

V paketu ACCLOG V1.23 sta opazeni naslednji napaki:

- 1.) V primeru, da uporabnik spoolira datoteko in izda BYE ukaz, ko je v toku izpisovanje za drugega uporabnika, pride do padca operativnega sistema.
Problem se resuje z naslednjo SLP korekcijo:

```
[11,10]LPDRV.MAC/AU:72./-BF=[11,10]LPDRV.MAC
-2,2
      .IDENT /08.1G/
-44
      PV117  -- 20-MAR-81 CONDITIONALLY ASSEMBLING FOR ACCOUNTING
      PV118  -- 20-MAR-81 COUNT PAGE AS SYSTEM OVERHEAD WHEN USER LOGGED OF
-424,./; PV117/
      .IF DF A#$LOG
-430,431,./; PV118/
      MOV     $LFTI,R1          ; GET USER TERMINAL UCB ADDRESS
      BEQ     169$              ; EQ - THERE IS NONE.
      BIT     #U2.LOG,U.CW2(R1) ; USER LOGGED ON?
      BNE     168$              ; NE - NO. PREVENT CRASH
      MOV     R1,-(SP)          ; EVERYTHING IS OK
      BR      170$              ;
168$:      CLR     $LFTI          ; RESET UCB ADDRESS
169$:
-466,./; PV117/
      .ENDC
      RETURN
```

Popravek se izvaja po naslednji sekvenci:

```
Editira se datoteka LPDRV.COM z dornjo vsebino.
>SLP @LPDRV
>MAC LPDRV=[1,1]EXEMC/ML,[11,10]RSXMC/PA:1,LPDRV
>LBR [1,24]RSX11M/RF=LPDRV
Generira se novi LPDRV ...
>@[200,200]SGNBLIDRV
Po koncani generaciji ...
>UNL LP:
>LOA LP:
>SET /UIC=[1,54]
>RUN $VMR
ENTER FILENAME: RSX11M
VMR>UNL LP:
VMR>LOA LP:
VMR>Z
```

V pomožnem programu ACCSEQ je nepravilna konverzija dneva v datumu, ko je zaporedna številka dneva < 10. Problem rešuje naslednja korekcija:

.TITLE ACCSEQ
.IDENT /02.01/

PROBLEM: ACCSEQ conversion utility does not work properly for days < 10. The following patch solve this problem.

PROCEDURE:

>LBR ACCSEQ.OLD=[1,24]ACCLOG/EX:ACCSEQ
>MAC ACCSEQ.POB=ACCSEQ.PAT
>PAT ACCSEQ.OBJ=ACCSEQ.OLD/CS:147425,ACCSEQ.POB/CS:010045
>LBR [1,24]ACCLOG/RF/-EP=ACCSEQ.OBJ

Rebuild task as follows

>TKB
TKB>[1,54]ACCSEQ=[1,24]ACCLOG/LB:ACCSEQ:ERRMSG
/
ENTER OPTIONS:
UNITS=4
STACK=64
//

PV116 -- 6-MAR-81 TIME OF YEAR CONVERSION

```
$PC=,  
.=$PC+1774  
CALL PAT1  
.$PC  
.PSECT $$$PAT  
PAT1: CMP 4(R5),#10. ; TWO DIGITS FOR DAY?  
RETURN  
.END
```

PROBLEM:

Kako restaurirati datoteku CORIMG-SYS?

REŠENJE:

Ako je datoteka izbrisana potrebno je imati bar još jednu jedinicu diska.

- Alocirati disk za privilegovani terminal. Poželjno je da se radi sa konzole bez ostalih korisnika na sistemu.
- Mount-irati disk sa /UNL opcijom kod MOU komande.
- Proveriti da li postoji CORIMG.SYS. Ako ne postoji proveriti sa VFY pomoćnim programom da li je peti FILE-ID slobodan; osloboditi ga i prepisati sa drugog diska datoteku CORIMG.SYS.
- Izvršiti sledeće komande:

```
>ASN dev:=SY:
```

```
>RUN $ZAP
```

```
ZAP>[0,0]0000000.DIR/AB  
_102/
```

```
_000:000102/ inv-seq-no
```

```
_5
```

```
_X
```

```
>RUN $ZAP
```

```
ZAP>[0,0]INDEXF.SYS/AB
```

```
_n+4:0,0R
```

```
_0,4/
```

```
_n+4:0,000004/ inv-seq-no.
```

```
_5
```

```
_0,766/
```

```
_n+4:0,000766/ YYYYYY
```

```
_ZZZZZZ
```

```
_X
```

Sada možemo izvršiti ACS komandu za taj disk.

NAPOMENA:

- n je logički blok FILE-HAEDER-a datoteke INDEXF.SYS.
inv-seq-no. je pogrešan SEQ. broj.
ZZZZZZ je nova kontrolna suma i njena vrednost je izračunata po
formuli: $ZZZZZZ = YYYYYY - (\text{inv-seq-no.} - 5)$
YYYYYY je stara kontrolna suma.

Svi pomenuti brojevi su oktalni.

b) Kako se na početku procedura definiše radni UIC za Patch u simbolu "\$PUIC" bilo bi poželjno iz njega izvaditi vrednost za naredbe kao što su:

- TESTFILE SYØ: [Ø,Ø] 001161.DIR; 1
- PIP [0,0] 001161.DIR;1/DE/NM

tako da je samo jedna modifikacija dovoljna u slučaju potrebe, na primer ako želimo istovremeno da radimo dve različite procedure sa više terminala.

Priloga i saopštenja na PATCH UIC 817

Posle rada kod korisnika: Centroslovi, kao i na...

1. SYØPT1.CMD javlja grešku u delu "Select your...

PIP - naredba must be explicit: [Ø,Ø] 001161.DIR; 1

2. INSCBL.CMD

Na pitanje: "Select your library (BAS, SDQ or DEX)"

umesto DEX treba da stoji DISK inace javlja grešku vrtilom: "Invalid test program."

3. INCVTS.CMD

Ne bi trebalo brisati datoteku SY-[1,2]QUERY.DTS jer je ona upotrebljavana i na novijem verzijama PIP 1.0. Eventualno proveriti da li je i ostaviti korisniku da je obriše ako želi.

4. Sagovornije sa poboljšanje rada sa autopatchom

al na kraju procedure patchivanja ili instalacije kompajlera, a pre brisanja svih datoteka i direktorija postaviti pitanje "da li je u redu", tako da je moguće u slučaju greške, ponoviti delove ili celu proceduru ~~bez da se...~~ ~~načinom...~~ a da se ne mora ponoviti prepisivanje datoteka na trake na lično.

SEKTORU ZA PROIZVODNJO SOFTWARE-a

V ACCLOG V1.23 Je opazena napaka pri stelju I/O v slucaju da je traka mountana. Naslednji patch resuje ta problem. Reseneracija sistema ni potrebna, toda potrebno je izvesti ZAP in OBJ patch.

PV115

FIX BUG IN MOUNT TAPE I/O COUNT

DISK = 22
TAP = 25

SWR

```
SPC=
SPC+636
BIC *C<DV,SDI<DV.F11<DV.MNT>,(SP) ; CLEAR UNRELEVANT
CMP *DV,SDI<DV.F11<DV.MNT>,(SP)+1 ; NO TAPES
SPC+700
BIC *C<DV,DIR<DV.F11<DV.MNT>,(SP) ; CLEAR SPARE BITS
CMP *DV,DIR<DV.F11<DV.MNT>,(SP)+1 ; NO DISKS
SPC+712
ADD *C,AC,DISK+2*(R2) ; INCREMENT DISK I/O COUNT
ACC AC,DISK(R2) ; DON'T FORGET CORRECT
SPC+724
ADD *C,AC,TAP+2*(R2) ; INCREMENT TAPE I/O COUNT
ACC AC,TAP(R2) ; HIGH PART ALSO
LENG
```

.TITLE LGSUB
 .IDENT /01.26/

OBJECT PATCH
 PROBLEM: QIO'S TO MOUNTED MAGTAPES ARE COUNTED AS DISK I/O.

PROCEDURE:

>LBR LGSUB.OLD=C1,24JACCLG/EX:LGSUB
 >MAC LGSUB.POB=LGSUB.PAT
 >PAT LGSUB.OBJ=LGSUB.OLD/CS:015556,LGSUB.POB/CS:030324
 >LBR C1,24JACCLG/RP=LGSUB/-EP

PV115 -- 22-JAN-81 FIX BUG IN MOUNT TAPE I/O COUNT

AC.DSK = 22
 AC.MAG = 26

\$PC=.

=\$PC+636

BIC \$^C<DV.SQD!DV.F11!DV.MNT>,(SP) ; CLEAR IRELEVANT BITS
 CMP \$DV.SQD!DV.F11!DV.MNT,(SP)+ ; MAG TAPE?

=\$PC+700

BIC \$^C<DV.DIR!DV.F11!DV.MNT>,(SP) ; CLEAR SPARE BITS
 CMP \$DV.DIR!DV.F11!DV.MNT,(SP)+ ; DISK?

=\$PC+712

ADD \$1,AC.DSK+2(R2) ; INCREMENT DISK I/O COUNT
 ADC AC.DSK(R2) ; DON'T FORGET CARRY

=\$PC+726

ADD \$1,AC.MAG+2(R2) ; INCREMENT TAPE I/O COUNT
 ADC AC.MAG(R2) ; HIGH PART ALSO

.END

PROBLEM: QID'S TO MOUNTED MAGTAPES ARE COUNTED AS DISK I/O

PROCEDURE:

FIND OUT VALUE OF GLOBAL SYMBOL \$ACRES IN [1,34]RSX11M.MAF

\$ACRES = nnn 004622

INVOKE PATCH AS FOLLOWS 004546

>ZAP
ZAP>[1,54]RSX11M.SYS/AB
_2000+nnn;OR
_0,640/
037767 37737
_0,644/
140010 140040
_0,702/
037736 37767
_0,706/
140041 140010
_0,716/
000030 24
_0,722/
000026 22
_0,732/
000024 30
_0,736/
000022 26
-X



ZA: V. Pečar

OD: V. Nonveiller

V VEDNOST: J. Gvardijančič, D. Šnajder

KRAJ IN DATUM: Beograd, 14.09.1981.

Primedbe i zapažanja na PATCH "JUL 81"

Posle rada kod korisnika: Centroslavija, Janko Lisjak, Dunav,

1. AUTOPATCH.CMD javlja grešku u delu "Replace corrected system generation files":

PIP - Version must be explicit or */ SY: [200,200] AP

2. INSCBL.CMD

Na pitanje: "Select your RMS library (RES,SEQ or DSK)"
umesto DSK treba da stoji DISK inače javlja grešku prilikom linkovanja test programa.

3. INSDTR.CMD

Ne bi trebalo brisati datoteku SY:[1,2]QUERY.DIC jer je ona upotrebljavana i sa novijom verzijom DTR V 2.0. Eventualno promeniti joj ime i ostaviti korisniku da je obriše ako želi.

4. Sugestije za poboljšanje rada sa autopatchom

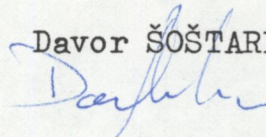
a) Na kraju procedure patchiranja ili instalacije kompajlera, a pre brisanja svih datoteka i direktorija postaviti pitanje "da li je u redu". Tako da je moguće u slučaju greške, ponoviti delove ili celu proceduru bez da se ponovo prepisuju sa trake na disk, a da se ne mora ponoviti prepisivanje datoteka sa trake na disk.

SPOROČILO DECUS O OPAŽANIH RESNIH NAPAKAH V
OPERACIJSKEM SISTEMU VMS 3.1

1. Korupcija strukture diska pri stand-alone BACKUP:
Extension file headers so korumpirani na izvornem disku, če uporabljamo kretnico /RECORD. Zato delajmo brez te kretnice, če pa je škoda že narejena, je treba takoj disk restavrirati, ker save-set ni poškodovan.
2. Padec sistema pri uporabi Remote Terminalov (preko DECneta):
Sistem se dostikrat zruši, če je uporabnik zvezan preko DECneta in nima dovolj velike BYTLM kvote. Zato bo vsem uporabnikom preko DECneta treba zagotoviti dovolj veliko Buffered I/O Byte Count kvoto za njihove največje QIO.

DECUS nič ne pove, če so te napake prisotne tudi pri VMS 3.0, vendar previdnost (predvsem pod tč. 1) najbrž ni odveč.

Davor ŠOŠTARIČ



Maribor, 16. 2. 1983

```

; * * * * *
; AR NO. 790016 MANDATORY PATCH
; PROBLEM:
; MP (MEMORY PROTECTION) ERROR AND 'IVHF' STATUS COULD OCCUR EVEN
; THOUGH VALID DATA WAS PASSED AS AN ARGUMENT.
; MODULE:
;   DATBAS.OBJ
;

```

```

.OPEN DATBAS.PAT
.ENABLE DATA
  .TITLE DATBAS
  .IDENT 70200167
  .PSECT DATBAS
  .MCALL GTSK$$,SVIK$$
;
; AR #790016 CHECKSUM = 41341
;

```

```

BASE:
MAXSIZ=1024.
.=BASE+676
  JSR PC,PAI016
.=BASE+4230
  BEQ 20$
  MOVB (R0)+,(R1)+
  CMP R1,BASE+122
  BHIS 20$
  SOB R2,10$
20$: CLC
  NOP
  NOP
.=BASE+3474
  JSR PC,PAR016
  NOP
.=BASE+4132
  JSR PC,PAC016
  .PSECT P90016
PAT016: MOV 4(R5),R4
  GTSK$$ #TPARM
  SVIK$$ #SSTRAP,#2
  RTS PC
PAR016: CMP BASE+112,#MAXSIZ
  BLOS 10$
  MOV #MAXSIZ,BASE+112
10$: MOV BASE+112,14(R2)
  RTS PC
PAC016: SVIK$$ TPARM+26,TPARM+30
  CLR BASE+64
  RTS PC
MEMPRO: ADD #6,SP
  MOV #1,R2
  RTI
SSTRAP: .WORD 0,MEMPRO
TPARM: .BLKW 18.
.END

```

```

.DISABLE DATA
.CLOSE DATBAS.PAT
MAC DATBAS.PBJ=DATBAS.PAT
PAT DATBAS.OBJ=DATBAS.OBJ,DATBAS.PBJ/CS:41341
PIP DATBAS.PBJ;* ,DATBAS.PAT;*/DE

```

delo O.K.
6-MAR-82 TAM.



računalniški sistemi delta

INTERNO OBVESTILO

oglasne deske

VSPO

ZA: Viktor Mrak

OD: Vladimir Pečar

V VEDNOST: Vsem delavcem VSPO

KRAJ IN DATUM: Ljubljana, 22.03.1984

PREDMET: Accounting V 2.0

Crash sistema pri delu s QUE MANAGER

Po koncu generacije sistema (pred BOOT-om novega sistema) je treba obvezno
zbrisati FILE [1,7] QUEUE SYS.

u

Pozdrav,

Vladimir Pečar

Pečar Vlado



računalniški sistemi delta

INTERNO OBVESTILO

oplovene diske
1980

ZA: Viktor Mrak

OD: Vladimir Pečar

V VEDNOST: Vsem delavcem VSPO

KRAJ IN DATUM: Ljubljana, 22.03.1984

PREDMET: SYSTEM CRASH pri mountu diskete na sistemu DELTA 700/80 SML

Za rešitev tega problema je treba:

- kreirati SLP File v DXDRV.SLP (glej prilogo)
- obdelati s SLP procesorjem
SLP @ DXDRV.SLP
- asemblirati in linkati driver in loadati.

Pozdrav,

Vladimir Pečar

Pečar



[11,10]DXDRV.MAC;2/-BF/AU:72.= [11,10]DXDRV.MAC;1

\

-2,2

.IDENT /03.04/

-43

:

:

DRS001 - 22-MAR-84 CORRECT BUG IN POOL DEALLOCATION AFTER
ERROR LOGGING

:

%

-481,481, /; DRS001/

/

RSX-11M V3.2
UTILITIES
BRU

Seq 5.1.17.12 M

1 of 2 URB

BRU TAPE LABEL PADDED WITH NULLS (SPR 11-30794 LK)

PROBLEM
STATEMENT

BRU didn't pad the tape label correctly in the ANSI VOL1 record when the tape label had less than 6 characters. This caused problems when BRU did a verify or compare operation or when we made an attempt to mount or dismount the tape.

RESPONSE

The following is a cumulative patch with .IDENT /01.2/ correcting the parsing algorithm.

Create the file [74,40]BRUPAR.PAT:

```

        .TITLE BRUPAR
;
; COPYRIGHT (C) 1980
; DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS.
;
; MODIFICATIONS
;
; 01.1 - SET PROPER BIT FOR /WINDOWS QUALIFIER
; 01.2 - PUT BLANKS INTO THE LABEL FIELD
        .IDENT /01.1/
        .PSECT
.BLK.=.
SETQ1=.BLK.+5470
.=.BLK.+760
        .WORD SETQ1 ; SET KEYWORD BIT IN THIS WORD
.=.BLK.

```

RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.12 M

2 of 2

```

      .IDENT /01.2/
      .PSECT
      .MCALL DIR$
    .BLK,=.
    .=.BLK,+1662
  
```

```

      CALL PAT1
      NOP
    .=.BLK.
      .PSECT $$PAT
  
```

\$\$PAT=.

```

PAT1:  MOV     #SLAB,R1           ; PUT BLANKS INTO THE LABEL FIELD
        MOV     #" ,(R1)+
        MOV     #" ,(R1)+
        MOV     #" ,(R1)
        DIR$   #GETASK         ; OBTAIN THE UIC WE ARE RUNNING UNDER
        RETURN
        .END
  
```

Assemble BRUPAR.PAT to create BRUPAR.POB

```

>SET /UIC=[74,40]
>MAC BRUPAR.POB,BRUPAR=BRUPAR.PAT
  
```

Extract BRUPAR.OBJ from [1,20]BRU.OLB, apply the patch, assign TK:
 to your target task build disk, and build BRU:

```

>LBR BRUPAR.OBJ;1=[1,20]BRU/EX:BRUPAR
>PAT BRUPAR.OBJ;2=BRUPAR.OBJ;1/CS:63056,BRUPAR.POB/CS:17051
>SET /UIC=[1,20]
>LBR BRU/RP=[74,40]BRUPAR.OBJ;2
>ASN ddn:=TK:
>TKR @[1,24]BRUPLD
  
```


RSX-11M V3.2
UTILITIES
BRU

Seq 5.1.17.13 M

1 of 5

/TAPELABEL DOESN'T WORK DURING RESTORE (SPR 11-32313 LK)

PROBLEM
STATEMENT

The /TAPELABEL switch does not work during the restore operation from a tape.

RESPONSE

BRU
does not check the input volume name during the restore operation from a tape. The following cumulative patch will correct this problem.

Create the file TAPEIO.PAT:

.TITLE TAPEIO

; COPYRIGHT (C) 1980
; DIGITAL EQUIPMENT CORP., MAYNARD, MASS.

; MODIFICATIONS:

; 01.1 --

; CORRECT ERROR MSG IF TAPE DRIVER NOT LOADED

; WAIT FOR DEVICE DETACHES TO AVOID EXIT WITH OUTSTANDING I/O

; MAKE TAPEIO SERIALLY REUSABLE

; CORRECT ERROR RETURN AT BOT FOR RESTOPE

; CORRECT "MOUNT TAPE" MESSAGE

; CORRECT TAPE FORMAT IF NO FILES FOUND

; 01.2 --

; INPUT TAPE LABEL VERIFICATION

RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.13 M

2 of 5

```

;
      .IDENT /01.1/

      .MCALL DIRS,WTSE$$

      .PSECT

      .BLK.=.

; OUTPUT CORRECT MSG IF TAPE DRIVER NOT LOADED

      .=.BLK.+36
      BCS      15$          ; HANDLER NOT RESIDENT
      NOP

      .=.BLK.+56
      15$:

; WAIT FOR DETACHES TO COMPLETE
; MAKE TAPEIO SERIALLY REUSABLE

      .=.BLK.+3570

      CALL     PAT1          ; CALL PATCH
      DIRS     $SOUDP8      ; DETACH THE OUTPUT DISK
      BCS      30$          ; DON'T WAIT IF DETACH FAILS
      WTSE$$   #EFN2        ; WAIT FOR OUTPUT DETACH
30$:      RETURN           ; DONE HERE

; CORRECT "MOUNT TAPE..." MESSAGE

CF.MES = 1000

      .=.BLK.+1170

      JMP     PAT2          ; JUMP TO PATCH
      .REPT  6
      NOP
      .FNDR

      .=.BLK.+1210

RWD1::

      .=.BLK.+1232

RWD2::

      .=.BLK.+1500

      .REPT  3
      NOP
      .FNDR

```

RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.13 M

3 of 5

```

.=.BLK.+1556
    BNE      380$

.=.BLK.+1640
380$:  .REPT  6
      .NOP
      .ENDR

.=.BLK.+2020
DIRDPB:

.=.BLK.+2042
    CMP     #IO.RWU,$TPDPB+0.IOFN ; RWU ISSUED?
    BNE     10$ ; NO
    BIS     #CF.MES,$CFLAG ; YES - NEED MOUNT TAPE MESSAGE
10$:  .MOV     #IO.SMO,$TPDPB+0.IOFN ; SET CHAR AND MOUNT FUNCTION
20$:  .CALL    DIRDPB ; ISSUE DIRECTIVE
    .TSTB   $TPSTA ; OK?
    .BPL    40$ ; YES - DONE HERE
    .BIT    #CF.MES,$CFLAG ; OUTPUT MESSAGE?
    .BEQ    450$ ; NO
    .TST    R0 ; YES - NOW?
    .BNE    450$ ; NO - TOO SOON
    .BR     440$ ; YES
40$:  .BIC    #CF.MES,$CFLAG ; CLEAR FLAG
    .RETURN

.=.BLK.+2142
440$:

.=.BLK.+2176
450$:

.=.BLK.+2220
    .BR     20$ ; TRY SMO AGAIN

; CORRECT BOT ERROR RETURN FOR RESTORE
.=.BLK.+2572
    .JMP    PAT3

; CORRECT TAPE FORMAT IF NO FILES FOUND
.=.BLK.+3626
    
```

RSX-11M V3.2
UTILITIES
BRU

Seq 5.1.17.13 M

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```

      .REPT 4
      NOP
      .ENDR

      .IDENT /01.2/

      .=.BLK. + 2442
      CALL PAT4
      .REPT 8.
      NOP
      .ENDR

      .=.BLK. + 2606
      POPA:
      .=.BLK. + 3300
      READTP:
      .PSECT $$$PAT
      $$$PAT=.
      PAT1:  MOV  #EFN1,$INDPB+Q.IOEF ; SETUP EVENT FLAG
            MOV  #IO.DET,$INDPB+Q.IOFN ; AND DETACH FUNCTION
            DIRS  #SINDPB ; DETACH THE INPUT DISK
            BCS  20$ ; DON'T WAIT IF DETACH FAILS
            WTSE$ #EFN1 ; WAIT FOR DETACH
      20$:  MOV  #IO.DET,$OUDPB+Q.IOFN ; SETUP OUTPUT DETACH
            RETURN

      PAT2:  CMPB  VOLNUM,#1 ; ONE TAPE ONLY?
            BNE  10$ ; NO
            CLR  VOLNUM ; YES - RESET VOLUME NUMBER
            MOV  #IO.RWD,Q.IOFN(R5) ; REWIND BUT NOT OFFLINE THE TAPE
            JMP  RWD2 ;
      10$:  CLR  VOLNUM ; ONE TAPE - RESET VOLUME NUMBER
            JMP  RWD1 ;

      PAT3:  MOV  R0,R5 ; SET UP R5 WITH DPB ADDR
            JMP  RWD1 ; REWIND THIS TAPE, WAIT FOR ANOTHER ONE

      PAT4:  BIT  #KY.LAB,$QUAL3 ; CHECK FOR TAPE LABEL SWITCH
            BEQ  20$ ; DON'T CHECK THE LABEL
            CMP  $BUF2+4,$LAB ; CMP LABEL
            BNE  150$ ; WRONG LABEL
            NOP  CMP  $BUF2+6,$LAB+2 ; CHECK SECOND WORD
            BNE  150$ ; WRONG LABEL

```

RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.13 M

5 of 5

```

        CMP     $BUF2+10,$SLAB+4      ; LAST COMPARE
        BNE     150$
20$:    CALL    READTP                ; READ UNTIL HDR1 ENCOUNTERED
        WTSE$S #EFN9
        CMPB   $TPSTA,#IE.DAO        ; DATA OVERRUNS ARE BOOT BLOCKS
        BEQ    20$                   ; IF SO KEEP GOING
        RETURN
150$:   TST     (SP)+                 ; ADJUST STACK
        JMP    POPA
    
```

.END

Assemble TAPEIO.PAT to create TAPEIO.POB:

```

>SET /UIC=[74,40]
>MAC TAPEIO.POB,TAPEIO=TAPEIO.PAT
    
```

Extract the module TAPEIO.OBJ;1 from the library [1,20]BRU.OLB; apply the patch, assign your target task build output disk to TK; and rebuild BRU.

```

>LBR TAPEIO.OBJ;1=[1,20]BRU.OLB/EX:TAPEIO
>PAT TAPEIO.OBJ;2=TAPEIO.OBJ;1/CS:113475,TAPEIO.POB/CS:161254
>SET /UIC=[1,20]
>LBR BRU/RP=[74,40]TAPEIO.OBJ;2
>ASN ddn:=TK:
>TKR @ [1,20]BRUBLD
    
```

RSX-11M V3.2
UTILITIES
BRU

Seq 5.1.17.14 M

1 of 5

BRU HANGS OR CREATES AN INCORRECT INDEX FILE BITMAP (SPR 11-31026 DD)

PROBLEM STATEMENT

BRU may hang when transferring a very large contiguous file, or may create an incorrect index file bitmap on the output volume.

RESPONSE

The following is a cumulative patch for the file BRUHEAD.OBJ. The above problems are corrected by the patches with .IDENT /01.7/ and /01.8/. When submitting any BRU SPRs, an LBR listing (LBR BRU.OLB/FU) should be included to show the patch level of BRU modules.

Create the file BRUHEAD.PAT:

```

      .TITLE BRUHEAD
;
; COPYRIGHT (C) 1979, 1980
; DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS. 01754
;
; MODIFICATIONS
;
; 01.1 - CORRECT CONTIGUOUS FILE ALLOCATION
; 01.2 - RESTORE FULL FILE ATTRIBUTES WHEN TRANSFERRING TO A
; MOUNTED DISK
; 01.3 - FIX SEQUENCE NUMBER ON EXTENSION HEADERS
; 01.4 - FIX CREATION OF EXTENSION HEADERS
;
; SUPERSEDES 01.4 WITH INCORRECT PLACEMENT OF $SPAT
;
; 01.5 - FIX RESTORE OF MULTIHEADER FILES TO A MOUNTED DISK
;
; 01.6 - FIX CREATION OF EXTENSION HEADERS
; 01.7 - FIX INDEX FILE BITMAP INITIALIZATION
; 01.8 - FIX RESTORE OF LARGE CONTIGUOUS FILES
;
      .IDENT /01.1/

```

RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.14 M
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```

        .PSECT
    .BLK.=.
    CONDSP=,BLK,+106
    .=.BLK.+6112
        CALL    PAT1    ; CALL PATCH
    .=.BLK.

        .PSECT    $$PAT
    $$PAT=.
    PAT1:  SUB    #2,CONDSP    ; CHECK DISPLACEMENT
           RETURN
           .IDENT /01.2/
           .MCALL FHD0FS
           FHD0FS =          56    ; DEFINE FILE HEADER OFFSETS
           SIDTOF =          56    ; FILE HEADER IDENT AREA WORD OFFSET
        .PSECT
    .BLK.=.
    .=.BLK.+3312
        MOV    #RSATR,SOUDPB+Q.IOPL+2    ; SET UP WRITE ATTRIBUTE DPB
        MOV    #SIDTOF+I.RVNO,RSATR+2    ; WANT TO CORRECT REVISION DATE
        CALL    PAT2    ; CALL PATCH TO SET UP MORE ATTRIBUTES
    .=.BLK.

        .PSECT    $$PAT
    $$PAT=.
    PAT2:  ADD    R5,RSATR+2    ; MAKE DATE ADDRESS ABSOLUTE
           MOV    #H.UFAT,RSATR+6    ; WRITE RECORD I/O AREA TOO
           ADD    R5,RSATR+6    ; MAKE RECORD I/O AREA ADDRESS ABSOLUTE
           RETURN

    RSATR: .BYTE  13.,35.    ; WRITE TIME/DATE ATTRIBUTES
           .WORD  0    ; TIME/DAT ADDRESS (DONE AT RUNTIME)
           .BYTE  4,32.    ; WRITE RECORD I/O AREA
           .WORD  0    ; RECORD I/O AREA ADDRESS (DONE AT RUNTIME)
           .WORD  0    ; ZERO TO TERMINATE ATTRIBUTE LIST
           .IDENT /01.3/
    
```

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 UTILITIES
 BRU

Seq 5.1.17.14 M

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```

.PSECT
.BLK.=
SEGNUM=.BLK.+166
.=.BLK.+3626
  CALL      PAT3      ; CALL PATCH TO SET SEQUENCE # IN NEW HEADER
.=.BLK.
.PSECT  $$PAT
$$PAT=.
PAT3:  ADD      #M.USE-M.FSQN,R2 ; POINT BACK TO RP USE FIELD
        MOV      SEGNUM,H.FSEQ(R0) ; SAVE SEQUENCE NUMBER IN HEADER
        RETURN
        .IDENT  /01.4/
.PSECT
.BLK.=.
NRPCNT=.BLK.+102
.=.BLK.+2054
  RORB      NRPCNT      ; ALSO FIX NEW RP COUNT FOR NEXT TIME
.=.BLK.
        .IDENT  /01.5/
.PSECT
.BLK.=.
.=.BLK.+1460
  BIT      #RS.SYN!RS.MOU,$RSFLG ; FILE SYNONYM OR MOUNTED DISK?
.=.BLK.+2064
  BIT      #RS.CMP!RS.SYN!RS.MOU,$RSFLG ; TOY WITH EXTENSION HEADERS?
.=.BLK.
        .IDENT  /01.6/
.PSECT
.BLK.=.
MAPPTR=.BLK.+204

```


RSX-11M V3.2
 UTILITIES
 BRU

Seq 5.1.17.14 M

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```

.=.BLK.+11252
  NOP
  CALL PAT4 ; CALL PATCH TO SET UP MAP AREA POINTER

.=.BLK.
  .PSECT $$PAT
  $$PAT=.
    $MAPOF = 134 ; MAP AREA WORD OFFSET
  PAT4:  MOV RO,MAPPTR ; RESET THE POINTER TO THE RP MAP AREA
        ADD # $MAPOF+M.RTRV-M.ESON,MAPPTR ;
        RETURN
  .IDENT /01.7/
  .PSECT

.BLK.=.
.=.BLK.+632
  .WORD 0 ; SHOW FIRST BITMAP BLOCK IN BUFFER

.=.BLK.
  .IDENT /01.8/
  .PSECT

.BLK.=.
XSGNUM=.BLK.+103

.=.BLK.+1120
  CALL PAT5 ; CALL PATCH TO SAVE TOTAL FILE SIZE

.=.BLK.+1564
  MOV TOTSIZ,$ALLSZ ; GET ALLOCATION SIZE FROM 1ST HEADER
  MOV TOTSIZ+2,$ALLSZ+2 ; THIS REPRESENTS THE ENTIRE FILE SIZE

.=.BLK.
  .PSECT $$PAT
  $$PAT=.
  PAT5:  MOV H.UFAT+F.WIRK(RO),TOTSIZ ; SAVE TOTAL SIZE OF FILE
        MOV H.UFAT+F.WIRK+2(RO),TOTSIZ+2 ; FOR POSSIBLE USE LATER
        CLRB XSGNUM ; RESET EXTENSION SEGMENT NUMBER
        RETURN

```

RSX-11M V3.2
UTILITIES
BRU

Seq 5.1.17.14 M

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TOTSIZ: .BLKW 2 ; TOTAL SIZE OF FILE (# OF BLOCKS)

.END

Assemble BRUHEAD.PAT to create BRUHEAD.POB.

```
>SET /UIC=[74,40]
>MAC BRUHEAD.POB=BRUHEAD.PAT
```

Extract the module BRUHEAD.OBJ from [1,20]BRU.OLB, apply the patch, assign TK: to your target output device, and build BRU.

```
>LBR BRUHEAD.OBJ;1=[1,20]BRU/EX:BRUHEAD
>PAT BRUHEAD.OBJ;2=BRUHEAD.OBJ;1/CS:27167,BRUHEAD.POB/CS:72337
>SET /UIC=[1,20]
>LBR BRU/RP=[74,40]BRUHEAD.OBJ;2
>ASN ddn:=TK:
>TKB @ [1,24]BRU.BLD
```

RSX-11M V3.2
 MISC SYSTEM TASKS
 RMD

Seq 5.7.5.3 F

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A WAY TO REDUCE OVERHEAD IN RMD (SPR 11-80028Z AG)

PROBLEM
 STATEMENT

RMD updates the screen 1 line at a time. This means that it can take up to 24 QIO's to update. Most of these QIO's are relatively small, making the overhead to update the screen excessive.

RESPONSE

The following patch, when applied to module RMDRIV will make RMD fill a 256 buffer before issuing a QIO. This means that, after the original screen paint, the screen can almost always be updated with a single QIO. This has resulted in a significant reduction in system overhead.

OU:RMDRIV.MAC;2/AU/-BF=IN:[14,10]RMDRIV.MAC;1

\-2,2

.IDENT /1.2/

-9,9

; VERSION: 1.2

-11

; MODIFICATIONS:

;

AG046 CHANGE TO SINGLE LONG QIO

;

;

-33,33,;/AG046/

.MCALL QIOWS,DIRS,*SIGSS,*WTSSS

-49,;/AG046/

.MACRO PUTC CHAR,?A ; PUT CHARACTER TO OUTPUT BUFFER

C*P R5,#BUFFER+RUFL-1

BLT A

CALL OUTPUT

A: MOV9 CHAR,(R5)+

.ENDM

RSX-11M V3.2
MISC SYSTEM TASKS
RMD

Seq 5.7.5.3 F

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SET /UIC=[14,24]
MAC RMDRIV,[14,34]RMDRIV/-SP=[1,1]EXEMC/ML,[11,10]RSXMC/PA:1,[14,10]RMDRIV
SET /UIC=[1,24]
LBR RMD/RP/-EP=[14,24]RMDRIV

TKB @PMDBLD

RSX-11M V3.2
DRIVERS
FDX-TTDRV

Seq 3.1.3.9 N
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FULL DUPLEX TERMINAL DRIVER QUESTIONS ANSWERED (SPR 11-800292 DD)

The following is a compilation of answers to often asked questions about the Full Duplex Terminal Driver. These procedures are provided for information only and are unsupported.

Q1: How do I select the size of the driver's partition, called TTPAR in RSX-11M systems, or TTCOM for RSX-11M-PLUS systems?

A1: By default, SYSGEN sets the size of TTPAR (TTCOM) to 8K words, but it can usually be made smaller. TTPAR contains code plus a private buffer pool, which is allocated in 20 word chunks for typeahead buffers, UCB extensions, and I/O buffers. Since the amount of I/O buffers required depends on both system activity and the length of the I/O requests, an exact sizing guideline cannot be given. A rough algorithm for determining the size of TTPAR is:

$$P = C + (20 * T) + (60 * A)$$

- Where: P is the size of TTPAR in decimal words
- C is the code size of the driver (from the line "TASK IMAGE SIZE" in [1,34]TTDRV,MAP)
- T is the number of terminals in the system
- A is the average number of I/O requests pending at any time

The above formula can be used to determine the size of TTCOM for RSX-11M-PLUS systems by setting C = 0 (since the code is strictly Instruction space and TTCOM is strictly Data space).

The value obtained for P is in decimal words; convert to octal bytes/100(8) for the TTPAR SET /MAIN command. For M-PLUS systems, convert P to octal words and use the result as the argument for the /SIZE switch of the VMR LOAD command.

If space is exhausted in TTPAR (TTCOM), the terminal driver will attempt to use primary pool, so if you're short on system pool, pad TTPAR (TTCOM) for comfort.

NOTE: The following answers involve changing code within the driver. It is recommended that a correction file be created to apply the changes stated, although it is possible to make the changes with ZAP or OPEN. The line numbers cited refer to version 1 of the appropriate module. All the modules reside in [11,10].

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DRIVERS
FDX-TTDRV

Seq 3.1.3.9 N

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- Q2:** The Full Duplex Terminal Driver will attempt to buffer both input and output requests to allow the task to be checkpointed. How do I disable this feature if it is causing thrashing in my system?
- A2:** The driver stops a task while it performs terminal I/O. Checkpointing will occur only if there is contention for the memory the I/O bound task occupies. Thrashing between many tasks performing terminal I/O can occur and will degrade system response due to excessive checkpointing, especially if the I/O requests are for single characters. To disable stopping and checkpointing a task performing terminal input, change line 134 of the module TTRW,MAC which reads:

```
BCS UNBI ;N - JUMP
to
BR UNBI ;DISALLOW CHECKPOINTING DURING INPUT
```

To disable stopping and checkpointing a task performing terminal output, change line 811 of the module TTRW,MAC which reads:

```
BCS CLR16 ;N - JUMP
to
BR CLR16 ;DISALLOW CHECKPOINTING DURING OUTPUT
```

Note that a read with prompt function is considered an output request when the check for buffering is made.

- Q3:** When a remote (dial-up) line is answered, the characteristics of the line are reset and the speed is changed to a rate specified at SYSGEN. How can I disable the resetting of the line characteristics and baud rate?
- A3:** The resetting of the line characteristics is done by routine MANS in the module TTMOD,MAC (line 167). To maintain the line parameters across dial-ins or to reset them to a particular setting, modify lines 167 through 178 appropriately. Note that this routine returns the C-bit clear, so make sure that any local modifications adhere to this. Also note that line 173 is where the speed is reset. This line should be commented out (place a semi-colon before it) to not affect the baud rate. In addition, to maintain the baud rate constant, the following line should also be commented out:

If your remote lines are interfaced through a DH-11, comment out line 594 of the module TTYH,MAC, which reads:

```
MOV T$$MAN,LPR(R3) ;;;SET LINE PARAMETERS
```

If your remote lines are interfaced through a DZ-11, comment out line 190 of the module TTYZ,MAC, which reads:

```
MOV @SP,LPR(R3) ;LOAD PARAMETERS
```

RSX-11M V3.2
DRIVERS
FDX-TTDRV

Seq 3.1.3.1Ø N

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NOTE ON USING TERMINAL DRIVER SUBFUNCTION TF.RCU (SPR 11-26495 DD)

PROBLEM
STATEMENT

Terminal Driver subfunction TF.RCU does not work as described in the manual.

RESPONSE

Note that the restore cursor position subfunction (TF.RCU) will only work correctly if the terminal driver knows the exact position of the cursor. Although the driver attempts to accurately maintain the cursor co-ordinates, it is not always possible to accomplish this. For example, if a task outputs a cursor positioning escape sequence, the driver cannot interpret the sequence to track the new cursor location. Write-pass-all output is not tracked at all. In addition, turning a terminal off and on may reset the cursor to home position without the driver's knowledge. Before using the TF.RCU subfunction, to get back into synchronization, it is therefore best to use the driver's cursor positioning feature (via the VFC parameter) to set both the terminal and driver cursor co-ordinates to a fixed location.

RSX-11M V3.2
RSX-11M-PLUS V1.0
IAS V3.0
FORTRAN IV V2.2

LINKING FCSRES TO FORRES OR F4PRES

Fortran and Fortran IV-PLUS users who want to reduce the size of their respective resident libraries can do so by linking either FORRES or F4PRES to FCSRES (File Control Services Resident Library).

In order to link either resident library to FCSRES the user must first allocate enough space at task build time to allow FCSRES to be mapped. To do this the user must specify a lower base address for the FORTRAN or FORTRAN IV-PLUS resident library than would be normally specified if no linking to FCSRES was going to be done. The base address to be used will vary depending on the size of FCSRES but if the size of FORRES or F4PRES is 8K words and the size of FCSRES is 4K words the base address used at task build time will be 120000 instead of the normal 140000. The size of either FORRES OR F4PRES should be the same (ie. 40000).

The following example shows how to build a FORTRAN IV V2.2 resident library:

```
>MAC FORRES,FORRES/--SP=FORRES ;ASSEMBLE FORRES
>TKB
TKB>[1,1]FORRES/--HD/--PI,FORRES/--SP,[1,1]FORRES=FORRES,[1,1]FORRES/LB
TKB>/
ENTER OPTIONS:
TKB>STACK=0
TKB>PAR=FORRES:120000:40000
TKB>LIBR=FCSRES:RO
TKB>/
```

ASSUMPTIONS :

```
FORRES is 8K words.
FCSRES is 4k words.
FCSRES was already created and installed.
```


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SAVING MEMORY UNDER RSX-11M V3.2

Only two PDP-11s support memory sizes greater than 124K words: the 11/44, and the 11/70. Since RSX-11M-PLUS is the natural choice on the 44 and 70, most use of RSX-11M should be on machines which have relatively small amounts of memory. Unfortunately, the default RSX-11M V3.2 Sysgen options do not make optimal use of memory on small systems.

Do the following to tailor an RSX-11M V3.2 system to a memory-limited machine:

1. SYSVMR.COMD sets the size of POOL to the maximum. If you don't need that much, change it.
2. For systems with the full duplex terminal driver, SYSVMR sets TTPAR to 8K words, but it can usually be made much smaller. TTPAR contains code plus a private buffer pool, which is allocated in 20 word chunks for type-ahead buffers, UCB extensions, and i/o-pending buffers. Since the space needed for the i/o-pending buffers depends on both system activity and the sizes of the i/o requests, an exact sizing guideline cannot be given. A rough guideline for sizing TTPAR is:

$$P = C + (20 * T) + (60 * A)$$

Where P is the size of TTPAR in decimal words
C is the code size (from the line "TASK IMAGE SIZE" in [1,34]TTDRV.MAP)
T is the number of terminals in the system
A is the number of users likely to be ACTIVELY typing at one time

The value obtained for P is in decimal words; convert to octal bytes/100 for the TTPAR SET /MAIN command. If space is exhausted in TTPAR, the driver will attempt to use the system pool, so if you're short on system pool, pad TTPAR for comfort.

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3. SYSVMR.COMD allocates space in DRVPAR for ALL loadable drivers selected. If you don't need all of them all of the time, don't load them in VMR and don't allocate space for them in DRVPAR (thereby saving both memory and pool). Instead, use the MCR command LOAD as needed. Use /HIGH and /PAR to avoid memory fragmentation -- for example,

LOA DX:/PAR=GEN/HIGH

CAUTION: Memory fragmentation can be a worse problem than wasted memory. Loading on an as-needed basis is helpful only if both the following conditions are met: 1) The driver is not needed very often; 2) The users who issue the LOAD command know how to avoid fragmentation--i.e. they've read the documentation of the LOAD command, understand /HIGH and /PAR, and know how to run RMDEMO.

4. As described in the Software Dispatch issue of March, 1980, the queue manager system can be reduced from 32K words to just over 12K words by rebuilding without the PAR task builder directives. Or, you can achieve the same effect by REMoving the tasks and re-INStalling with /INC=0.
5. COT... and ...RMD, too, are built to an over-large 8K words. Remove and install with zero increment.
6. If VT52 support is all that is needed for an RMDEMO program, the old RMD52 from version 3.1 is adequate. Retrieve it from a V3.1 kit, and re-build under V3.2, to yield a 1.5K word task. Since RMD52 doesn't have all the features of the new program, we keep both versions on our system: RMD52 installed as ...RMD, and the version 3.2 RMDEMO installed as RMDBIG. Of course, use of the old V3.1 RMDEMO program under V3.2 is UNSUPPORTED.