Task Oriented Practice (TOP)
4ESS™ Switch
4AP15 To 4AP16 Retrofit
3B Computer APS

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1. Overview

This practice contains the procedure for office technicians to use to retrofit the 3B computer Attached Processor System (APS) from the 4AP15 generic to the 4AP16 generic. Back-Out procedures are provided if problems occur in loading or coming up on the new generic.

This practice is reissued to incorporate field comments.

This practice contains CAUTIONS.

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This practice was developed by the Lucent Technologies Toll Switching - R & D Information Development.

2. Guide to the Procedure

General

The Off-Line disk retrofit method is used when the basic structure of the 3B disk has to be changed. This procedure only must be used when going from the 4AP15 generic to the 4AP16 generic.

System Update Procedure

Off-Line Disk Method: The procedure starts by having both system disks (Moving Head Disk [MHD] 0 and MHD 1) active (ACT) Full Duplex. When the Off-Line Disk method is selected, the new generic can be written into the primary partitions of the off-line MHD while the system is running on the old generic from the on-line MHD. This method will result in having one set of old generic partitions on the on-line MHD and one set of new generic partitions on the off-line MHD. These two sets will become the same again after the completion of the retrofit procedure. The System Update Procedure (SUPR) Off-Line Disk method of loading the new generic is based on three distinct steps: (1) the Enter Step (2) the Proceed Step, and (3) the Commit Step.

A. Enter Step

Copy from tape the new generic into the primary partitions of the off-line disk. The SUPR process will recent change one of the disks to off-line and read the new generic from tapes onto the primary partitions of that off-line MHD. After the tapes are read, SUPR will transfer control to the application process (APPLHOOK) to perform application specific work. APPLHOOK will examine the data base the system is currently running on, and build recent change scripts to be applied to the new data base to map over office dependent data and equipages. APPLHOOK returns control to SUPR which in turn copies the primary partitions (boot, root, etc, and db) to the backup partitions.

B. Proceed Step

The SUPR process will transfer control to the application process (APPLHOOK). APPLHOOK will apply the recent change scripts, built in the Enter Step, to the new data base. After the recent change scripts are applied, the new data base will contain the current system (that is, the data base the system is currently running on) office dependent data and equipages. APPLHOOK copies system files and partitions used by applications from the old generic to the off-line disk. Then, APPLHOOK prompts the technician to manually stop receiving Automatic Message Accounting (AMA) records from the 1B Processor. After AMA is stopped, APPLHOOK copies the log file to the off-line disk and returns control to the SUPR process.

SUPR marks the off-line disk as bootable. The system is configured to boot on the secondary disk with Control Unit 0 forced on-line. Then, the system is booted to the new generic.

C. Commit Step

The off-line disk (that is, the one containing the old generic) is marked Out-of-Service (OOS), and a request is issued to restore the disk to service. After the disk is restored, both system disks will contain the new generic.

D. Emergency Back-Out

If problems are encountered during the retrofit, the technician is given the capability to cancel the retrofit at any step of the procedure by using the appropriate Emergency Back-Out Procedure. The back-out procedures are divided into three categories as follows:

- Back-out SUPR Enter and Proceed Steps
- Back-out from the new generic to the old generic
- If system automatically backed out after booting.

Before the retrofit is started, the Emergency Back-Out Procedures for the retrofit process must be read and understood.

System Update Menu Page

The interactive System Update Menu Page is provided for the user to execute SUPR and application commands with their appropriate arguments. The System Update Menu Page is composed of the following three screens:

- System Update Menu Page 107 (main screen)
- Enter Arguments Page 1 of 2
- Enter Arguments Page 2 of 2.

All actions are done on the System Update Menu Page except when specifying Enter command arguments which are done on the two Enter Argument screens.

On each of the three screens, a prompt (CMD<) is located in the upper left-hand corner. A blinking cursor is placed after it to designate where the desired menu number(s) should be typed. Error, warning, and procedural messages are displayed in reverse video. Status messages are displayed in normal video. All messages displayed on the message line are also printed on the Receive Only Printer (ROP). Output messages are scrolled through the Scrolling Line. The manual input line is used to execute Program Documentation Standards (PDS) manual input commands.

A. System Update Menu Page 107

The menus for the System Update Menu page are divided into three groups according to functions (Figure 1).

The first group (the numbers 701 through 709) represents the SUPR processes and application processes that can be executed from the System Update Menu page. The first three processes (Enter, Proceed, Commit) are mandatory processes that must be executed to install a new generic into the 3B computer system using SUPR.

The mandatory processes are listed in the order in which they must be executed (701, 702, 703). As each of the three processes complete successfully, their menu numbers and descriptions are shown in reverse video. This is a visual indication of which mandatory processes have completed successfully and which mandatory process still need to be executed. When all three of these processes are displayed in reverse video, the system update is completed.

Menu numbers 704 through 709 are navigational commands that provide direct control over the procedure to the operator .

The second group consists of numbers 720, 721, and 735. Numbers 720 and 721 represent optional arguments that may be desired on some of the SUPR command lines. Number 735 is the command to execute a SUPR or application process that is Ready to be executed.

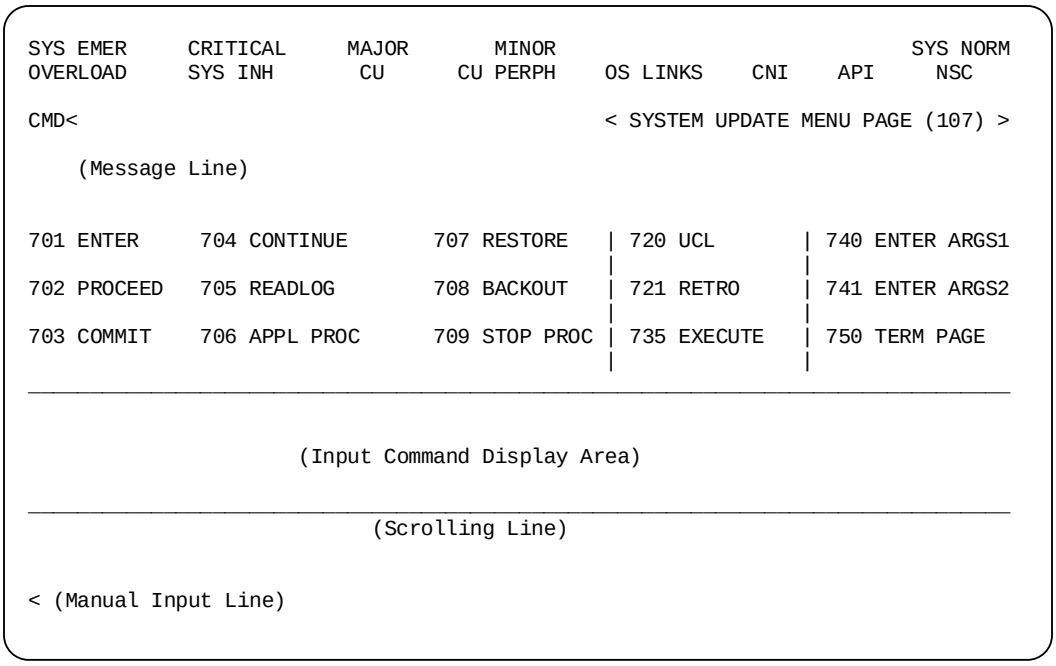

Figure 1. System Update Menu Page 107 Screen

The third group consists of numbers 740, 741, and 750. Number 740 is the command to bring up Enter Arguments Page 1 or 2. Number 741 brings up Enter Arguments Page 2 of 2. Number 750 terminates the System Update Menu Page.

B. Enter Arguments Page 1 of 2 Screen

The menu numbers 760 through 764 request arguments that are to be specified on the Enter command (Figure 2). All Enter command arguments are specified on the screen except the Destination on disk and the Tape sequence arguments which are specified on the Enter Arguments Page 2 of 2 screen. To the right of the menu numbers and their descriptions are the possible values that may be specified for each argument along with their default values (if any). If a default value is not listed for an argument, that argument is a mandatory argument and must be specified.

```
SYS EMER     CRITICAL     MAJOR       MINOR                              SYS NORM
OVERLOAD     SYS INH       CU      CU PERPH    OS LINKS    CNI    API     NSC

CMD<                                          < ENTER ARGUMENTS PAGE 1 OF 2 >

    (Message Line)


760 UPDATE METHOD:                 (B = BACKUP PARTITION, 0 = OFF-LINE DISK)

761 DFC PREFERENCE:                (0 = DFC 0, 1 = DFC 1, 2 = NO PREF <DEFAULT>)

762 UPDATE BACKUP PARTITIONS:      (Y = YES <DEFAULT>, N = NO)

763 UNCONDITIONAL EXECUTION:       (N = NO <DEFAULT>, Y = YES)

764 TAPE DEVICE:                   (SPECIFY FULL PATHNAME)


792 DISPLAY ENTER ARGUMENTS PAGE 2     (SPECIFY DISKS AND SEQUENCE OPTIONS)
793 DISPLAY SYSTEM UPDATE MENU PAGE    (VIEW ENTER INPUT COMMAND LINE)
_____________________________________________________________________________
                           (Scrolling Line)


< (Manual Input Line)
```

Figure 2. Enter Arguments Page 1 of 2 Screen

The menu numbers 792 and 793 control paging. Number 792 displays the Enter Arguments Page 2 screen. Number 793 displays the System Update Menu Page 107 screen, automatically formats the Enter input command, and displays it in the display area of Page 107.

C. Enter Arguments Page 2 of 2 Screen

Near the top of the screen, the possible argument values for destination (DEST) and sequence option (SEQ OPTION) are displayed (Figure 3). Menus 770 through 779 are for specifying the Destination path name argument for the disk to be updated. Numbers 780 through 789 are for specifying the SEQ Option argument.

Menu numbers 791 and 793 control paging. Number 791 displays the Enter Arguments Page 1 of 2 screen. Number 793 displays the System Update Menu Page 107 screen, automatically formats the Enter input command, and displays it in the display area.

```
SYS EMER     CRITICAL     MAJOR       MINOR                                SYS NORM
OVERLOAD     SYS INH       CU      CU PERPH    OS LINKS    CNI    API     NSC

CMD<                                          < ENTER ARGUMENTS PAGE 2 OF 2 >

    (Message Line)


DEST = DESTINATION-DISK TO BE UPDATED (FULL PATHNAME)
SEQ OPT = SEQUENCE OPTION FOR DESTINATION (S = SINGLE, D = DOUBLE, T = TRIPLE)

770 DEST:                                                  780 SEQ OPT:

771 DEST:                                                  781 SEQ OPT:

772 DEST:                                                  782 SEQ OPT:

773 DEST:                                                  783 SEQ OPT:

774 DEST:                                                  784 SEQ OPT:

775 DEST:                                                  785 SEQ OPT:

776 DEST:                                                  786 SEQ OPT:

777 DEST:                                                  787 SEQ OPT:

778 DEST:                                                  788 SEQ OPT:

779 DEST:                                                  789 SEQ OPT:

_____________________________________________________________________________

791 DISPLAY ENTER ARGUMENTS PAGE 1     (SPECIFY OTHER ENTER ARGUMENTS)
793 DISPLAY SYSTEM UPDATE MENU PAGE    (VIEW ENTER INPUT COMMAND LINE)
_____________________________________________________________________________
                            (Scrolling Line)


< (Manual Input Line)
```

Figure 3. Enter Arguments Page 2 of 2 Screen

D. System Update Installation - 1960 Screen

System Update Installation Display Page 1960 (Figure 4) replaces the 109 Display Page. The 109 Display Page will be the menu page for system update.

To select a BWM, 9000,"Y" is entered where Y is the desired BWM number. The menu page then displays the current status of the requested BWM and sets the SU=nn-nnnn indicator to the requested BWM name. The 9010 command verifies the BWM and will delete improper message lines. The verify will also check the message file integrity. When the verify successfully completes, an indication is given and the contents of the

APPLY section are displayed.

After an EXEC ALL command is entered, a 9560 may be used to stop execution of the next command line in the section.

After a EXEC command is entered, the 9565,Z where Z is the line to be reset, can be used to reset a specified line if necessary. The specified line is then highlighted and may be executed again.

The action indicators (91XX, 92XX, 93XX, or 94XX) are used in conjunction with the section indicators (XX = 10, 20, 30, 40, or 50) to perform the desired software update installation functions. A single command number represents the action desired and the section of the message file affected. The first two digits represent the action. The second two digits represent the section.

The 9260,F command is used to print any American Standard Code for Information Interchange (ASCII) files associated with the currently installed software update.

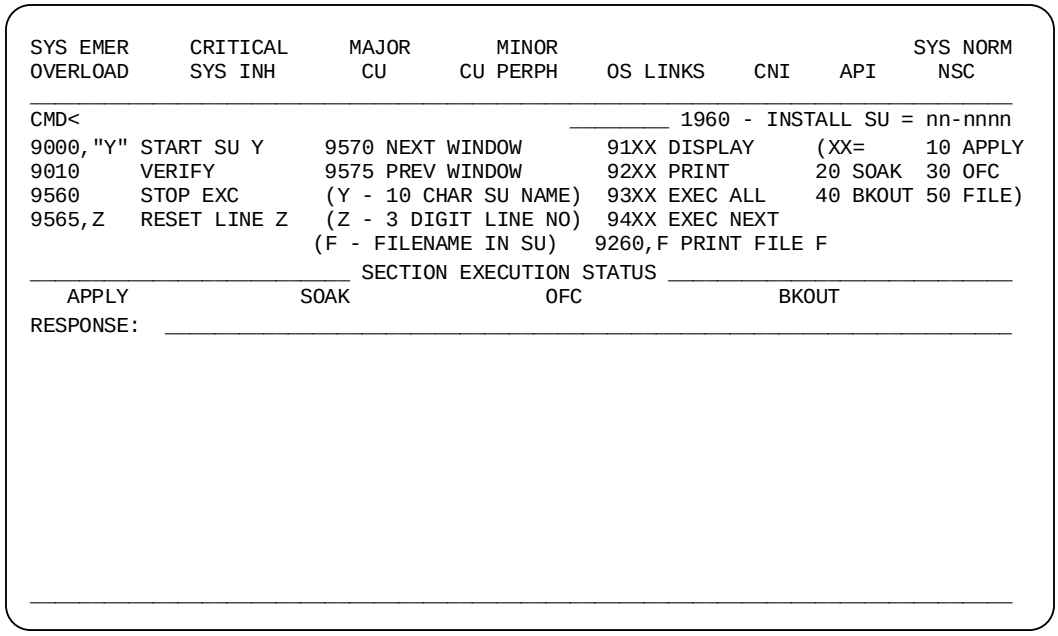

Figure 4. Display Page 1960—SU Installation

3. Preparation and Planning

Generic Load Requirements

The generic load for the 3B computer must be 4AP15 5M.R4 issue prior to the start of the update.

General Notes

The following are general notes that apply to the 4AP15 to the 4AP16 generic retrofit:

(a) **Place a check mark beside each step or substep when completed.**

(b) **A requirement for retrofitting from 4AP15 to the 4AP16 is that the CNI must be equipped with four DLNs.**

(c) **A requirement for retrofitting from 4AP15 to the 4AP16 is that the total of SS7 nodes (including CCS7, HSAL, and CCIT7 nodes), in the CNI ring must not exceed 40.**

(d) **A requirement for retrofitting from 4AP15 to the 4AP16 is that the 3B20D computer main store memory must be equipped with a minimum of 12 TN56 circuit packs (24 MB of memory).**

(e) All DCHN link nodes must be IRN2s.

(f) All input messages and commands are entered at the MCRT unless otherwise stated.

(g) Some response output may appear in different order due to spooler processing.

(h) Additional output lines may appear due to the specific office configuration.

(i) During this procedure, appropriate ***Response:*** message must be received before proceeding to next step.

(j) Since many of the commands invoke execution of remove (RMV), restore (RST), and diagnose (DGN), ensure that execution has successfully completed before continuing the update. The **OP:DMQ** input message will provide the necessary status.

(k) ***This is a common document that is to be used in all 4ESS switch offices retrofitting from 4AP15 to 4AP16 generic. Steps within this document that start*** **''If AT&T office is being retrofitted''*, MUST NOT BE PERFORMED by Local Exchange Carriers (LECs) or Independent Telephone Companies.***

(l) ***Steps that start*** **''If Gateway office or International Switching Center (ISC) is being retrofitted''*, MUST NOT BE PERFORMED by offices that are not a Gateway office or ISC.***

(m) **If AT&T office is being retrofitted**, verify that office has the GTT data base:

Enter message

VER:MEMORY,APP IBGTT:APPDB!

Check the ROP for output. Ensure TEN DIGIT size is 1000000 (field 3). If the size is not correct, contact next higher technical support group. An example of the structure is shown below:

```
APPLICATION      INBOUND
CREATED          .........
START ADDR           10
UPD SEQ NUM          10

    NPA NXX      000010 0002 00007000 00000000 000
    TEN DIGIT    000230 0003 01000000 00000000 000
    SIX DIGIT    010470 0001 00001884 00000000 000
    NCP TBL      010530 0001 00001023 00000000 000
    CRC TBL      010570 0001 00001280 00000000 000

TOTAL CLUMPS     00001058
CLUMP SIZE       00005120
```

4. Preliminary Steps

NOTE:
The preliminary steps must be completed successfully before starting to implement the System Update Procedure.

Steps to Be Done One Day Prior to Retrofit

(1) **Place a check mark beside each step when completed.**

(2) Do Steps 3 through 14 to verify 4AP16 generic 3B computer tapes to be loaded.

NOTE:
If tapes do not verify, appropriate support organization must be contacted.

(3) Mount rt0 1 tape (without write-enable ring) on available tape drive.

NOTE:
Step 4 will take approximately 40 minutes to complete.

(4) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(5) Demount rt0 1 tape.

(6) Mount rt0 2 tape (without write-enable ring) on available tape drive.

NOTE:
Step 7 will take approximately 35 minutes to complete.

(7) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(8) Demount rt0 2 tape.

(9) Mount rt0 3 tape (without write-enable ring) on available tape drive.

NOTE:
Step 10 will take approximately 35 minutes to complete.

(10) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(11) Demount rt0 3 tape.

(12) Mount rt0 4 tape (without write-enable ring) on available tape drive.

NOTE:
Step 13 will take approximately 10 minutes to complete.

(13) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(14) Demount rt0 4 tape.

(15) Mount db tape (without write-enable ring) on available tape drive.

NOTE:
Step 16 will take approximately 5 minutes to complete.

(16) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(17) Demount db tape.

(18) Enter: **OP:STATUS:FREEDISK,FN"/tmp"!**

Ensure printout indicates a minimum of 2,400 blocks remaining. If printout indicates less than 2,400 blocks, contact support organization for resolution.

(19) Contact support organization to determine if any BWMs need to be applied. Ensure that the BWM that contains applhook products is the latest; and has been or will be applied. Verify if any late fixes have been added to the Pre-Apply BWM that may change the sequence of events in the Enter Step - Load New Generic on Off-Line Disk section.

(20) If BWMs need to be applied, do Steps 21 through 36; otherwise, go to Step 37.

(21) Enter: **OP:STATUS:LISTDIR,FN"/etc/bwm"!**

(22) If listed BWMs (Step 21) are not in the format of AAAxx-xxxx (BWM, CFT or DMT number), enter message for each BWM to be applied:

COPY:BWM xxxxxx!
(xxxxxx = BWM, CFT, or DMT number to be applied).

Response:

MOVING /etc/bwm/xxxxxx TO /etc/bwm/AAAxx-xxxx
COPY BWM COMPLETED

(23) At 3B MCRT, depress **NORM DISP** (**PF2**) key and enter **1960** in command mode to obtain display Page 1960.

(24) Select the BWM by entering **9000,**AAAxx-xxxx in command mode (where AAAxx-xxxx is number to be applied).

(25) Enter **9260,SCANS** in command mode for BWM to be applied to determine if any special procedures need to be done after BWM is applied. Save printout for later use.

(26) Enter CMD: **9010** to verify the BWM.

(27) Wait for UPD VFY COMPLETED message to be displayed in RESPONSE field.

(28) Enter CMD: **9310** to execute the APPLY Section.

(29) Wait for COMPLETED: APPLY SECTION message to be displayed in RESPONSE field.

(30) Enter CMD: **9320** to execute the SOAK Section.

(31) Wait for SOAK SECTION COMPLETED: TIMER HAS BEEN SET to be displayed in RESPONSE field, and ROP printout indicating that soak timer is in progress. See the following:

UPD PRINT SOAK TIMER IN PROGRESS

----------BWM SOAK TIMER INFORMATION----------
BWM NAME = AAAxx-xxxx REMAINING SOAK PERIOD = 23:59 (HH:MM)

CURRENT SOAK TIMER
START Wed Jul 26 23:32:54 1997
END Thu Jul 27 23:32:54 1997
DURATION 24:0 (HH:MM)

PREVIOUS SOAK TIMER
START Wed Jul 26 23:32:54 1997
END Thu Jul 27 23:32:54 1997
DURATION 24:0 (HH:MM)

----------END OF BWM SOAK TIMER INFORMATION----------
UPD PRINT SOAK TIMER COMPLETED

(32) Wait for SOAK PERIOD COMPLETED: SOAK SECTION message to be displayed in RESPONSE field.

NOTE:
The END field under CURRENT SOAK TIMER section indicates the time this message should be displayed.

(33) Enter CMD: **9330** to execute the OFC Section.

NOTE:
The time to finish the OFC Section is dependent on the BWM size.

(34) Wait for COMPLETED: OFFICIAL SECTION message to be displayed in RESPONSE field.

(35) If there are special procedures to be followed per Step 25, do as required.

(36) Repeat from Step 24 for each BWM to be entered.

(37) Do Steps 38 through 59 to run file system audits and update primary or backup partitions.

(38) Determine which file system is running (root or broot).

Enter: **OP:STATUS:FILESYS!**

Response:

/ on /dev/root read/write on (date) — system running on root
.
.

OR

/ on /dev/broot read/write on (date) — system running on broot
.
.

(39) If system is running on root, do Steps 40 through 49; otherwise, go to Step 50.

(40) Run the file system block audit on the primary partition:

Enter: **AUD:FSBLK 1,INS"/dev/root"!**

Response:

AUD ENV=RTR FSBLK 1 /dev/root COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

NOTE:
Contact the appropriate support organization before running in CORR mode.

(41) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSBLK 1,INS"/dev/root";CORR!**

(42) If errors persist, contact your support organization.

(43) Repeat from Step 40 for **"/dev/db"**, **"/dev/etc"**, and **"/dev/log"**.

(44) Run the file system linkage audit on the primary partition:

Enter: **AUD:FSLINK 1,INS"/dev/root"!**

Response:

AUD ENV=RTR FSLINK 1 /dev/root COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

NOTE:
Contact the appropriate support organization before running in the CORR mode.

(45) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSLINK 1,INS"/dev/root";CORR!**

(46) If errors persist, contact your support organization.

(47) Repeat from Step 44 for **"/dev/db"**, **"/dev/etc"**, and **"/dev/log"**.

NOTE:
Step 48 will take approximately 10 minutes to complete.

(48) Update the backup partitions:

Enter: **EXC:QCOPY:TOBROOT!**

Response:

(On the ROP)
REPT QCOPY DISK COPY COMPLETED

(49) GO TO STEP 60.

(50) If the 3B computer is running on broot, do Steps 51 through 59; otherwise, go to Step 60.

(51) Run the file system block audit on the secondary partition:

Enter: **AUD:FSBLK 1,INS"/dev/broot"!**

Response:

AUD ENV=RTR FSBLK 1 /dev/broot COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

NOTE:
Contact the appropriate support organization before running in the CORR mode.

(52) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSBLK 1,INS"/dev/broot";CORR!**

(53) If errors persist, contact your support organization.

(54) Repeat from Step 51 for **"/dev/bdb"**, **"/dev/betc"**, and **"/dev/log"**.

(55) Run the file system linkage audit on the secondary partition:

Enter: **AUD:FSLINK 1,INS"/dev/broot"!**

Response:

AUD ENV=RTR FSLINK 1 /dev/broot COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

NOTE:
Contact the appropriate support organization before running in the CORR mode.

(56) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSLINK 1,INS"/dev/broot";CORR!**

(57) If errors persist, contact your support organization.

(58) Repeat from Step 55 for **"/dev/bdb"**, **"/dev/betc"**, and **"/dev/log"**.

NOTE:
Step 59 will take approximately 10 minutes to complete.

(59) Update the primary partitions:

Enter: **EXC:QCOPY:TOROOT!**

Response:

(On the ROP)
REPT QCOPY DISK COPY COMPLETED

(60) Do Steps 61 through 82 to write 3B computer 4AP15 generic backup tapes.

(61) Mount a 2,400-foot blank tape (with write-enable ring) on available tape drive.

(62) Run boot audits:

Enter: **EXC:ENVIR:UPROC,FN"/tools/bootaud"!**

NOTE:
Step 63 will take approximately 5 minutes to complete.

(63) Observe the ROP and wait for **EXC ENVIR UPROC /tools/bootaud COMPLETED** message and ensure no errors are received. **Do not** continue until errors, if received, are corrected.

(64) Dump the /etc/pdtspec file and verify its content:

Enter: **DUMP:FILE:ALL,FN"/etc/pdtspec"!**

Response:

DUMP FILE ALL COMPLETED
/dev/lboot
/dev/vtoc
/dev/boot
/dev/bboot
/dev/root
/dev/etc
/dev/db
/dev/amafiles
/dev/amabfiles

(65) Make backup tapes:

Enter:
COPY:BKDISK;START:SRC"/dev/vtoc",TD"/dev/mtX**8",TPSIZE 2200!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(66) Demount tape, label rt0 1 tape per local practice, and remove write ring from tape.

(67) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(68) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(69) Demount tape, label rt0 2 tape per local practice, and remove write ring from tape.

(70) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(71) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(72) Demount tape, label rt0 3 tape per local practice, and remove write ring from tape.

(73) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(74) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(75) Demount tape, label rt0 4 tape per local practice, and remove write ring from tape.

(76) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(77) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE or

COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL

(78) If COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL message was received, go to Step 82; otherwise, continue update.

(79) Demount tape, label rt0 5 tape per local practice, and remove write ring from tape.

(80) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(81) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL

(82) Demount tape, label db tape per local practice, and remove write ring from tape.

(83) Do Steps 84 through 102 to verify 3B computer backup tapes just written.

(84) Mount 4AP15 rt0 1 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 85 will take approximately 40 minutes to complete.

(85) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(86) Demount rt0 1 backup tape.

(87) Mount 4AP15 rt0 2 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 88 will take approximately 35 minutes to complete.

(88) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(89) Demount rt0 2 backup tape.

(90) Mount 4AP15 rt0 3 backup tape (without write-enable ring) on available tape drive.

(91) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(92) Demount rt0 3 backup tape.

(93) Mount 4AP15 rt0 4 backup tape (without write-enable ring) on available tape drive.

(94) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(95) Demount rt0 4 backup tape.

(96) If 4AP15 rt0 5 backup tape was written, continue the update; otherwise, go to Step 100.

(97) Mount 4AP15 rt0 5 backup tape (without write-enable ring) on available tape drive.

(98) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(99) Demount rt0 5 backup tape.

(100) Mount 4AP15 db backup tape (without write-enable ring) on available tape drive.

(101) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(102) Demount db backup tape.

(103) Enter: **OP:DMSORDERS INCORE!**

(104) If there are DMS ORDERS INCORE (Step 103) listed, each data base management system (DMS) order needs to be verified with the responsible organization (CNAC for AT&T) to determine if the DMS order should be activated prior to the retrofit. **If a listed DMS order is not activated, it will be lost which could have an adverse effect on the machine.**

NOTE:
Steps 105 through 110 compares the incore data to the disk data.

(105) Run the office ID data audit:

Enter: **AUD:NIDATA 1;SUM!**

Response:

AUD ENV=RTR NIDATA 1 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(106) If errors are received, contact your support organization.

(107) Run the link configuration data audit:

Enter: **AUD:NIDATA 2;SUM!**

Response:

AUD ENV=RTR NIDATA 2 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(108) If errors are received, contact your support organization.

(109) Run cluster/member routing data audit:

Enter: **AUD:NIDATA 4;SUM!**

Response:

AUD ENV=RTR NIDATA 4 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(110) If errors are received, contact your support organization.

(111) Enter: **OP:NODES!**

(112) Using printout, ensure no CCS7, HSAL, and/or CCITT7 link nodes are in **UNA** state with a link set (**LS**) of 0. Retrofit will abort if the above condition exists.

System Evaluation to Be Done Within 24 Hours Before Retrofit

(1) **Place a check mark beside each step when completed.**

(2) Ensure that the current 3B computer generic is 4AP15 5M.R4.

(3) Ensure that the 3B computer has not experienced terminal suspends, bootstraps, diagnostic failures, or overloads within the past 24 hours.

(4) Ensure that both control units (CUs) have been diagnosed all tests pass (ATP) within the past 24 hours.

(5) Ensure that all 3B computer and/or system problems have been cleared.

(6) Ensure that the disks and input/output processors (IOPs) are running duplex and that the CUs are in Active-Standby mode.

(7) By observing the Ring Group Status Page 1106, ensure that all of the equipped CNI ring link nodes are in the Active-Normal (ACT-NORM) state.

(8) By observing the Signaling Link Summary Page 1108, ensure that all equipped signaling links (SLKs) associated with the equipped CNI ring link nodes are in service and in a stable state.

(9) By observing the enhanced direct link node/attached processor interface (DLN/API) Stream Status Page 1107, ensure that **Hdwr State** and **Appl State** are **ACT** for two DLNs. Ensure that **Mode** is **ONEWAY IN** and **Stream** is **SCAN IN** for one DLN and **Mode** is **ONEWAY OUT** and **Stream** is **SCAN OUT** for the other DLN.

(10) At 1B Processor MCC terminal, enter **108** to obtain System Status Page (108).

(11) Enter **810** (SDC) to get a service degrading report printout. If there are any units listed in the report, make corrective actions to clear the service degrading condition of each unit listed before continuing the update.

(12) All forces on disks must be cleared.

(13) It is recommended that the system update activity be done during light traffic periods.

(14) Prior to the start of the nights system update activities, AMA data should be transferred (tape and/or teleprocessing).

(15) Ensure that all in-progress growth has been completed. If growth has not been completed, contact appropriate support organization to determine if the update can be done.

(16) Observe the 1B MTC terminal and 3B computer MCRT printouts for any audits that are inhibited. If audits are inhibited, take corrective action, as determined by the appropriate support organization.

(17) **If AT&T office is being retrofitted**, contact NAMAC to verify that the retrofit can proceed.

Steps to Be Done on the Night of Retrofit

(1) **Place a check mark beside each step when completed.**

(2) Notify the far-end user of CNI ring link nodes (2STP, D-Chan, PBX links) that their signaling links will be temporarily down for approximately 6 to 8 minutes when the 3B computer is booted to the new generic. Give them the approximate time that the signaling links will be taken down (approximately 6 hours from now).

NOTE:
Step 3 will take approximately 10 minutes to complete.

(3) Verify MHD 0:

Enter: **VFY:MHD 0!**

Wait for **VFY MHD** 0 **COMPLETED** message before verifying the next MHD.

(4) Repeat Step 3 for each equipped MHD in the office (replace 0 with member number of MHD to be verified):

(5) Depress **EA DISP** (**PF1**) key to obtain EAI page.

(6) On EAI page, verify that no unit is forced on-line. If a unit is forced on-line, enter the appropriate EAI command to clear the force.

(7) Depress **NORM DISP** (**PF2**) key and enter **102** in command mode to obtain display Page 102.

(8) Verify that the 3B computer is fully duplex. Observe the 102 Page on the MCRT and enter the following message:

Enter: **OP:OOS!**

If any units are out of service or off-line, restore to full duplex configuration before proceeding.

(9) Verify that CU 0 is ACT RUN. If CU 1 is ACT RUN, enter the following message to switch the CUs:

Enter: **SW:CU!**

Ensure that CU 0 is ACT RUN.

(10) Determine which file system is running (root or broot) and record for later use. This information will be necessary if a back-out is required.

Enter: **OP:STATUS:FILESYS!**

Response:

/ on /dev/root read/write on (date) — system running on root

.
.

OR

/ on /dev/broot read/write on (date) — system running on broot

.
.

(11) Do Steps 12 through 20 to clear disks and min-config.

(12) Depress **EA DISP** (**PF1**) to obtain EAI page.

(13) If /dev/root was listed (Step 10), enter EAI CMD: **31** to clear broot.

(14) If /dev/broot was listed (Step 10), enter EAI CMD: **30** to set broot.

(15) Enter EAI CMD: **33** to clear min-config.

(16) Enter: **SW:PORTSW!**

(17) Depress **EA DISP** (**PF1**) key to obtain EAI page.

(18) If /dev/root was listed (Step 10), enter EAI CMD: **31** to clear broot.

(19) If /dev/broot was listed (Step 10), enter EAI CMD: **30** to set broot.

(20) Enter EAI CMD: **33** to clear min-config.

(21) Depress **NORM DISP** (**PF2**) key.

NOTE:
Step 22 will take approximately 10 minutes to complete.

(22) Run SAWS audits on the 4ESS™ switch. At the 1B MTC terminal:

Enter: **AUD:NUM (43,44,45,66)!**

If any audits have errors, reenter AUD:NUM messages for audits with errors. If errors continue to be received, contact next higher technical support group.

(23) Commit to the normal 1B file on the 4ESS switch. At the 1B MTC terminal:

Enter: **UPD:COMMIT;NORMFILE!**

Response:

UPD:COMMIT COMPLETED TO NORMFILE

(24) At 3B MCRT, dump disk copy of 1ASTAT file:

Enter: **DUMP:FILE:FORMAT,FN"/dev/1astat",x!**

Response:

DUMP FILE DATA COMPLETED — followed by several lines of address — data dumps in the following format:

00000000000 f0ff 0fff aabb ccxx xxxx xxxx xxxx xxxx

aa = Normal 1afile:

00 — 1afile0 or
01 — 1afile1

bb = Lock Indicator:

00 — Update File is Unlocked or
01 — Update File is Locked

cc = System Operating State:

01 — Operating in Normal Mode or
02 — Operating in Update Mode

x = Hexadecimal dump

NOTE:
If cc is 02 (operating in update mode) or bb is not 01 (01 indicates update file is locked), DO NOT continue with the update. Contact your local support organization immediately.

(25) Determine if AMA option is TAPE:

Enter: **OP:AMA;CONTROLFILE!**

(26) If AMA option (OC and/or IC) is TAPE, copy AMA primary data on tape per local practice.

(27) Dump the current state of the AMA control files as follows and save printouts for later use:

- Enter: **OP:AMA;STREAM!**
- Enter: **OP:AMA;CONTROLFILE!**
- Enter: **OP:AMA;CONFIG!**
- Enter: **OP:AMA;MAPS!**

(28) Determine if deferred formatting is on:

Enter: **OP:AMA;PTRS!**

(29) If printout shows DF (deferred formatting) status is ACTIVE, retrofit can not be performed. Contact support organization.

(30) Using printout from OP:AMA;STREAM! command (Step 27), determine if IC or DUAL data stream is listed. If IC or DUAL is listed, perform Step 31; if IC or DUAL is not listed, go to Step 32.

(31) Using printout from OP:AMA;PTRS! command (Step 28), determine if DF is allowed. If DF is allowed, inhibit deferred formatting:

Enter: **SET:AMA;CONTROL;IC:DF OFF!**

Using printout, Ensure DF is not allowed.

(32) Enter following command to obtain current office dependent ECD information concerning all physically equipped 3B computer units in the office.

Enter: **EXC:ENVIR:UPROC,FN"/database/cni/odata/dump"!**

WARNING:
Only one EXC:ENVIR:UPROC command can be run at a time. COMPLETE message must be received before entering the next EXC:ENVIR:UPROC command

Check ROP for following messages:

REPT DUMP STARTED
REPT DUMP - DUMPING EQUIPAGE FOR: A
(where A is list of hardware equipages being dumped)
REPT DUMP - DUMP FILES ARE IN /database/cni/odata
(dump files are in the following format: DMP.*)
REPT DUMP - COMPLETED
EXC ENVIR UPROC /database/cni/odata/dump COMPLETED

(33) Record the feature flag indicators for later use. On the MCRT header line (first line on MCRT display), the feature flag indicators show that the features are currently turned on.

BIT POSITION	-	0	1	2	3	4	5	6
FEATURE	-	X	D	I	N	R	T	A

X = UNASSIGNED BIT
D = DADC
I = ICDR
N = NEMOS
R = CNI RING
T = TOSS
A = ATP

(34) Inhibit ECD and DLNCM audits:

- Enter: **INH:AUD:ECD!**
- Enter: **INH:AUD:DLN!**

Response:

INH AUD COMPLETED

(35) Verify that there are no diagnostics in progress:

Enter: **OP:DMQ!**

If a diagnostic is listed in the ROP printout, ensure that all diagnostics are successfully completed before continuing the update.

(36) Inhibit all 3B automatic diagnostics:

- Enter: **INH:DMQ;SRC REX!**
- Enter: **INH:DMQ;SRC ADP!**

Response:

INH DMQ COMPLETED

(37) At 1B Processor MCC terminal, if System Status Page (108) is not displayed, enter **108**

(38) If **801 - RESTRICT RC** is colored white on black, Enter **801** (RESTRICT RC) to inhibit recent changes (**801 - RESTRICT RC** colored black on white).

(39) Inhibit 1B Processor REX. At the 1B MTC terminal:

Enter: **INH:MACLI,CLASS MTCE;REX!**

Response:

```
REPT: MACLI,CLASS MTCE INHIBITED
 AUTOMATIC JOB SCHEDULING DISALLOWED
```

(40) Inhibit CNI DMS recent changes:

At 3B MCRT, enter: **INH:RCV:ON!**

Response:

```
4ESS INH RCV COMPL
 RECENT CHANGE INHIBIT ON
```

(41) **If AT&T office is being retrofitted**, perform Steps 42 through 45; otherwise, go to Step 46.

(42) Inhibit application data base recent changes:

Enter: **INH:RCV:APPDB,APP ALL!**

Response:

```
INH RCV APPDB [APP ALL] COMPLETED
```

(43) Inhibit file transfer:

Enter: **INH:FTA;APP ALL!**

Response:

```
INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR IBGTT

 INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR OBGTT

 INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR CORE

 INH FTA APP ALL   COMPLETE
```

(44) Inhibit Automated Database Backup (ADB)

Enter: **INH:ADB,APP IBGTT!**

Response:

INH ADB COMPLETED, FOR IBGTT

(45) Inhibit data consistency checks:

Enter: **INH:DCC!**

Response:

INH DCC COMPLETE

(46) **NOTICE!** Before starting the Enter Step, the Emergency Back-Out Procedures for the retrofit process must be read and understood. See the Emergency Back-Out Procedures in Part 10.

5. Enter Step

If unresolvable problems are encountered during this step, evaluate the severity of the problem and determine whether or not to abort the retrofit process. If the retrofit process is to be aborted, do the Emergency Back-Out Procedure in paragraph 10 ‘‘Back-Out Enter or Proceed Steps.’’

Specify Enter Command Arguments

Purpose: To select the mandatory arguments and to insert the desired values in the respective input fields.

(1) **Place a check mark beside each step when completed.**

⇒ **NOTE:**
System Update Menu Page 107 must not be displayed when doing Step 2.

(2) Stop all processes associated with System Update Menu Page:

Enter: **STOP:EXC:ANY,FN"/prc/supr/suprint",UCL!**

Response:

STOP EXC ANY COMPLETED

(3) Depress **CMD** (**PF3**) key and enter **107** in command mode to obtain display Page 107.

(4) Do Steps 5 through 9 to confirm that suprlog is empty.

(5) Enter CMD: **705** to specify Readlog command to be executed.

Response:

The readlog command will automatically be formatted and displayed in the display area of Page 107 in the following form:

OP:GEN;READLOG!

(6) Enter CMD: **735** to execute the Readlog command.

NOTE:
The responses below will be received if suprlog is empty.

Response:

(Displayed on Page 107 message line and ROP):

ERROR 432: THE READLOG PROCESS TERMINATED UNSUCCESSFULLY

(On the ROP):

OP GEN READLOG STOPPED WITH ERROR CODE 412081

(7) If suprlog is empty, go to Step 10.

(8) If suprlog is not empty (zero length), enter message to clear suprlog:

COPY:FILESYS:FILE,SRC"/dev/null",DEST"/etc/log/suprlog"!

Response:

COPY FILESYS FILE COMPLETED

(9) Repeat from Step 2 to ensure suprlog is empty.

(10) Enter CMD: **701** to select the ENTER step.

NOTE:
If an invalid argument value is specified, an error message will appear on the message line of the Enter Arguments page currently being displayed. After an argument value has been specified, it is displayed in reverse video to make it visually stand out from the rest of the screen.

Response:

The Enter Arguments Page 1 of 2 will automatically be displayed.

(11) Enter CMD: **760** for Update Method argument.

Response:

Cursor is positioned at the UPDATE METHOD: input field.

(12) Enter: **O** (capital letter O) to specify Off-Line Disk Method.

Response:

Cursor returns to the **CMD<** line.
OK appears at the right of the cursor.

(13) Enter CMD: **761** for DFC Reference argument.

Response:

Cursor positioned at DFC REFERENCE: input field.

(14) Enter: **1** to select DFC 1 as off-line disk.

Response:

Cursor returns to the **CMD<** line.
OK appears at the right of the cursor.

(15) Enter CMD: **764** for Tape Device argument.

Response:

Cursor is positioned at the TAPE DEVICE: input field.

(16) Enter: **/dev/mt**X**8**
(where X is member number [0 or 1 only] of the selected tape drive).

Response:

Cursor returns to the **CMD<** line.
OK appears at the right of the cursor.

(17) Enter CMD: **792** to display Enter Arguments Page 2 of 2.

Response:

Enter Arguments Page 2 of 2 displayed.

(18) Enter CMD: **770** for Destination argument.

Response:

Cursor is positioned at the first DEST: input field.

(19) Enter: **/dev/vtoc**

Response:

Cursor returns to the **CMD<** line.
OK appears at the right of the cursor.

(20) Enter CMD: **780** for Sequence Option argument.

Response:

Cursor positioned at the first SEQ OPT: input field.

(21) Enter: **D** for Double Sequence.

Response:

Cursor returns to the **CMD<** line.
OK appears at the right of the cursor.

(22) Enter CMD: **793** to display System Update Menu Page 107.

Response:

The Enter command will automatically be formatted and displayed in the display area of Page 107 in the following form:

```
UPD:GEN;ENTER:OFLDISK 1,
SRC "/dev/mtX8",
DEST "/dev/vtoc",
SEQOPT DBL!
```

NOTE:
If a mandatory Enter command line argument has not been specified, the appropriate Enter Arguments Page will be displayed instead of the System Update Menu Page so that the user can specify the missing argument. The menu page will not allow the System Update Menu Page to be displayed until all the mandatory argument command line arguments have been specified.

(23) Enter CMD: **735** to execute the Enter command.

Response:

On the message line of Page 107, the following message will be displayed in normal video:

THE ENTER PROCESS IS EXECUTING

In the display area of Page 107, the following message will continue to be displayed:

UPD:GEN;ENTER:OFLDISK 1,
SRC "/dev/mtX8",
DEST "/dev/vtoc",
SEQOPT DBL!

NOTE:
DEST "/dev/vtoc", will be displayed in reverse video.

(24) Wait for the following messages to appear on the ROP. This is an indication that it is time to mount a tape containing the new generic and continue the update.

UPD GEN ENTER MOUNT TAPE AND CONTINUE
MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE

Load New Generic on Off-Line Disk

(1) **Place a check mark beside each step or substep when completed.**

(2) Mount the tape labeled ‘‘4AP16 rt0 1’’ on the tape unit specified in the input message.

(3) Verify proper tape to be loaded is mounted on tape drive:

Enter: **DUMP:TAPE:HDR,TD"/dev/mt**X**8"!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

DUMP TAPE HDR MSG COMPLETED
GENERIC-VERSION: 4AP<16>xx.RySTANDARD

TYPE OF TAPE: **RT0-1**
TAPE WRITTEN: Wed Jul 26 23:32:54 1997
FILE SYSTEM: ROOT

Using printout, ensure proper tape is mounted.

If wrong tape is mounted on tape drive, demount this tape and mount proper tape.

(4) Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be automatically formatted and displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

(5) Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
UPD:GEN;CONTINUE
UPD GEN CONTINUE COMPLETED
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then, the following message will appear:

THE ENTER PROCESS IS EXECUTING

(6) Expect the following ROP output messages:

UPD GEN ENTER MHD 1 SELECTED FOR NEW GENERIC
RMV MHD 1 TASK b MESSAGE STARTED
RMV MHD 1 COMPLETED
UPD GEN ENTER CHANGING MHD 1 TO OFFLINE
REPT DIOP SIMPLEX PROCESSING COMPLETED
REPT MHD 1 OFFLINE
UPD GEN ENTER MHD 1 OFFLINE
REPT DKDRV INFO CODE X'537

(7) Verify reading of the tape:

Approximately every 5 minutes, a status message will be printed on the ROP which will specify the number of blocks of data written since the previous status message, as follows:

UPD GEN ENTER xxxx BLOCKS WRITTEN

(8) Become familiar with the following. When reviewed, continue at Step 9.

(a) If the Continue process terminates because of an error, the following error message will appear on Page 107 message line in reverse video:

ERROR xxx: THE ENTER PROCESS TERMINATED UNSUCCESSFULLY
(The error code explanations can be found in SUPR appendix of the I/O manual.)

On the ROP:
UPD GEN ENTER STOPPED WITH ERROR CODE xxxxxx

(b) If SUPR fails due to a tape read error, you may clean the tape heads, remount the tape on the same tape drive, and restart by entering the Continue command on the System Update Menu Page as follows:

1. Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

2. Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then the following message will appear:

THE ENTER PROCESS IS EXECUTING

UPD GEN ENTER MHD 1 SELECTED FOR NEW GENERIC

(9) It will take approximately 40 minutes to read the ‘‘rt0 1’’ tape. After the ‘‘rt0 1’’ tape has been read, expect the following response in reverse video:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE

(10) Expect the following ROP output messages:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE
UPD GEN ENTER MOUNT TAPE AND CONTINUE

NOTE:
The next four steps must be done within 15 minutes after the above messages are received.

(11) Demount rt0 1 tape and mount the tape labeled ‘‘4AP16 rt0 2’’ on same tape drive.

(12) Verify proper tape to be loaded is mounted on tape drive:

Enter: **DUMP:TAPE:HDR,TD"/dev/mt**X**8"!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

DUMP TAPE HDR MSG COMPLETED
GENERIC-VERSION: 4AP<16>xx.RySTANDARD

TYPE OF TAPE: **RT0-2**
TAPE WRITTEN: Wed Jul 26 23:32:54 1997
FILE SYSTEM: ROOT

Using printout, ensure proper tape is mounted.

If wrong tape is mounted on tape drive, demount this tape and mount proper tape.

(13) Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

(14) Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then the following message will appear:

THE ENTER PROCESS IS EXECUTING

If the Continue process terminates because of an error, do Steps 8(a) and 8(b) as required.

(15) Expect the following ROP output message:

UPD GEN CONTINUE COMPLETED

(16) It will take approximately 40 minutes to read the ‘‘rt0 2’’ tape. After the ‘‘rt0 2’’ tape has been read, expect the following response in reverse video:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE

(17) Expect the following ROP output messages:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE
UPD GEN ENTER MOUNT TAPE AND CONTINUE

NOTE:
The next four steps must be done within 15 minutes after the above messages are received.

(18) Demount rt0 2 tape and mount the tape labeled ‘‘4AP16 rt0 3’’ on same tape drive.

(19) Verify proper tape to be loaded is mounted on tape drive:

Enter: **DUMP:TAPE:HDR,TD"/dev/mt**X**8"!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

DUMP TAPE HDR MSG COMPLETED
GENERIC-VERSION: 4AP<16>xx.RySTANDARD

TYPE OF TAPE: **RT0-3**
TAPE WRITTEN: Wed Jul 26 23:32:54 1997
FILE SYSTEM: ROOT

Using printout, ensure proper tape is mounted.

If wrong tape is mounted on tape drive, demount this tape and mount proper tape.

(20) Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

(21) Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then the following message will appear:

THE ENTER PROCESS IS EXECUTING

If the Continue process terminates because of an error, do Steps 8(a) and 8(b) as required.

(22) Expect the following ROP output message:

UPD GEN CONTINUE COMPLETED

(23) It will take approximately 40 minutes to read the ‘‘rt0 3’’ tape. After the ‘‘rt0 3’’ tape has been read, expect the following response in reverse video:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE

(24) Expect the following ROP output messages:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE
UPD GEN ENTER MOUNT TAPE AND CONTINUE

NOTE:
The next four steps must be done within 15 minutes after the above messages are received.

(25) Demount rt0 3 tape and mount the tape labeled ‘‘4AP16 rt0 4’’ on same tape drive.

(26) Verify proper tape to be loaded is mounted on tape drive:

Enter: **DUMP:TAPE:HDR,TD"/dev/mt**X**8"!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

DUMP TAPE HDR MSG COMPLETED
GENERIC-VERSION: 4AP<16>xx.RySTANDARD

TYPE OF TAPE: **RT0-4**
TAPE WRITTEN: Wed Jul 26 23:32:54 1997
FILE SYSTEM: ROOT

Using printout, ensure proper tape is mounted.

If wrong tape is mounted on tape drive, demount this tape and mount proper tape.

(27) Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

(28) Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then the following message will appear:

THE ENTER PROCESS IS EXECUTING

If the Continue process terminates because of an error, do Steps 8(a) and 8(b) as required.

(29) Expect the following ROP output message:

UPD GEN CONTINUE COMPLETED

(30) It will take approximately 10 minutes to read the ''rt0 4'' tape. After the ''rt0 4'' tape has been read, expect the following response in reverse video:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE

(31) Expect the following ROP output messages:

MOUNT TAPE FOR APPROPRIATE DISK AND CONTINUE UPDATE
UPD GEN ENTER MOUNT TAPE AND CONTINUE

NOTE:
The next four steps must be done within 15 minutes after the above messages are received.

(32) Demount rt0 4 tape and mount the tape labeled ''4AP16 db'' on same tape drive.

(33) Verify proper tape to be loaded is mounted on tape drive:

Enter: **DUMP:TAPE:HDR,TD"/dev/mt**X**8"!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

DUMP TAPE HDR MSG COMPLETED
GENERIC-VERSION: 4AP<16>xx.RySTANDARD

TYPE OF TAPE: **DATABASE**
TAPE WRITTEN: Wed Jul 26 23:32:54 1997
FILE SYSTEM: ROOT

Using printout, ensure proper tape is mounted.

If wrong tape is mounted on tape drive, demount this tape and mount proper tape.

(34) Enter CMD: **704** to specify Continue command to be executed.

Response:

The following message will be displayed in the display area of Page 107:

UPD:GEN;CONTINUE!

(35) Enter CMD: **735** to execute the Continue command.

Response:

On Page 107 message line, the following messages will appear in normal video for a short time:

THE CONTINUE PROCESS IS EXECUTING
UPD:GEN CONTINUE!
UPD GEN CONTINUE COMPLETED
THE CONTINUE PROCESS COMPLETED SUCCESSFULLY

Then the following message will appear:

THE ENTER PROCESS IS EXECUTING

If the Continue process terminates because of an error, do Steps 8(a) and 8(b) as required.

(36) Expect the following ROP output message:

UPD GEN CONTINUE COMPLETED

NOTE:
No message will be received on the 107 page indicating that tape reading is complete.

(37) It will take approximately 5 minutes to read the ‘‘db’’ tape. After the ‘‘db’’ tape has been read, expect the following response:

NOTE:
PRM_0 E800 000. .... will be received during each file or directory copy.

UPD GEN ENTER TRANSFERRING CONTROL TO APPLICATION
UPD GEN APPLICATION - TURNING OFF "VFY:FILE" DURING RETROFIT
UPD GEN APPLICATION - "VFY:FILE" TURNED OFF
UPD GEN ENTER APPLICATION COMPLETION WITHIN 14400 SECONDS
UPD GEN APPLICATION ENTER STAGE TO 4AP16.xxxx STARTED

(38) If following messages are received on ROP, immediately contact appropriate support organization and abort retrofit by performing the back-out procedure in paragraph 10 ‘‘Back-out Enter or Proceed Step’’.

UPD GEN APPLICATION ERROR: OFFICE IS NOT FINAL GENERIC RELEASE
GENERIC RELEASE MUST BE R4!

REPT A2H PROCESS TERMINATING

(39) If there are **NO** fixes for the new generic (**no new generic files to process**):

1. Expect the following messages on the ROP if there are no generic fixes; Otherwise, if the following message is not received, go to Step 40:

   UPD GEN APPL #2 - NO 4AP16.xxxx NEWGENFILES TO PROCESS
   ENTER NEWGENFILES OPTION

2. Continue by doing the following:

   Enter: **UPD:APPL;CONTINUE!**

(40) Become familiar with the following restart procedure. When the restart procedure is reviewed, continue at Step 41.

If the conversion process fails, wait for the COMPLETED message; then do the following Steps 1 through 6 to restart the Enter process.

CAUTION:
Don't do Steps 1 through 6 unless an aborted Enter process is to be restarted.

1. Enter: **UPD:APPL;ABORT!**
2. Enter CMD: **704** to specify the Continue command.

   The following message will be displayed in the display area of Page 107:

   UPD:GEN;CONTINUE!
3. Enter CMD: **735** to execute the Continue command.

   Response:

   On Page 107 message line, the following message will appear in normal video:

   THE CONTINUE PROCESS IS EXECUTING
4. Verify from ROP printouts that the process that failed has restarted.
5. If process fails again, contact appropriate support organization.
6. If the retrofit is to be aborted, do the Emergency Back-Out Procedure in paragraph 10 ''Back-Out Enter or Proceed Steps.''

(41) A new rcvecd will be copied from the off-line MHD into the retrofit directory; expect the following ROP printout.

```
UPD GEN APPLICATION FILE COPY
    SOURCE:          /supr/usr/bin/rcvecd
    DESTINATION:     /retrofit/rcvecd
UPD GEN APPLICATION COPY COMPLETE
```

(42) CNI conversion will be performed for this retrofit; expect the following ROP printout.

```
UPD GEN APPLICATION FILE COPY
    SOURCE:          /supr/cmp/cni/proc/CNI13RETRO
    DESTINATION:     /retrofit/CNI13RETRO
UPD GEN APPLICATION COPY COMPLETE

UPD GEN APPLICATION FILE COPY
    SOURCE:          /supr/PD_Tlib
    DESTINATION:     /retrofit/PD_Tlib
UPD GEN APPLICATION COPY COMPLETE
```

(43) The new masks will be copied from the off-line MHD into the retrofit directory; expect the following ROP printouts.

```
UPD GEN APPLICATION DIRECTORY COPY
    SOURCE:          /supr/lla/ecdmasks
    DESTINATION:     /retrofit
UPD GEN APPLICATION COPY COMPLETE
```

NOTE:
The application process is building a recent change conversion script with values according to office dependent values in the current ECD. During the proceed step, the conversion script will be applied automatically to the new data base so that the new data base will contain current office dependent information. Expect mount PRM E800 000 with each execution of a data base conversion process.

(44) Expect ROP printouts indicating an ECD dump of the current data base is in progress:

```
UPD GEN APPLICATION EXECUTING APPL_CMD
 /database/tools/ecdump root >/dev/null 2> /etc/bwm/script.errors
REPT ECDUMP STARTED
REPT ECDUMP IN PROGRESS
```

(45) Demount db tape from tape unit.

(46) Wait for following messages from ECD dump:

```
REPT ECDUMP IN PROGRESS
        .
        .
REPT ECDUMP IN PROGRESS
```

NOTE:
The ECD dump in progress messages will be received every 120 seconds (for about 30 minutes) until the following ECD dump complete messages are received:

```
REPT ECDUMP /database/dmpfiles/ecd.dmp CREATED WITH xxxx
LINES
REPT ECDUMP COMPLETE CODE 0
UPD GEN APPLICATION APPL_CMD
 /database/tools/ecdump root >/dev/null 2> /etc/bwm/script.errors
COMPLETE
```

(47) If office is equipped with Model 1 3B computer, expect the following messages indicating that the new data base is being converted for use on the Model 1 3B computer:

```
UPD GEN APPLICATION DATABASE CONVERSION - /supr/appecd
      APPLYING CONVERSION SCRIPT /supr/concoct.mod1
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
      APPLYING concoct.mod1 TO /supr/appecd
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING concoct.mod1 TO /supr/appecd
REPT DATABASE CONVERSION COMPLETED
    SUCCESSFULLY APPLIED SCRIPT concoct.mod1 TO /supr/appecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE

UPD GEN APPLICATION DATABASE CONVERSION - /supr/ecd
      APPLYING CONVERSION SCRIPT /supr/concoct.mc1
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING concoct.mc1 TO /supr/ecd
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING concoct.mc1 TO /supr/ecd
REPT DATABASE CONVERSION COMPLETED
    SUCCESSFULLY APPLIED SCRIPT concoct.mc1 TO /supr/ecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE
```

(48) Expect the following messages to be received indicating that a script is being built to ensure that the DLN node positions in the current running system are in the same place in the new ECD:

UPD GEN APPLICATION EXECUTING APPL_CMD
/prc/supr/dlnretro /database/dmpfiles/ecd.dmp /etc/bwm/dlnscript 2>
/etc/bwm/script.errors

REPT DLNRETRO STARTED
REPT DLNRETRO - DLN LN00-xx
REPT DLNRETRO - DLN LN32-xx

REPT DLNRETRO - DLN LN00-yy (See NOTE 1)
REPT DLNRETRO - DLN LN32-yy (See NOTE 1)

REPT DLNRETRO - a LN09-zz (See NOTE 2)
(where a is SIN or EIN)
REPT DLNRETRO - a LN41-zz (See NOTE 2)

REPT DLNRETRO LN00-ww ADDED TO SCRIPT FILE (See NOTE 3)
REPT DLNRETRO LN32-ww ADDED TO SCRIPT FILE (See NOTE 3)

REPT DLNRETRO COMPLETE CODE 0
UPD GEN APPLICATION APPL_CMD
/prc/supr/dlnretro /database/dmpfiles/ecd.dmp /etc/bwm/dlnscript 2>
/etc/bwm/script.errors COMPLETE

NOTE 1:
This message is printed if the office is equipped with four DLNs.

NOTE 2:
This message is printed if the office is equipped with Call Detail Recording Platform (CDRP). You will receive SIN if SCSI Interface Node (SIN) is equipped or EIN if Ethernet Interface Node (EIN) is equipped.

NOTE 3:
The new generic ECD has DLNs defined in position LN00-5, LN32-5, LN00-11, and LN32-11. This message is printed to indicate differences between current system ECD and new ECD. The new ECD will be updated (in Proceed Step) with current system data.

(49) Expect the following messages to be received indicating that a script is being built to purge spooler output devices for SCC channels and APSMSG from the new ECD (if applicable):

UPD GEN APPLICATION EXECUTING APPL_CMD
/prc/supr/cftpurge /database/dmpfiles/ecd.dmp /supr/dmpfiles/ecd.dmp
/etc/bwm/cftscript 2> /etc/bwm/script.errors
REPT CFTPURGE STARTED

_____

REPT CFTPURGE COMPLETE - NOTHING TO PURGE (See NOTE 1)

-- OR --

REPT CFTPURGE COMPLETE - X Y PURGED (See NOTE 2)

_____

UPD GEN APPLICATION APPL_CMD
/prc/supr/cftpurge /database/dmpfiles/ecd.dmp /supr/dmpfiles/ecd.dmp
/etc/bwm/cftscript 2> /etc/bwm/script.errors COMPLETE

NOTE 1:
This message is printed if the Switching Control Center (SCC) channels are equipped and APSMSG is turned on (3B computer messages being sent to 1B Processor).

NOTE 2:
This message is printed if SCC channels are unequipped and/or APSMSG is not turned on. (where X = apsmsg, Y= ttyz)

(50) Expect the following messages to be received indicating that a script is being built to map office dependent information from the current office ECD to the new ECD:

UPD GEN APPLICATION EXECUTING APPL_CMD
/prc/supr/newretro /prc/supr/retro.fields >/etc/bwm/retroscript 2>
/etc/bwm/script.errors
REPT RETRO IS BUILDING THE ECD CONVERSION SCRIPT
REPT RETRO ECD CONVERSION COMPLETE
UPD GEN APPLICATION APPL_CMD
/prc/supr/newretro /prc/supr/retro.fields >/etc/bwm/retroscript 2>
/etc/bwm/script.errors COMPLETE

(51) If ATP feature is enabled, expect the following messages to be received indicating that a script is being built to turn on ATP audits in the new ECD:

```
UPD GEN APPLICATION EXECUTING APPL_CMD
 /prc/supr/atpretro /database/dmpfiles/ecd.dmp /etc/bwm/atpscript 2>
  /etc/bwm/script.errors
REPT ATPRETRO STARTED
REPT ATPRETRO COMPLETE
UPD GEN APPLICATION APPL_CMD
 /prc/supr/atpretro /database/dmpfiles/ecd.dmp /etc/bwm/atpscript 2>
  /etc/bwm/script.errors COMPLETE
```

(52) If there are fixes for the new generic, applhook will copy these fixes to the partition containing the new generic.

Expect following ROP printout confirming each copy:

```
UPD GEN APPLICATION FILE COPY
    SOURCE:          /4AP16.xxxx/A
    DESTINATION:     /B
(where A is source file, and B is destination file)
UPD GEN APPLICATION COPY COMPLETE
PRM_0 E800 000. .... .... .. .. ..
```

(53) Expect the following messages indicating that the 4ESS™ Switch application work is complete for the ENTER step:

```
UPD GEN APPLICATION ENTER STAGE TO 4AP16.xxxx COMPLETE

UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO
SUPR
```

(54) Expect the following messages indicating that the backup partitions are being updated:

```
UPD GEN ENTER UPDATING PARTITION 3 IN MHD 1
UPD GEN ENTER UPDATING PARTITION 5 IN MHD 1
```

Approximately 5 minutes will elapse before receiving the next output message.

```
UPD GEN ENTER UPDATING PARTITION 14 IN MHD 1
UPD GEN ENTER UPDATING PARTITION 17 IN MHD 1
```

(55) When the Enter process has completed, expect the following messages on the ROP:

UPD GEN ENTER COMPLETED
THE ENTER PROCESS COMPLETED SUCCESSFULLY

(56) Review the Proceed Step, especially Proceed Steps 39 through 44, before continuing the update.

6. Proceed Step

During the Proceed Step, the conversion scripts created during the Enter Step will be automatically applied to the new data base.

If unresolvable problems are encountered during this step, evaluate the severity of the problem and determine whether or not to abort the retrofit process. If the retrofit process is to be aborted, do the Emergency Back-Out Procedure in paragraph 10 ‘‘Back-Out Enter or Proceed Steps.’’

(1) **Place a check mark beside each step or substep when completed.**

(2) Dump the current state of the AMA control files as follows and save printouts for later use:

- Enter: **OP:AMA;DISK!**
- Enter: **OP:AMA;MAPS!**

(3) **If AT&T office is being retrofitted**, dump GTT memory:

Enter: **VER:MEMORY;APPDB!**

Save output to be compared later (after boot to new generic).

(4) Dump CCS7 routing tables:

Enter: **OP:C7NET;ROUTING!**

Save output to be compared later (after boot to new generic).

(5) If Gateway office or International Switching Center (ISC) is being retrofitted, dump international routing tables:

Enter: **OP:C7NET;INTL!**

Save output to be compared later (after boot to new generic).

(6) Enter CMD: **702** to select the Proceed Step.

Response:

The Proceed command will automatically be formatted and displayed in the display area of the System Update Menu Page in the following form:

UPD:GEN;PROCEED!

(7) Enter CMD: **735** to execute the Proceed command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE PROCEED PROCESS IS EXECUTING

(8) Verify the following messages on the ROP:

UPD GEN PROCEED TRANSFERRING CONTROL TO APPLICATION
UPD GEN PROCEED APPLICATION COMPLETION WITHIN 14400 SECONDS
UPD GEN APPLICATION PROCEED STAGE TO 4AP16.xxxx STARTED

(9) Become familiar with the following restart procedure. When the restart procedure is reviewed, continue at Step 10.

If a data base conversion process fails, expect the following messages (where X identifies the script that failed):

UPD:GEN APPLICATION#2 - SCRIPT /etc/bwm/X FAILED
ENTER SCRIPT OPTION

Restart the aborted process in the Proceed Step by doing the following Steps 1 through 5:

CAUTION:
Don't do Steps 1 through 5 unless an aborted Proceed process is to be restarted.

1. Enter: **UPD:APPL;ABORT!**
2. Enter CMD: **704** to specify the Continue command.

   Response:

   The following message will be displayed in the display area of Page 107:

   UPD:GEN;CONTINUE!

3. Enter CMD: **735** to execute the Continue command.

   Response:

   On Page 107 message line, the following message will appear in normal video:

   THE PROCEED PROCESS IS EXECUTING

4. Verify from ROP printouts that the process that failed has restarted. If process fails again, contact appropriate support organization.
5. If the retrofit is to be aborted, do the Emergency Back-Out Procedure in paragraph 10 ''Back-Out Enter or Proceed Steps.''

NOTE:
Step 10 will take approximately 7 minutes.

(10) Expect the following messages indicating that the new ECD is being updated with current DLN node position data:

```
UPD GEN APPLICATION DATABASE CONVERSION - /supr/appecd
      APPLYING CONVERSION SCRIPT /etc/bwm/dlnscript
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING dlnscript TO /supr/appecd
                              .
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING dlnscript TO /supr/appecd
REPT DATABASE CONVERSION COMPLETED
    SUCCESSFULLY APPLIED SCRIPT dlnscript TO /supr/appecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE
```

Expect mount PRM_0 E800 000. .... with each execution of a data base conversion process.

(11) If CFTPURGE reported that TTYZ and/or APSMSG purged (i.e., SCC channels unequipped and/or APSMSG not turned on) in the ENTER step, expect the following messages:

```
UPD GEN APPLICATION DATABASE CONVERSION - /supr/appecd
      APPLYING CONVERSION SCRIPT /etc/bwm/cftscript
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING cftscript TO /supr/appecd
                              .
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
    APPLYING cftscript TO /supr/appecd
REPT DATABASE CONVERSION COMPLETED
    SUCCESSFULLY APPLIED SCRIPT cftscript TO /supr/appecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE
```

(12) Expect the following messages indicating that the conversion script (containing office-dependent values) is being applied to the new data base:

NOTE:
Step 12 will take approximately 40 minutes to complete.

```
UPD GEN APPLICATION DATABASE CONVERSION - /supr/appecd
     APPLYING CONVERSION SCRIPT /etc/bwm/retroscript
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
   APPLYING retroscript TO /supr/appecd
                              .
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
   APPLYING retroscript TO /supr/appecd
REPT DATABASE CONVERSION COMPLETED
   SUCCESSFULLY APPLIED SCRIPT retroscript TO /supr/appecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE
```

NOTE:
Steps 13 through 19 will take approximately 15 minutes to complete.

(13) If ATPRETRO reported that the switch is using ATP feature in the ENTER step, expect the following messages; otherwise, go to the next step:

```
UPD GEN APPLICATION DATABASE CONVERSION - /supr/appecd
     APPLYING CONVERSION SCRIPT /etc/bwm/atpscript
REPT DATABASE CONVERSION STARTED
REPT DATABASE CONVERSION IN PROGRESS
   APPLYING atpscript TO /supr/appecd
                              .
                              .
                              .
REPT DATABASE CONVERSION IN PROGRESS
   APPLYING atpscript TO /supr/appecd
REPT DATABASE CONVERSION COMPLETED
   SUCCESSFULLY APPLIED SCRIPT atpscript TO /supr/appecd
UPD GEN APPLICATION DATABASE CONVERSION COMPLETE
```

(14) APPLHOOK will copy ucrontab file to the off-line disk. Expect the following message:

```
UPD GEN APPLICATION FILE COPY
    SOURCE:         /usr/lib/ucrontab
    DESTINATION:    /supr/usr/lib/ucrontab
UPD GEN APPLICATION COPY COMPLETE
```

(15) APPLHOOK will copy application files in /etc directory to the partition containing the new generic.

Expect mount PRM E800 000. .... with each file or directory copy.

A printout in the following form will confirm each copy:

```
UPD GEN APPLICATION FILE COPY
    SOURCE:         /etc/A
    DESTINATION:    /supr/A
UPD GEN APPLICATION COPY COMPLETE
```
(where A is the name of the file being copied).

NOTE:
Expect the following message for a particular file that is presently non-existent:

```
UPD GEN APPLICATION FILE /etc/A NON-EXISTENT
```

(16) If the office is equipped with a Network Services Complex Teleconferencing (TC) type, applhook will copy /database/coams directory to the partition containing the new generic.

NOTE:
If NSCX Direct Services Dialing (DSD) type is equipped in the office, messages for copying /database/coams files will not be received.

A printout in the following form will confirm the copy:

```
UPD GEN APPLICATION DIRECTORY COPY
    SOURCE:         /database/coams
    DESTINATION:    /supr/coams
UPD GEN APPLICATION COPY COMPLETE
```

(17) APPLHOOK will copy /database/cni/lndata directory to the partition containing the new generic. A printout in the following form will confirm the copy:

```
UPD GEN APPLICATION DIRECTORY COPY
    SOURCE:         /database/cni/lndata
    DESTINATION:    /supr/cni/lndata
UPD GEN APPLICATION COPY COMPLETE
```

(18) APPLHOOK will copy /database/cni/odata directory to the partition containing the new generic.

A printout in the following form will confirm the copy:

```
UPD GEN APPLICATION DIRECTORY COPY
    SOURCE:         /database/cni/odata
    DESTINATION:    /supr/cni/odata
UPD GEN APPLICATION COPY COMPLETE
```

(19) When APPLHOOK is finished copying /database/cni/odata, expect the following messages:

```
UPD GEN APPLICATION EXECUTING APPL_CMD /retrofit/CNI13RETRO

RING REPT /RETROFIT/CNI13RETRO
EXECUTING WITH NO ARGUMENTS

RING REPT CNI13RETRO
GENERIC 13.4 PROTOCOL PARAMETER DATA CONVERSION IS DONE

RING REPT CNI13RETRO
GENERIC 13.4 VL_TAB AND LN7SLOTS DATA CONVERSION IS DONE

RING REPT CNI13RETRO
CMPFMTEO DELETED

RING REPT CNI13RETRO
GENERIC 13.4 MOCT EXCP DATA CONVERSION IS DONE

RING REPT CNI13RETRO
GENERIC 13.4 MOCT UVDT DATA CONVERSION IS DONE

RING REPT CNI13RETRO
GENERIC 13.4 DATA CONVERSION IS DONE

UPD GEN APPLICATION  APPL_CMD
/retrofit/CNI13RETRO COMPLETE
```

(20) APPLHOOK will copy /etc/log/1bperfsu directory to the partition containing the new generic.

A printout in the following form will confirm the copy:

```
UPD GEN APPLICATION DIRECTORY COPY
    SOURCE:          /etc/log/1bperfsu
    DESTINATION:     /supr/log/1bperfsu
UPD GEN APPLICATION COPY COMPLETE
```

(21) Expect the following printout for DMS copy:

```
UPD GEN APPLICATION  FILE COPY
     SOURCE:          /database/dms/users
     DESTINATION:     /supr/dms/users
UPD GEN APPLICATION  COPY COMPLETE
```

(22) Expect the following printout:

```
UPD GEN APPLICATION FILE COPY
    SOURCE:          /supr/appecd
    DESTINATION:     /supr/s.appecd
UPD GEN APPLICATION COPY COMPLETE
```

(23) Expect the following printout:

```
UPD GEN APPLICATION  FILE COPY
    SOURCE:          /supr/appdmert
    DESTINATION:     /supr/s.appdmert
UPD GEN APPLICATION COPY COMPLETE
```

(24) If office being retrofitted performs TDAS teleprocessing, expect the following printout:

```
UPD GEN APPLICATION  FILE COPY
    SOURCE:          /tdas/adm/passwd
    DESTINATION:     /supr/retrofit/passwd
UPD GEN APPLICATION COPY COMPLETE
```

If office being retrofitted does not have TDAS teleprocessing, expect the following printout:

```
UPD GEN APPLICATION FILE COPY /tdas/adm/passwd NON-EXISTENT
```

(25) APPLHOOK copies the following partitions from the active disk to the OFL disk:

- bwm
- amafiles
- amabfiles

A printout in the following form will confirm each copy:

```
UPD GEN APPLICATION  PARTITION COPY
    SOURCE:          /dev/A
    DESTINATION:     /supr/dev/A
UPD GEN APPLICATION COPY COMPLETE
```

(where A is the name of the partition being copied).

(26) APPLHOOK copies the cdmp partition from the active disk to the OFL disk.

A printout in the following form will confirm the copy:

```
UPD GEN APPLICATION  PARTITION COPY
    SOURCE:          /dev/cdmp
    DESTINATION:     /supr/dev/cdmp
UPD GEN APPLICATION COPY COMPLETE
```

(27) APPLHOOK will copy appdb0 and appdb1 partitions to OFL disk.

A printout in the following form will confirm each copy:

```
UPD GEN APPLICATION  PARTITION COPY
    SOURCE:          /dev/A
    DESTINATION:     /supr/dev/A
UPD GEN APPLICATION COPY COMPLETE
```

(where A is appdb0 or appdb1 in the off-line disk).

(28) Expect the following printout for tlp partition copy:

```
UPD GEN APPLICATION  PARTITION COPY
    SOURCE:          /dev/tlp
    DESTINATION:     /supr/dev/tlp
UPD GEN APPLICATION COPY COMPLETE
```

(29) Expect the following printout for log partition copy:

```
UPD GEN APPLICATION  PARTITION COPY
    SOURCE:          /dev/log
    DESTINATION:     /supr/dev/log
UPD GEN APPLICATION COPY COMPLETE
```

(30) APPLHOOK will copy the active 1afile partition (0 or 1) to 1afile0 and 1afile1 on the OFL disk. Expect the following printout to confirm each copy:

```
UPD GEN APPLICATION PARTITION COPY
    SOURCE:        /dev/1afileX
    DESTINATION:   /supr/dev/1afileY
UPD GEN APPLICATION COPY COMPLETE
```

(where X is 0 or 1 and Y is 0 or 1)

(31) After 1afile copies, expect the following message confirming that the reconditioning process is completed:

```
UPD GEN APPLICATION PARTITION COPY
    SOURCE:          CONVERTED 1ASTAT FILE
    DESTINATION:   /supr/dev/1astat
UPD GEN APPLICATION COPY COMPLETE
```

(32) Do not continue until the following message is received on ROP:

```
UPD GEN APPLICATION#2 - ENTER MESSAGE TO CONTINUE
RETROFIT PROCESS AFTER TDAS DATA IS PULLED
```

(33) For offices that use TDAS teleprocessing, call your appropriate OSS and request TDAS to be pulled. Do not continue until TDAS is pulled.

(34) For offices that record TDAS data to tape, copy TDAS to tape per local practice. Do not continue until TDAS is copied to tape.

(35) After TDAS has been pulled/copied to tape, enter message to continue:

Enter: **UPD:APPL;CONTINUE!**

(36) Wait for the following message to be received on ROP:

UPD GEN APPLICATION#2 - ENTER AMARCV OPTION

(37) Dump the current status of link nodes and international routing as follows and save printouts for later use:

- Enter: **OP:NODES!**
- Enter: **OP:C7NET;INTL!**

(38) Dump CCS7 routing and save printout for later use:

Enter: **OP:C7NET;ROUTING!**

CAUTION:
The following response may be received after entering the UPD:APPL;STOPAMA message and may be ignored.

REPT AMA/ICDR FORMATTER
AMA FLOW STILL STOPPED FOR RETROFIT

(39) Since this retrofit will eventually require a memory zeroing boot to the new load, enter the following request for AMA to be stopped:

Enter: **UPD:APPL;STOPAMA!**

Response:

A2H STOPPING AMA RECEIVER

UPD GEN APPLICATION FILE COPY
SOURCE: /etc/log/appllog
DESTINATION: /supr/log/appllog
UPD GEN APPLICATION COPY COMPLETE

REPT AMA/ICDR FORMATTER
STOPPING FLOW TO 3B FOR RETROFIT

REPT AMA FORMATTER FLUSHED AMA RECORDS
UPD GEN APPLICATION PROCEED STAGE TO 4AP16.xxxx COMPLETE
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR

UPD GEN PROCEED UPON COMPLETION BOOT SYSTEM SELECTING
PRIMARY ROOT

UPD GEN PROCEED UPON COMPLETION BOOT SYSTEM SELECTING MHD 1

UPD GEN PROCEED COMPLETED
THE PROCEED PROCESS COMPLETED SUCCESSFULLY

CAUTION:
Do not continue until it has been verified that the above two messages in bold type were received:

After it has been determined that the above messages were received, **IMMEDIATELY** go to the next step.

(40) At 3B MCRT, depress **EA DISP** (**PF1**) key to obtain EAI page.

(41) Enter EAI CMD: **31** to clear broot.

(42) Enter EAI CMD: **22** to force the system to the secondary disk.

(43) Enter EAI CMD: **10** to force CU 0 on-line.

(44) Enter EAI CMD: **54** IMMEDIATELY to boot the system. At EAI page, the PRM associated with the booted MHD should display Exxx where xxx is the various stages of processor recovery. The numbers xxx should continue upwards until they repeat. Wait for the following message:

REPT CFTSHL TERMINAL IN SERVICE

IF PROCESSOR FAILURE MESSAGES APPEAR CONTINUOUSLY FOR A DURATION OF 2 MINUTES, IMPLEMENT THE FOLLOWING ''EMERGENCY PROCESSOR RECOVERY PROCEDURE'' TO BOOT THE SYSTEM BACK TO THE OLD GENERIC.

CAUTION:
The following ''Emergency Processor Recovery Procedure'' (Steps 1 through 4) is implemented only if the system fails to come up on the new generic.

****** EMERGENCY PROCESSOR RECOVERY PROCEDURE ******

(1) Enter EAI CMD: **20** to select the primary disk (MHD 0).

(2) Enter EAI CMD: **10** to force CU 0 on-line.

(3) Enter EAI CMD: **54** IMMEDIATELY to boot the system.

(4) Contact the appropriate support organization for assistance.

If the 3B20D automatically backs out to the OLD GENERIC, do the Emergency Back-Out Procedure ''Automatic Back-Out Recovery Procedure.''

(45) After the postmortem prints, operate **ALM RLS** (**PF4**) key to restore alarms.

(46) Once the processor has begun to come up on the new generic, expect the following messages. Depending on the office configuration, some responses may not appear at all.

NOTE:
Some responses may appear in different order due to spooler processing.

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE HSA7.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IUN.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE PBXD.3.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE PBXT.3.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE DLNE.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE DLN.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IITP.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IIDB.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE PBXS.4.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE CNI7.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IRN.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE SIN.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE EIN.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IRN2.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IIDP.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE IITB.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE C7I.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE ATP.2.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
INITIALIZATION OF IUNS OF TYPE SDSP.1.0 COMPLETED
x IUNS PLACED IN THE ACTIVE STATE
x IUNS EQUIPPED
(where x is the number of link nodes)

RING REPT IUN INIT
IUN LEVEL 4 INITIALIZATION COMPLETED

RING REPT IMSDRV INIT
COMPLETED CRITICAL LEVEL 4 INITIALIZATION

REPT RINGINIT CNI/IMS PART DONE

REPT DLNCM PROC (Pump) LN32-z PUMP STARTED
(where z is the ring node member number of the DLN)
REPT DLNCM PROC (Pump) LN00-z PUMP STARTED

REPT DLNCM PROC (Pump) LN00-z a (511) BINKS PUMPED IN nnnn MSEC
REPT DLNCM PROC (Pump) LN32-z a (511) BINKS PUMPED IN nnnn MSEC
(where a is office dependent)
REPT DLNCM PROC (Pumpapp) LN00-z STARTED X’00000000
REPT DLNCM PROC (Pumpapp) LN32-z STARTED X’00000000

REPT DLNCM PROC (Pumpapp) LN00-z DBTOC PUMPED 5120 BYTES
MSEC nnnn
REPT DLNCM PROC (Pumpapp) LN32-z DBTOC PUMPED 5120 BYTES
MSEC nnnn
REPT DLNCM PROC (Pumpapp) LN00-z (A) PUMPED (B) BYTES MSEC
(C)
(where (A) is PCPGTT, IBGTT, OBGTT, or MISCGTT (B) is number of
bytes and (C) is time in MSEC)
REPT DLNCM PROC (Pumpapp) LN32-z (A) PUMPED (B) BYTES MSEC (C)
REPT DLNCM PROC (Pumpapp) LN00-z Pump COMPL (B) BYTES MSEC (C)
REPT DLNCM PROC (Pumpapp) LN32-z Pump COMPL (B) BYTES MSEC (C)

REPT RINGINIT INIT LEVEL 4 COMPLETED IN nnn SECONDS

(47) Procedure must not be continued until the above message (REPT RINGINIT INIT LEVEL 4 COMPLETED IN nnn SECONDS) is received.

(48) Depress **EA DISP** (**PF1**) key to obtain EAI page.

(49) Enter CMD: **13** to clear forces on CU 0.

Response:

REPT CU 0 NO LONGER FORCED ONLINE

(50) If office has TDAS:

Enter: **AUD:TDAS 1!**

Response:

AUD TDAS 1 - NO PASSWORD FILE

AUD TDAS 1 - DETAIL REPORTS
TDAS PARTITION ERROR REPORT
.
.
TDAS AUDIT DISK MANAGEMENT REPORT
.
.

AUD ENV=RTR TDAS 1 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors.)

NOTE:
Contact the appropriate support organization before running in CORR mode.

(51) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:TDAS 1;CORR!**

(52) If errors persist, contact your support organization.

(53) At 3B MCRT, enter message **OP:DMQ!**. If CU is not listed, enter message **RST:CU 1!**.

(54) **If AT&T office is being retrofitted**, perform Steps 55 through 58; otherwise, go to Step 59.

(55) Inhibit application data base recent changes:

Enter: **INH:RCV:APPDB,APP ALL!**

Response:

```
INH RCV APPDB [APP ALL] COMPLETED
```

If RL - CANNOT CONNECT TO DATABASE response is received, wait 1 minute and repeat.

(56) Inhibit file transfer:

Enter: **INH:FTA;APP ALL!**

Response:

```
INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR IBGTT

 INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR OBGTT

 INH FTA APP ALL   IN PROGRESS
 FTA IS INHIBITED FOR CORE

 INH FTA APP ALL   COMPLETE
```

(57) Inhibit data consistency checks:

Enter: **INH:DCC!**

Response:

```
INH DCC COMPLETE
```

(58) Inhibit Automated Database Backup:

Enter: **INH:ADB,APP IBGTT!**

Response:

INH ADB COMPLETED, FOR IBGTT

(59) Inhibit CNI DMS recent changes:

Enter: **INH:RCV:ON!**

Response:

4ESS INH RCV COMPL
RECENT CHANGE INHIBIT ON

(60) Verify DLN stream status:

Enter: **OP:DLNCM,DLNMAP!**

Verify from ROP printout that **Hdwr State** and **Appl State** are **ACT** for two DLNs. Verify that **Mode** is **ONEWAY IN** and **Stream** is **SCAN IN** for one DLN and **Mode** is **ONEWAY OUT** and **Stream** is **SCAN OUT** for the other DLN. Verify that **ODA Pump** is **COMPL** for each DLN.

(61) Depress **NORM DISP** (**PF2**) key and enter **1107** in command mode to obtain display Page 1107.

(62) Ensure that DLN states on 1107 page are the same as DLN states indicated in the printout (Step 60).

(63) Verify that the CNI ring is active and there is no isolated segment in the ring.

Enter: **OP:RING;DETD!**

Verify that no "**i**" is listed for any link node.

(64) Dump link node status and domestic and international routing tables as follows:

- Enter: **OP:NODES!**
- Enter: **OP:C7NET;ROUTING!**
- Enter: **OP:C7NET;INTL!**

(65) Compare the above printouts with printouts saved earlier, along with any expected changes.

(66) Run the office ID data audit:

Enter: **AUD:NIDATA 1;SUM!**

Response:

AUD ENV=RTR NIDATA 1 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(67) If errors are received, contact your support organization.

(68) Run the link configuration data audit:

Enter: **AUD:NIDATA 2;SUM!**

Response:

AUD ENV=RTR NIDATA 2 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(69) If errors are received, contact your support organization.

(70) Run cluster/member routing data audit:

Enter: **AUD:NIDATA 4;SUM!**

Response:

AUD ENV=RTR NIDATA 4 COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(71) If errors are received, contact your support organization.

(72) Verify that the following pages can be accessed by using the NORM DISP function of the MCRT:

- 1105 - Ring Status Summary
- 1106 - Ring Group Status
- 1107 - DLN/API Stream Status
- 1108 - Signaling Link Summary

Verify that the equipped ring nodes are in the Active/Norm state.

(73) At 1B Processor MCC terminal, enter **108** to obtain System Status Page (108).

(74) Enter **810** (SDC) to get a service degrading report printout. If there are any CNI ring units listed in the report, make corrective actions to clear the service degrading condition of each CNI ring unit listed before continuing the update.

7. Soak Step

At this point, the 3B computer should enter a soak period to verify system stability with the new generic. Allow the system to restore itself to duplex during this interval.

(1) **Place a check mark beside each step when completed.**

(2) Inhibit REX diagnostic:

Enter: **INH:DMQ;SRC REX!**

Response:

INH DMQ COMPLETED

(3) Inhibit equipment configuration data base (ECD) audits:

Enter: **INH:AUD:ECD!**

Response:

INH AUD COMPLETED

(4) Operate **ALM RLS** (**PF4**) key to restore alarms.

(5) Compare AMA stream indicator, AMA configuration, and AMA control file data saved during the preliminary steps with current system data.

(6) Dump the AMA stream value and compare output with data saved earlier:

Enter: **OP:AMA;STREAM!**

Response:

REPT AMA STREAM INDICATOR IS x
(where x is OC, IC, or DUAL).

(7) If the AMA stream indicator is not the same value as indicated in the preliminary steps, reset the AMA stream configuration for the office:

Enter: **SET:AMA;STREAM:**a!
(where a is OC, IC, or DUAL depending on the control file data from the preliminary step).

(8) Dump AMA configuration and compare output with data saved earlier:

Enter: **OP:AMA;CONFIG!**

Verify from the output message that the proper number of partitions are equipped for each stream configured in the office.

(9) If partitions are not set, enter the following message for each partition to be set:

Enter: **SET:AMA;CONFIG;**a**:PART** b**,EQUIP!**
(where a is OC or IC depending on AMA configuration data saved earlier and where b is partition number to be equipped).

Response:

Output message indicating that the specific partition is equipped.

(10) Enter: **OP:AMA;DISK!**

If the percentage value for each partition in the output message is less than the percentage value recorded at the beginning of the SUPR Proceed Step, contact your local support organization.

(11) Evaluate the status of AMA disk maps for partitions of each stream configured for the office:

Enter: **OP:AMA;MAPS!**

Evaluate the Disk Map values and verify that the LPO values are equal to or greater than the values recorded at the beginning of the SUPR Proceed Step.

(12) Do Steps 13 through 15 to verify AMA control file parameters.

(13) Enter: **OP:AMA;CONTROLFILE!**

(14) Compare parameter values in the output message with the values saved earlier during the preliminary steps.

(15) If improper parameter values are indicated, reset control file parameters with the values saved earlier:

Enter:
SET:AMA;CONTROL;x**:OFFICEID** a**,EXPDATE** b**,START** c**,STOP** d**,**
MT e**,OPTION** f**,HOCPSWD** g**,BACKUPSWD** h**,TAPEID "**i**", DWD** j
,MSN k**,FAST** l**,DF** m**!**

x = OC or IC - For explanation of other parameters, see the *4ESS™ Switch/APS Input Manual*.

A maximum of three parameters may be changed at a time.

Response:

Output messages containing new parameter values.

(16) If control file shows that AMA sessions are manually inhibited, then allow them if so desired.

(17) At 1B MTC terminal, run SAWS audits on the 4ESS switch:

Enter: **AUD:NUM (43,44,45,66)!**

If any audits have errors, reenter AUD:NUM messages for audits with errors. If errors continue to be received, contact next higher technical support group.

While audits are running, continue at Step 18, but periodically observe printout for completion of audits with 0 errors.

(18) At 3B MCRT, update the disk copy of the 1ASTAT file:

Enter: **AUD:APDRV 3,INS"STATFLAGS"!**
(STATFLAGS must be entered as all capital letters).

Response:

AUD ENV=RTR APDRV 3 STATFLAGS COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(19) Dump disk copy of 1ASTAT file and verify:

Enter: **DUMP:FILE:FORMAT,FN"/dev/1astat",x!**

Response:

DUMP FILE DATA COMPLETED — followed by several lines of address — data dumps in the following format:

00000000000 f0ff 0fff aabb ccdd xxxx xxxx xxxx xxxx

aa = Normal 1afile:
- 00 — 1afile0 or
- 01 — 1afile1

bb = Lock Indicator:
- 00 — Update File is Unlocked or
- 01 — Update File is Locked

cc = System Operating State:
- 01 — Operating in Normal Mode or
- 02 — Operating in Update Mode

x = Hexadecimal dump

NOTE:
If cc is 02 (operating in update mode) or bb is not 01 (01 indicates update file is locked), do NOT continue with the update. Contact your local support organization immediately.

(20) Dump the system disk VTOC:

NOTE:
MHD 1 must be restored to service before dumping VTOC.

Enter: **DUMP:MHD 1;VTOC!**

Verify printout for the following:

PTN	START	END	SIZE	DESCRIPTION
0	0	1	2	vtoc
1	2	238	237	lboot
8	239	838	600	lboot21
2	839	920	82	boot + PRI
3	921	1002	82	bboot + BKUP
6	1003	31002	30000	swap
4	31003	226002	195000	root + FILSYS,PRI
5	226003	421002	195000	broot + FILSYS,BKUP
7	421003	429002	8000	tmp + FILSYS
9	429003	469002	40000	update + FILSYS
11	469003	469502	500	panic
12	469503	473502	4000	cdmp + FILSYS
13	473503	478502	5000	etc + FILSYS,PRI
14	478503	483502	5000	betc + FILSYS,BKUP
15	483503	513502	30000	bwm + FILSYS
16	513503	533502	20000	db + FILSYS,PRI
17	533503	553502	20000	bdb + FILSYS,BKUP
20	553503	750110	196608	1afile0 + PRI
21	750111	946718	196608	1afile1 + PRI
22	946719	946719	1	1astat + PRI
23	946720	1006719	60000	tdas + FILSYS
25	1006720	1015019	8300	log + FILSYS
28	1015020	1015519	500	amafiles + FILSYS
29	1015520	1016019	500	amabfiles + FILSYS
30	1016020	1048787	32768	appdb0
31	1048788	1081555	32768	appdb1
32	1081556	1114323	32768	appdb2
33	1114324	1134323	20000	gttx + FILSYS
35	1134324	1157323	23000	tlp + FILSYS
62	1157324	1157324	1	bank
63	1157325	1179999	22675	diag
10	---	---	---	UNASGNED
		•		
		•		
		•		
61	---	---	---	UNASGNED

(21) Initialize the Data Base Management System:

Enter: **INIT:DMS MEDIUM!**

Response:

RING INIT DMS MEDIUM COMPL
COMPLETED MEDIUM INITIALIZATION

(22) Depress **EA DISP** (**PF1**) key to obtain EAI page.

NOTE:
Steps 23 through 25 are being done to unblock audits.

(23) Enter CMD: **42**

(24) Enter CMD: **Q** (capital letter Q)

(25) Enter CMD: **50**

(26) Run the file system block audit on the TDAS file system:

Enter: **AUD:FSBLK 1,INS"/dev/tdas"!**

Response:

AUD ENV=RTR FSBLK 1 /dev/tdas COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors.)

NOTE:
Contact the appropriate support organization before running in CORR mode.

(27) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSBLK 1,INS"/dev/tdas";CORR!**

(28) If errors persist, contact your support organization.

(29) Run the file system linkage audit on the TDAS file system:

Enter: **AUD:FSLINK 1,INS"/dev/tdas"!**

Wait for audit to complete.

NOTE:
Contact the appropriate support organization before running in CORR mode.

(30) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSLINK 1,INS"/dev/tdas";CORR!**

(31) If errors persist, contact your support organization.

(32) Determine which file system is running (root or broot) and record for later use:

Enter: **OP:STATUS:FILESYS!**

Response:

/ on /dev/root read/write on (date) — system running on root
.
.

OR

/ on /dev/broot read/write on (date) — system running on broot
.
.

(33) Using the printout, ensure system is running on root.

(34) Run the file system block audit on the primary partition:

Enter: **AUD:FSBLK 1,INS"/dev/root"!**

If audits are blocked, repeat Steps 23 through 25.

Wait for the audit to complete.

NOTE:
Contact the appropriate support organization before running in CORR mode.

(35) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSBLK 1,INS"/dev/root";CORR!**

(36) If errors persist, contact your support organization.

(37) Repeat from Step 34 for **"/dev/db"**; and then **"/dev/etc"**; and then **"/dev/log"**.

(38) Run the file system linkage audit on the primary partition:

Enter: **AUD:FSLINK 1,INS"/dev/root"!**

Wait for the audit to complete.

NOTE:
Contact the appropriate support organization before running in CORR mode.

(39) If the number of errors found, if any, is greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSLINK 1,INS"/dev/root";CORR!**

(40) If errors persist, contact your support organization.

(41) Repeat from Step 38 for **"/dev/db"**; and then **"/dev/etc"**; and then **"/dev/log"**.

(42) On the MCRT header line (first line on MCRT display), verify that the feature flag indicators show features that were turned on prior to booting to the new generic.

Feature flag indicators are located in the following positions:

BIT POSITION	-	0	1	2	3	4	5	6
FEATURE	-	X	D	I	N	R	T	A

X = UNASSIGNED BIT

D = DADC

I = ICDR

N = NEMOS

R = CNI RING

T = TOSS

A = ATP

(43) Verify establishment of appropriate System Name (sysname) and Time Zone values for the office by observing the MCRT screen.

(44) Verify that office dependent ECD data was updated automatically during the System Update Process.

Enter: **EXC:ENVIR:UPROC,FN"/database/cni/odata/dump.n"!**

WARNING:
Only one EXC:ENVIR:UPROC command can be run at a time. COMPLETE message must be received before entering the next EXC:ENVIR:UPROC command.

Check ROP for following messages and verify that ECD data was updated properly.

REPT DUMP.N STARTED
REPT DUMP.N - DUMPING EQUIPAGE FOR: X
(where X is a list of hardware equipage being dumped)
REPT DUMP.N - DUMP FILES ARE IN /database/cni/odata

NOTE:
The dump file names of the new generic are in the following format: DMPn.a_b (where a is the unit type and b is the member number).

REPT DUMP.N - EXECUTING DIFF. CHECK THE ROP FOR HARDWARE DIFFERENCES
REPT DUMP.N - DIFF OUTPUT FOR X FOLLOWS

NOTE 1:
Differences in hardware equipage data will be printed (if they exist).
"<" indicates data in old generic
">" indicates data in new generic
This message is repeated for each hardware equipage listed in the previous message.

NOTE 2:
If no differences were found for a particular unit type, expect the following printout:
REPT DUMP.N - NO DIFFERENCES WERE FOUND FOR X

REPT DUMP.N - DIFF COMPLETE. OUTPUTS ARE ALSO IN /database/cni/odata

NOTE:
The diff file names of the old and new generic are in the following format: DIFF.a_b
(where a is the unit type and b is the member number).

REPT DUMP.N - COMPLETED
EXC ENVIR UPROC /database/cni/odata/dump.n COMPLETED

(45) If results were satisfactory, clean up dump and diff files:

Enter: **EXC:ENVIR:UPROC,FN"/database/cni/odata/dump.clean"!**

(46) Do not continue until EXC ENVIR UPROC COMPL message is received.

(47) If office being retrofitted performs TDAS teleprocessing,

NOTE:
If /tdas/adm/passwd NOT FOUND response is received from OP:STATUS input message, next higher technical support group must be contacted for resolution; procedure must not be continued until resolved.

Enter: **OP:STATUS:LISTDIR,FN"/tdas/adm/passwd"!**

Ensure that the following response is NOT received:

OP STATUS LISTDIR STOPPED /tdas/adm/passwd NOT FOUND

(48) Contact support organization to determine if any BWMs need to be applied.

(49) If BWMs need to be applied, do Steps 50 through 64; otherwise, go to Step 65.

(50) Enter: **OP:STATUS:LISTDIR,FN"/etc/bwm"!**

(51) At 3B MCRT, depress **NORM DISP** (**PF2**) key and enter **1960** in command mode to obtain display Page 1960.

(52) Select the BWM by entering **9000,**AAAxx-xxxx in command mode (where AAAxx-xxxx is number to be applied).

(53) Enter **9260,SCANS** in command mode for BWM to be applied to determine if any special procedures need to be done after BWM is applied. Save printout for later use.

(54) Enter CMD: **9010** to verify the BWM.

(55) Wait for UPD VFY COMPLETED message to be displayed in RESPONSE field.

(56) Enter CMD: **9310** to execute the APPLY Section.

(57) Wait for COMPLETED: APPLY SECTION message to be displayed in RESPONSE field.

(58) Enter CMD: **9320** to execute the SOAK Section.

(59) Wait for SOAK SECTION COMPLETED: TIMER HAS BEEN SET to be displayed in RESPONSE field, and ROP printout indicating that soak timer is in progress. See the following:

```
UPD PRINT SOAK TIMER IN PROGRESS

-----------------BWM SOAK TIMER INFORMATION-----------------
BWM NAME = CFT94-0165          REMAINING SOAK PERIOD = 23:59
(HH:MM)


          CURRENT SOAK TIMER
START          Wed Jul 26 23:32:54 1997
END            Thu Jul 27 23:32:54 1997
DURATION       24:0 (HH:MM)

         PREVIOUS SOAK TIMER
START          Wed Jul 26 23:32:54 1997
END            Thu Jul 27 23:32:54 1997
DURATION       24:0 (HH:MM)


--------------END OF BWM SOAK TIMER INFORMATION--------------
UPD PRINT SOAK TIMER COMPLETED
```

(60) Wait for SOAK PERIOD COMPLETED: SOAK SECTION message to be displayed in RESPONSE field.

NOTE:
The END field under CURRENT SOAK TIMER section indicates the time this message should be displayed.

(61) Enter CMD: **9330** to execute the OFC Section.

NOTE:
The time to finish the OFC Section is dependent on the BWM size.

(62) Wait for COMPLETED: OFFICIAL SECTION message to be displayed in RESPONSE field.

(63) If there are special procedures to be followed per Step 53, do as required.

(64) Repeat from Step 52 for each BWM to be entered.

(65) **If AT&T office is being retrofitted**, verify GTT memory:

Enter: **VER:MEMORY;APPDB!**

Compare printout with printout saved earlier. If differences are found between printouts, contact NESAC for resolution.

8. Commit Step

If unresolvable problems are encountered prior to this step, evaluate the severity of the problem and determine whether or not to back out to the old generic. If the retrofit must be backed out, do the Emergency Back-Out Procedure in paragraph 10 ‘‘Back-Out From New Generic Issue to Old Generic Issue.’’

(1) **Place a check mark beside each step when completed.**

NOTE:
The Commit Step will copy the new generic from MHD 1 to MHD 0, resulting in a copy of the new generic in both MHDs.

(2) Depress **NORM DISP** (**PF2**) key and enter **107** in command mode to obtain display Page 107.

(3) Enter CMD: **703** to specify Commit command to be executed.

Response:

The Commit command will be automatically formatted and displayed in the display area of Page 107 in the following form:

UPD:GEN;COMMIT!

(4) Enter CMD: **735** to execute the Commit command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE COMMIT PROCESS IS EXECUTING

(5) Expect the following ROP output messages:

UPD:GEN COMMIT!PF
REPT MHD 0 OUT OF SERVICE
RST MHD 0 TASK x MESSAGE STARTED
RST MHD 0 IN PROGRESS (this message repeats several times)
RST MHD 0 COMPLETED
REPT DIOP DUPLEX PROCESSING COMPLETED
UPD GEN COMMIT TRANSFERRING CONTROL TO APPLICATION
UPD GEN COMMIT APPLICATION COMPLETION WITHIN 1500 SECONDS
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR
UPD GEN COMMIT LOG WILL BE PURGED IN 180 SECONDS, SAVE IT IF NEEDED
UPD GEN COMMIT COMPLETION WILL BE IN 180 SECONDS

Continue at Step 6, but periodically observe MCRT and ensure that the following message is received:

RST MHD 0 COMPLETED

(6) Depress **CMD MSG** (**PF3**) key to position cursor at bottom of page and then go immediately to the next step.

(7) Enter:
COPY:FILESYS:FILE,SRC"/etc/log/suprlog",DEST"/tmp/suprlog"!

Response:

COPY FILESYS FILE COMPLETED

(8) Expect the following message 3 minutes after the 180-second warning message:

UPD GEN COMMIT COMPLETED

(9) When the Commit process is completed, the following message is displayed on the Page 107 message line:

THE COMMIT PROCESS COMPLETED SUCCESSFULLY

CAUTION:
Do not continue until the above message is received.

(10) Depress **EA DISP** (**PF1**) key to obtain EAI page.

(11) Enter CMD: **14** to clear EAI forces.

(12) Allow 3B routine REX diagnostics:

Enter: **ALW:DMQ;SRC REX!**

Response:

ALW DMQ ENABLED REX

(13) Allow 1B Processor REX. At the 1B MTC terminal:

Enter: **ALW:MACLI,CLASS MTCE!**

Response:

REPT: MACP AUTOMATIC JOB SCHEDULING RESUMED

(14) Depress **NORM DISP** (**PF2**) key and enter **107** in command mode to obtain display Page 107.

(15) Terminate the System Update Menu Page 107:

Enter CMD: **750**

Expect ROP response:
THE SYSTEM UPDATE MENU PAGE TERMINATED SUCCESSFULLY

9. Post Generic Commit Steps

(1) **Place a check mark beside each step when completed.**

(2) Run boot audits:

Enter: **EXC:ENVIR:UPROC,FN"/tools/bootaud"!**

NOTE:
Step 3 will take approximately 5 minutes to complete.

(3) Wait for **EXC ENVIR UPROC /tools/bootaud COMPLETED** message and ensure no errors are received. **Do not** continue until errors, if received, are corrected.

(4) Update the backup partitions:

Enter: **EXC:QCOPY:TOBROOT!** (if system running on root)

Response:

(On the ROP)
REPT QCOPY DISK COPY COMPLETED

(5) Run the file system block audit on the backup partitions:

Enter: **AUD:FSBLK 1,INS"/dev/broot"!**

Response:

AUD ENV=RTR FSBLK 1 /dev/broot COMPLETED
x ERRORS FOUND
x ERRORS CORRECTED
(where x is the number of errors).

(6) If the number of errors found, if any, are greater than the number of errors corrected, run the audit again specifying the Correction (CORR) mode:

Enter: **AUD:FSBLK 1,INS"/dev/broot";CORR!**

(7) If errors persist, contact your support organization.

(8) Repeat from Step 5 for **"/dev/bdb"**; and then **"/dev/betc"**.

(9) Run the file system linkage audit on the backup partitions:

Enter: **AUD:FSLINK 1,INS"/dev/broot"!**

Wait for audit to complete.

(10) If the number of errors found, if any, are greater than the number of errors corrected, run the audit again specifying the CORR mode:

Enter: **AUD:FSLINK 1,INS"/dev/broot";CORR!**

(11) If errors persist, contact your support organization.

(12) Repeat from Step 9 for **"/dev/bdb"**; and then **"/dev/betc"**.

(13) Turn off any manual inhibit of Data Base Management System recent changes:

Enter: **INH:RCV:OFF!**

Response:

```
4ESS INH RCV COMPL
 RECENT CHANGE INHIBIT OFF
```

(14) **If AT&T office is being retrofitted**, perform Steps 15 through 18; otherwise, go to Step 19.

(15) Allow application data base recent changes:

Enter: **ALW:RCV:APPDB,APP ALL!**

Response:

```
ALW:RCV:APPDB [APP ALL] COMPLETED
```

(16) Allow file transfer:

Enter: **ALW:FTA;APP ALL!**

Response:

```
ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR IBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR OBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR CORE

 ALW FTA APP ALL   COMPLETE
```

(17) Allow data consistency checks:

Enter: **ALW:DCC!**

Response:

ALW DCC COMPLETE

(18) Allow automated database backup (ADB):

Enter: **ALW:ADB,APP IBGTT!**

Response:

ALW ADB COMPLETED, FOR IBGTT

(19) Allow equipment configuration data base (ECD) audits:

Enter: **ALW:AUD:ECD!**

Response:

ALW AUD COMPLETED

(20) At 1B Processor MCC terminal, if System Status Page (108) is not displayed, enter **108**

(21) If **801 - RESTRICT RC** is colored black on white, Enter **801** (RESTRICT RC) to allow recent changes (**801 - RESTRICT RC** colored white on black).

(22) Do Steps 23 through 42 to write 3B computer backup tapes.

(23) Mount a 2,400-foot blank tape (with write-enable ring) on available tape drive.

(24) Dump the /etc/pdtspec file and verify its content.

Enter: **DUMP:FILE:ALL,FN"/etc/pdtspec"!**

Response:

DUMP FILE ALL COMPLETED
/dev/lboot21
/dev/lboot
/dev/vtoc
/dev/boot
/dev/bboot
/dev/root
/dev/etc
/dev/db
/dev/amafiles
/dev/amabfiles

(25) Make backup tapes:

Enter:
COPY:BKDISK;START:SRC"/dev/vtoc",TD"/dev/mtX**8",TPSIZE 2200,COM!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(26) Demount tape, label rt0 1 tape per local practice, and remove write ring from tape.

(27) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(28) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(29) Demount tape, label rt0 2 tape per local practice, and remove write ring from tape.

(30) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(31) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(32) Demount tape, label rt0 3 tape per local practice, and remove write ring from tape.

(33) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(34) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE

(35) Demount tape, label rt0 4 tape per local practice, and remove write ring from tape.

(36) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(37) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK DISMOUNT GENERIC TAPE, LABEL AND MOUNT NEXT TAPE or
COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL

(38) If COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL message was received, go to Step 42; otherwise, continue.

(39) Demount tape, label rt0 5 tape per local practice, and remove write ring from tape.

(40) Mount another 2,400-foot blank tape (with write-enable ring) on same tape drive that tape was demounted.

(41) Enter: **COPY:BKDISK;ACK:TPSIZE 2200!**

Response:

Tape will be written.
COPY BKDISK COMPLETED, DISMOUNT DATABASE TAPE AND LABEL

(42) Demount tape, label db tape per local practice, and remove write ring from tape.

(43) Do Steps 44 through 62 to verify 3B computer backup tapes.

(44) Mount 4AP16 rt0 1 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 45 will take approximately 40 minutes to complete.

(45) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(46) Demount rt0 1 backup tape.

(47) Mount 4AP16 rt0 2 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 48 will take approximately 35 minutes to complete.

(48) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(49) Demount rt0 2 backup tape.

(50) Mount 4AP16 rt0 3 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 51 will take approximately 35 minutes to complete.

(51) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(52) Demount rt0 3 backup tape.

(53) Mount 4AP16 rt0 4 backup tape (without write-enable ring) on available tape drive.

NOTE:
Step 54 will take approximately 35 minutes to complete.

(54) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(55) Demount rt0 4 backup tape.

(56) If 4AP16 rt0 5 backup tape was written, continue; otherwise, go to Step 60.

(57) Mount 4AP16 rt0 5 backup tape (without write-enable ring) on available tape drive.

(58) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(59) Demount rt0 5 backup tape.

(60) Mount 4AP16 db backup tape (without write-enable ring) on available tape drive.

(61) Enter: **VFY:TAPE,TD "/dev/mt**X**8",RETRY 3!**
(where X is the tape drive number [0 or 1 only] that tape is mounted on).

Response:

VFY TAPE STARTED
VFY TAPE COMPLETED RETRIES 0 HEADER MISMATCHES 0 DATA MISMATCHES 0

(62) Demount db backup tape.

(63) The 3B20D 4AP16 Generic contains Service Circuit System (SCS) and Expanded Time Slot Interchange (XTSI) Operational and Diagnostic Files. If your office is equipped with SCS and/or XTSI, these files must be copied from the 3B20D Computer Disk to update the appropriate frame(s) PRIOR to the 1B Generic Retrofit. Consult Section 2 "Overview of 4E22 to 4E23 Retrofit" of the "4ESS™ Switch Generic Retrofit and ODA Update Planning and Scheduling Guide 4E22 to 4E23" (234-185-023) for the necessary documentation and sequence of events.

10. Emergency Back-Out Procedures

Back-Out Enter or Proceed Steps

Restore the old generic on the partition containing the new generic and abort the retrofit process.

(1) **Place a check mark beside each step when completed.**

(2) If the retrofit failed after the boot to the new generic, the ‘‘Back-out from New Generic Issue to Old Generic Issue’’ procedure must be performed or if the retrofit automatically backed out to the Old Generic, the ‘‘Automatic Back-Out procedure must be performed.

(3) Abort retrofit process:

Enter: **UPD:APPL;ABORT!**

NOTE:
An RL response may be received. If RL is received, this means that there is nothing to abort and it is all right to continue with next step. The ABORT message does not have to be inputted again.

(4) If Page 107 is not displayed, depress **NORM DISP** (**PF2**) key and enter **107** in command mode.

(5) Enter CMD: **707,720** to specify Restore UCL command to be executed.

Response:

The Restore Unconditional message will be automatically formatted and displayed in the display area of Page 107 in the following form:

UPD:GEN;RESTORE;UCL!

(6) Enter CMD: **735** to execute Restore Unconditional command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE RESTORE PROCESS IS EXECUTING

(7) On the ROP, expect the following output messages:

REPT MHD a OUT OF SERVICE
RST MHD a TASK x MESSAGE STARTED
RST:MHD a IN PROGRESS (this message repeats several times)
RST MHD a COMPLETED
REPT DIOP DUPLEX PROCESSING COMPLETED
UPD GEN RESTORE TRANSFERRING CONTROL TO APPLICATION
UPD GEN RESTORE APPLICATION COMPLETION WITHIN 1500 SECONDS
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR
UPD GEN RESTORE LOG WILL BE PURGED IN 180 SECONDS, SAVE IT IF NEEDED
UPD GEN RESTORE COMPLETION WILL BE IN 180 SECONDS

(8) If suprlog does not need to be saved, go to Step 11.

(9) If suprlog is to be saved, depress the **CMD MSG** (**PF3**) key to position cursor at bottom of page and then go immediately to the next step.

(10) Enter:
COPY:FILESYS:FILE,SRC"/etc/log/suprlog",DEST"/tmp/suprlog"!

Response:

COPY FILESYS FILE COMPLETED

(11) Wait for the following message to appear on Page 107 message line before continuing with next step:

THE RESTORE PROCESS COMPLETED SUCCESSFULLY

On the ROP:
UPD GEN RESTORE COMPLETED

NOTE:
At this point the system update has been completely backed out.

(12) Terminate the System Update Menu Page 107:

Enter CMD: **750**

Expect ROP response:
THE SYSTEM UPDATE MENU PAGE TERMINATED SUCCESSFULLY

(13) Turn off any manual inhibit of Data Base Management System recent changes:

Enter: **INH:RCV:OFF!**

Response:

```
4ESS INH RCV COMPL
 RECENT CHANGE INHIBIT OFF
```

(14) **If AT&T office is being retrofitted**, perform Steps 15 through 18; otherwise, go to Step 19.

(15) Allow application data base recent changes:

Enter: **ALW:RCV:APPDB,APP ALL!**

Response:

```
ALW:RCV:APPDB [APP ALL] COMPLETED
```

(16) Allow file transfer:

Enter: **ALW:FTA;APP ALL!**

Response:

```
ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR IBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR OBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR CORE

 ALW FTA APP ALL   COMPLETE
```

(17) Allow data consistency checks:

Enter: **ALW:DCC!**

Response:

```
ALW DCC COMPLETE
```

(18) Allow automated data base backup (ADB):

Enter: **ALW:ADB,APP IBGTT!**

Response:

ALW ADB COMPLETED, FOR IBGTT

(19) Allow following inhibited 3B audits and automatic diagnostics:

- **ALW:AUD:ECD!**
- **ALW:AUD:DLN!**
- **ALW:DMQ;SRC ADP!**
- **ALW:DMQ;SRC REX!**

(20) Allow 1B Processor REX. At the 1B MTC terminal:

Enter: **ALW:MACLI,CLASS MTCE!**

Response:

REPT: MACP AUTOMATIC JOB SCHEDULING RESUMED

(21) At 1B Processor MCC terminal, if System Status Page (108) is not displayed, enter **108**

(22) If **801 - RESTRICT RC** is colored black on white, Enter **801** (RESTRICT RC) to allow recent changes (**801 - RESTRICT RC** colored white on black).

Back-Out from New Generic Issue to Old Generic Issue

NOTE:
This step is applicable only while running on the new generic, but prior to committing to the new generic. This step cannot be implemented after the commit to the new generic.

(1) **Place a check mark beside each step when completed.**

(2) Dump the current state of the suprlog and save printouts for later use:

Enter: **OP:GEN;READLOG!**

(3) If Page 107 is not displayed, depress **NORM DISP** (**PF2**) key and enter **107** in command mode.

(4) Enter CMD: **708,720** to specify Back-Out UCL command to be executed.

Response:

The Back-Out Unconditional message will be automatically formatted and displayed in the display area of Page 107 in the following form:

UPD:GEN;BACKOUT;UCL!

(5) Enter CMD: **735** to execute the Back-Out Unconditional command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE BACKOUT PROCESS IS EXECUTING

NOTE:
The Back-Out process will copy the suprlog back into the old generic.

(6) On the ROP, expect the following output messages:

```
UPD:GEN;BACKOUT;UCL! PF
UPD GEN BACKOUT TRANSFERRING CONTROL TO APPLICATION
UPD GEN BACKOUT APPLICATION COMPLETION WITHIN x SECONDS
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR
UPD GEN BACKOUT UPON COMPLETION BOOT SYSTEM SELECTING
PRIMARY ROOT
UPD GEN BACKOUT UPON COMPLETION BOOT SYSTEM SELECTING
MHD 0
```

Wait for the following message before booting to the file system containing the old generic.

```
UPD GEN BACKOUT COMPLETED
```

(7) Do Steps 8 through 14 to boot to the file system that contains the old generic.

(8) Determine which file system (/dev/root or /dev/broot) was recorded during ‘‘Steps to Be Done on the Night of Retrofit’’ section.

(9) Depress **EA DISP** (**PF1**) key to obtain EAI page.

(10) If file system /dev/root was recorded earlier, enter EAI CMD: **31** to clear broot.

(11) If file system /dev/broot was recorded earlier, enter EAI CMD: **30** to set broot.

(12) Enter EAI CMD: **20** to select the primary partition of MHD 0.

(13) Enter EAI CMD: **10** to force CU 0 on-line.

(14) Enter EAI CMD: **54** IMMEDIATELY to boot the system.

NOTE:
Steps 15 through 17 are being performed to clear forces.

(15) If EAI page is not displayed, depress **EA DISP** (**PF1**) key

(16) Enter CMD: **13** to clear forces on CU 0.

(17) Enter CMD: **14** to clear EAI forces.

NOTE:
Once the old generic is running again, the old generic may be restored on the partitions that contained the new generic by restoring MHD 1 (Steps 18 through 25).

(18) If Page 107 is not displayed, depress **NORM DISP** (**PF2**) key and enter **107** in command mode.

(19) Enter CMD: **707,720** to specify Restore UCL command to be executed.

Response:

The Restore Unconditional message will be automatically formatted and displayed in the display area of Page 107 in the following form:

UPD:GEN;RESTORE;UCL!

(20) Enter CMD: **735** to execute Restore Unconditional command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE RESTORE PROCESS IS EXECUTING

(21) On the ROP, expect the following output messages:

REPT MHD a OUT OF SERVICE
RST MHD a TASK x MESSAGE STARTED
RST:MHD a IN PROGRESS (this message repeats several times)
RST MHD a COMPLETED
REPT DIOP DUPLEX PROCESSING COMPLETED
UPD GEN RESTORE TRANSFERRING CONTROL TO APPLICATION
UPD GEN RESTORE APPLICATION COMPLETION WITHIN 1500 SECONDS
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR
UPD GEN RESTORE LOG WILL BE PURGED IN 180 SECONDS, SAVE IT IF NEEDED
UPD GEN RESTORE COMPLETION WILL BE IN 180 SECONDS

(22) If suprlog does not need to be saved, go to Step 25.

(23) If suprlog is to be saved, depress the **CMD MSG** (**PF3**) key to position cursor at bottom of page and then go immediately to the next step.

(24) Enter:
COPY:FILESYS:FILE,SRC"/etc/log/suprlog",DEST"/tmp/suprlog"!

Response:

COPY FILESYS FILE COMPLETED

(25) Wait for the following message to appear on Page 107 message line before removing forces on MHD 1:

THE RESTORE PROCESS COMPLETED SUCCESSFULLY

On the ROP:
UPD GEN RESTORE COMPLETED

NOTE:
At this point the system update has been completely backed out.

(26) Terminate the System Update Menu Page 107:

Enter CMD: **750**

Expect ROP response:
THE SYSTEM UPDATE MENU PAGE TERMINATED SUCCESSFULLY

(27) Allow 1B Processor REX. At the 1B MTC terminal:

Enter: **ALW:MACLI,CLASS MTCE!**

Response:

REPT: MACP AUTOMATIC JOB SCHEDULING RESUMED

(28) At 1B Processor MCC terminal, if System Status Page (108) is not displayed, enter **108**

(29) If **801 - RESTRICT RC** is colored black on white, Enter **801** (RESTRICT RC) to allow recent changes (**801 - RESTRICT RC** colored white on black).

Automatic Back-Out Recovery Procedure

CAUTION:
This step is to be executed only in the case where the 3B20D has automatically backed out to the OLD GENERIC. Your next higher support organization must be contacted before executing any step in this section.

(1) **Place a check mark beside each step when completed.**

(2) Initialize the CNI ring:

Enter: **INIT:RING 4!**

NOTE:
The following messages are received as a result of the INIT:RING 4. Some responses may appear in different order due to spooler processing.

Response:

RING REPT IUN INIT
IUN LEVEL 4 INITIALIZATION COMPLETED

RING REPT IMSDRV INIT
COMPLETED CRITICAL LEVEL 4 INITIALIZATION

REPT RINGINIT CNI/IMS PART DONE

REPT RINGINIT INIT LEVEL 4 COMPLETED IN nnn **SECONDS**

(3) Do not continue with the procedure until the above message (REPT RINGINIT INIT LEVEL 4 COMPLETED IN nnn SECONDS) is received.

(4) If Page 107 is not displayed, depress **NORM DISP** (**PF2**) key and enter **107** in command mode.

(5) Enter CMD: **707,720** to specify Restore UCL command to be executed.

Response:

The Restore Unconditional message will be automatically formatted and displayed in the display area of Page 107 in the following form:

UPD:GEN;RESTORE;UCL!

(6) Enter CMD: **735** to execute Restore Unconditional command.

Response:

On Page 107 message line, the following message will appear in normal video:

THE RESTORE PROCESS IS EXECUTING

(7) On the ROP, expect the following output messages:

REPT MHD a OUT OF SERVICE
RST MHD a TASK x MESSAGE STARTED
RST:MHD a IN PROGRESS (this message repeats several times)
RST MHD a COMPLETED
REPT DIOP DUPLEX PROCESSING COMPLETED
UPD GEN RESTORE TRANSFERRING CONTROL TO APPLICATION
UPD GEN RESTORE APPLICATION COMPLETION WITHIN 1500 SECONDS
UPD GEN APPLICATION COMPLETE - RETURNING CONTROL TO SUPR
UPD GEN RESTORE LOG WILL BE PURGED IN 180 SECONDS, SAVE IT IF NEEDED
UPD GEN RESTORE COMPLETION WILL BE IN 180 SECONDS

(8) If suprlog does not need to be saved, go to Step 11.

(9) If suprlog is to be saved, depress the **CMD MSG** (**PF3**) key to position cursor at bottom of page and then go immediately to the next step.

(10) Enter:
COPY:FILESYS:FILE,SRC"/etc/log/suprlog",DEST"/tmp/suprlog"!

Response:

COPY FILESYS FILE COMPLETED

(11) Wait for the following message to appear on Page 107 message line before continuing with next step:

THE RESTORE PROCESS COMPLETED SUCCESSFULLY

On the ROP:
UPD GEN RESTORE COMPLETED

NOTE:
At this point the system update has been completely backed out.

(12) Terminate the System Update Menu Page 107:

Enter CMD: **750**

Expect ROP response:
THE SYSTEM UPDATE MENU PAGE TERMINATED SUCCESSFULLY

(13) Turn off any manual inhibit of Data Base Management System recent changes:

Enter: **INH:RCV:OFF!**

Response:

```
4ESS INH RCV COMPL
 RECENT CHANGE INHIBIT OFF
```

(14) **If AT&T office is being retrofitted**, perform Steps 15 through 18; otherwise, go to Step 19.

(15) Allow application data base recent changes:

Enter: **ALW:RCV:APPDB,APP ALL!**

Response:

```
ALW:RCV:APPDB [APP ALL] COMPLETED
```

(16) Allow file transfer:

Enter: **ALW:FTA;APP ALL!**

Response:

```
ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR IBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR OBGTT

 ALW FTA APP ALL   IN PROGRESS
 FTA IS ALLOWED FOR CORE

 ALW FTA APP ALL   COMPLETE
```

(17) Allow data consistency checks:

Enter: **ALW:DCC!**

Response:

```
ALW DCC COMPLETE
```

(18) Allow automated data base backup (ADB):

Enter: **ALW:ADB,APP IBGTT!**

Response:

ALW ADB COMPLETED, FOR IBGTT

(19) Allow automatic diagnostics:

- **ALW:DMQ;SRC ADP!**
- **ALW:DMQ;SRC REX!**

(20) Allow 1B Processor REX. At the 1B MTC terminal:

Enter: **ALW:MACLI,CLASS MTCE!**

Response:

REPT: MACP AUTOMATIC JOB SCHEDULING RESUMED

(21) At 1B Processor MCC terminal, if System Status Page (108) is not displayed, enter **108**

(22) If **801 - RESTRICT RC** is colored black on white, Enter **801** (RESTRICT RC) to allow recent changes (**801 - RESTRICT RC** colored white on black).