLST MEMBER OF SYS1.PARMLIB.
       THERE IS NO PROVISION TO ASSIGN ATTRIBUTES TO A GROUP OF
       DASD VOLUMES WITH A SINGLE SPECIFICATION IN VATLST.

       THIS USERMOD UPDATES THE VOLUME ATTRIBUTE PROCESSOR (IEAVAP00)
       TO ACCEPT GENERIC MASKS SUCH THAT A SINGLE VATLST STATEMENT
       CAN ASSIGN THE SPECIFIED MOUNT ATTRIBUTES TO EVERY ONLINE
       DASD VOLUME WITH A SERIAL NUMBER MATCHING THE MASK (AND WITH
       A MATCHING DEVICE TYPE).

       GENERIC MASKS FOR VOLUME SERIAL NUMBERS MAY CONTAIN ASTERISKS
       AND PERCENT SIGNS WHERE EACH ASTERISK REPRESENTS A GROUP OF
       ZERO OR MORE CHARACTERS AND EACH PERCENT SIGN REPRESENTS
       EXACTLY ONE CHARACTER.  VOLUME SERIAL CHARACTERS CORRESPONDING
       TO THESE MASKING CHARACTERS IN A COMPARE WILL BE CONSIDERED TO
       MATCH.

       CONSECUTIVE ASTERISKS SHOULD NOT BE CODED EXCEPT FOR THE
       SPECIAL MASK OF SIX ASTERISKS WHICH CAN BE USED TO SPECIFY
       THE CURRENT IPL (OR SYSTEM RESIDENCE) VOLUME.

       TO SPECIFY AN EXACT VOLUME SERIAL CONTAINING AN ASTERISK OR
       PERCENT SIGN, CODE AN 'S' IN COLUMN 7 INSTEAD OF A COMMA.

       THE ONLY GENERIC MASK RECOGNISED FOR THE DEVICE TYPE FIELD IS
```

```
       A SINGLE ASTERISK WHICH SPECIFIES THAT ALL DASD DEVICE TYPES
       ARE ACCEPTABLE.  THIS DEVICE TYPE GENERIC MASK CAN BE USED ON
       VATLST STATEMENTS WITH A SPECIFIC OR A GENERIC VOLUME SERIAL.

       IEA166I NO VOLUME MATCH
       IS A NEW MESSAGE ISSUED WHEN NO VOLUMES WERE FOUND TO MATCH
       A GENERIC VOLUME MASK.

       IEA855I MESSAGES WILL CONTINUE TO BE GENERATED WHEN NO VOLUMES
       MATCH A SPECIFICALLY NAMED VOLUME.

   SPECIAL CONDITIONS:
     ACTION:
       THIS SYSMOD SHOULD BE ACTIVATED SIMULTANEOUSLY WITH ZP60042.
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 41.
       IEFAB464 CHANGES CONTRIBUTED BY GREG PRICE.
       IEAVAP00 CHANGES CONTRIBUTED BY TOM ARMSTRONG.

     REWORK HISTORY:
       2021-11-05: INITIAL AVAILABILITY.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEFAB464
       IEAVAP00

 */.
++MOD(IEFAB464) DISTLIB(AOSB3) TXLIB(IEFAB464).
++MOD(IEAVAP00) DISTLIB(AOSC5) TXLIB(IEAVAP00).
++USERMOD(ZP60042) REWORK(20230628) /* ADD INDIRECT CATALOGING */.
++VER(Z038) FMID(EDM1102)
  PRE(UZ50553,UZ72608,UZ65674)
  SUP(M096220)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO WAY TO CATALOG A DATA SET ON "THE CURRENT SYSRES".
       CATALOG ENTRIES FOR SINGLE-VOLUME NON-VSAM DATA SETS SPECIFY
       THE DEVICE TYPE AND THE VOLUME SERIAL NUMBER.  THERE IS NO
       WAY TO INDICATE THAT THE DATA SET WILL BE FOUND ON WHICHEVER
       VOLUME HAPPENS TO BE THE CURRENT IPL OR SYSTEM RESIDENCE
       VOLUME.

       THIS USERMOD UPDATES SVC 26 TO OVERLAY THE RESULTS OF A
       LOCATE FOR A SINGLE-VOLUME DATA SET WHERE THE CATALOG ENTRY
       HAS A VOLUME SERIAL OF SIX ASTERISK.  THE RESULT IS UPDATED
       SO THAT THE DEVICE TYPE AND THE VOLUME SERIAL INDICATE THE
       CURRENT IPL OR SYSTEM RESIDENCE VOLUME.


   SPECIAL CONDITIONS:
     ACTION:
       A "CLPA" MUST BE PERFORMED AT IPL TIME FOR THIS SYSMOD TO
       BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 42.
```

```
  REWORK HISTORY:
    2020-06-07: INITIAL AVAILABILITY.
    2023-06-04: REMOVE LPA/NON-LPA CALLER DIFFERENTIATION.
    2023-06-06: RECOGNIZE SYSTEM CALLERS IN A USER TASK.
    2023-06-28: FIX MODULE IGG0CLBG DELETING DATASETS,
                CATALOGED WITH VOL(******).

  THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
  MODULES:
    IGG026DU

PROBLEM DESCRIPTION(S):
  M096220 -
    MsgIEA326I LOCATE FAILED FOR SYS1.LINKLIB and wait00A during
    NIP when master catalog is on D/T3375, 3380 or 3390.

    NIP LOCATE routine IEAVNP12 subroutine GETTRNM is called to
    read the true name record for the target of a LOCATE.  It
    searches the catalog index to find the correct pointer to
    the true name CI in the data component and builds the RBA
    of the target data CI.  When building the RBA, GETTRNM
    incorrectly calculates the value using the index component
    CI size instead of the data component CI size.  No problem
    results as long as index and data component have the same
    CI size, as with a catalog on 3350.  For 3375s, 3380s and
    3390s, VSAM selects different CI sizes for catalog index
    and data components, so the calculated value is wrong, an
    incorrect data record is read and the LOCATE fails.  When
    LOCATE fails for SYS1.LINKLIB, the result is msgIEA326I
    and wait00A.

    IEAVNP12 subroutine GETTRNM is changed to use the correct
    CI size when calcuating the true name CI RBA.

    While this usermod is not required for correct operation
    of IEAVNP12 with a master catalog on devices other than 3375,
    3380 or 3390, it will produce the correct results regardless
    of catalog device type.

COMPONENT:  5752-SC1DE-EDM1102

SPECIAL CONDITIONS:
  ACTION:  An IPL is required after installation of this user
    modification.

  REWORK HISTORY:
    2009/06/25: MVS 3.8J DASD extensions 1.02

  CROSS REFERENCE-MODULE/MACRO NAMES TO USERMODS
    IEAVNP12  M096220

  CROSS REFERENCE-USERMODS TO MODULE/MACRO NAMES
    M096220   IEAVNP12

  THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
  MODULES
    IEAVNP12

PROBLEM DESCRIPTION:
    MSGIDC3009I RC=136, RSN=40 trying to delete NONVSAM datasets
    cataloged with DEVT(uuuu) VOL(******).
```

```
       MODULE IGG0CLBG is corrected with a test of 6 stars in the
       volume of the NONVSAM entry. These are replaced by the
       current SYSRES volume and device type before deleting
       the dataset.

   COMPONENT:  5752-SC1DE-EDM1102

   SPECIAL CONDITIONS:
     ACTION:  An IPL with CLPA is required.

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES
       IGG0CLBG

   COMMENTS:
     LAST CHANGE:  2023/06/28
       IEAVNP12 CHANGES CONTRIBUTED BY KEVIN LEONARD.
       IGG026DU CHANGES CONTRIBUTED BY GREG PRICE.
       IGG0CLBG CHANGES CONTRIBUTED BY ROB PRINS.

     LISTEND
 */.
++MOD(IEAVNP12) DISTLIB(AOSC5) TXLIB(IEAVNP12).
++MOD(IGG026DU) DISTLIB(AOSD0) TXLIB(IGG026DU).
++ZAP(IGG0CLBG) DISTLIB(AOSA0).
++USERMOD(ZP60043) REWORK(20231007) /* RESOLVE SYSRES FOR APF */.
++VER(Z038) FMID(EBB1102)
  PRE(UZ60307,UZ84276)
 /*
   PROBLEM DESCRIPTION:
     THERE IS NO WAY TO SPECIFY THE IPL VOLUME FOR AN APF LIBRARY.
       ENTRIES FOR APF AUTHORIZED LIBRARIES IN THE IEAAPFXX MEMBER
       OF SYS1.PARMLIB MUST SPECIFY THE ACTUAL VOLUME SERIAL OF THE
       LIBRARY, WHICH IS NOT CONDUCIVE TO RELIABLY CLONING SYSTEM
       RESIDENCE VOLUMES FOR ALTERNATE IPL CONFIGURATIONS.

       THIS USERMOD FROM TOM ARMSTRONG UPDATES THE APF TABLE
       INITIALIZATION ROUTINE TO RECOGNIZE THAT A VOLUME SPECIFICATION
       OF SIX ASTERISKS INDICATES THE CURRENT IPL OR SYSTEM RESIDENCE
       VOLUME.  THE ACTUAL IPL VOLUME SERIAL WILL BE SUBSTITUTED INTO
       THE TABLE AT IPL TIME.

       MODULE IEFAB458
       IMPLEMENT ****** NOTATION FOR THE CURRENT SYSTEMS
       RESIDENCE VOLUME WHEN DCB=DATASETNAME IS CODED
       ON JCL STATEMENTS WHERE THE PROVIDED DATASETNAME
       IS CATALOGED ON THE SYSTEMS RESIDENCE VOLUME
       USING ****** TO SPECIFY THE VOLUME.


   SPECIAL CONDITIONS:
     ACTION:
       AN IPL MUST BE PERFORMED FOR THIS SYSMOD TO BECOME ACTIVE.

   COMMENTS:
     PRYCROFT SIX P/L PUBLIC DOMAIN USERMOD FOR MVS 3.8 NUMBER 43.

     REWORK HISTORY:
       2021-11-05: INITIAL AVAILABILITY.
       2023-10-07: TOM ARMSTRONG: ADD THE SIX STARS FIX IN
```

```
                  THE OBTAIN IN MODULE IEFAB458

     THE FOLLOWING MODULES AND/OR MACROS ARE AFFECTED BY THIS USERMOD:
     MODULES:
       IEAVNPA5
       IEFAB458
 */.
++MOD(IEAVNPA5) DISTLIB(AOSC5) TXLIB(IEAVNPA5).
++MOD(IEFAB458) DISTLIB(AOSB3) TXLIB(IEFAB458).
```

ZP60042

```
++USERMOD(ZP60042)  /*

       This usermod belongs to the triplet ZP60041, ZP60042
       and ZP60043

       The function of ZP60042 is described in the coverletter
       of ZP60041

                          */.
```

ZP60043

```
++USERMOD(ZP60043)  /*

       This usermod belongs to the triplet ZP60041, ZP60042
       and ZP60043

       The function of ZP60043 is described in the coverletter
       of ZP60041

                          */.
```

ZUM0001

```
++ USERMOD(ZUM0001) REWORK(20230201)      .
++ VER(Z038)
   FMID(EBB1102)
   .
++ MOD(IKJEFTE2)
   DISTLIB(AOST4)
   TXLIB(IKJEFTE2)
   .
```

ZUM0002

```
++USERMOD (ZUM0002).
++VER (Z038) FMID(EBB1102).
++MOD(IEFACTRT) TXLIB(IEFACTRT).
```

ZUM0005

```
++USERMOD (ZUM0005) /*
    DESC: Install USERMOD ZUM0005 to modify generation of MSTRJCL
          JES2 will no longer be automagically be started
          */.
++VER (Z038) FMID(EBB1102).
++MACUPD(SGIEE0MS).
```

ZUM0007

```
++USERMOD (ZUM0007) /*
    Desc: INSTALL USERMOD ZUM0007
          Y2K patch (by Michael Koehne
          */.
++VER (Z038) FMID(EBB1102)
  PRE(UY17588 UZ27405).
++ ZAP (IKJEFLA) .
++ ZAP (IKJEFT25) .
```

ZUM0014

```
++ USERMOD(ZUM0014).
++ VER(Z038)
   FMID(EBB1102)
   PRE(UZ78841)
   .
++ MOD(IKJEFTE8)
   DISTLIB(AOST4)
   TXLIB(IKJEFTE8).
```

ZUM0015

```
++USERMOD (ZUM0015) /* SET CONSOLES TO ROLL-DELETE MODE SP 3
  DESC: Install USERMOD ZUM0015 (put consoles in RD mode at IPL)
        */.
++VER (Z038) FMID(EBB1102) PRE(UZ35148,UZ34427).
++ZAP(IEECVETC) DISTLIB(AOSC5).
++UPDTE (IEECDCM) .
```