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A METHOD TO RUN EDITMERGE AND UPDATE BACKUP DISKS

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Abstract. A method to run EDITMERGE and update backup disks has been developed that minimizes the time spent off the regional distribution circuit (RDC), while maximizing protection from loss of critical files.

1. Introduction

EDITMERGE is a process by which keys are added to, changed, or deleted from the AFOS data base. After keys are added or changed, MODIFY must be run to reset pointers in the AFOS data base. Once EDITMERGE and MODIFY have been run, it is essential that backup disks be updated as soon as possible in order to protect against loss of data due to software or file damage. Since all these activities require AFOS to be shut down and off-line for a significant period of time, we found it desirable to develop a technique to minimize the down time, while maximizing the number of useful backups.

2. The Technique

The technique involves running EDITMERGE on both the DPCM and the DCM in the normal fashion. A degraded MODIFY is then begun on the DCM. While this is running, the PK switch is thrown to "A" and a degraded MODIFY is started on the DPCM (we now have degraded MODIFY running separately on each computer at the same time). The PK switch is then thrown back to "B" to await the finish of the DCM degraded MODIFY.

The DCM degraded MODIFY is run first so the DCM backups disks can be updated first. Once this is done, AFOS can then be brought up in DCM degraded mode and the office brought back on-line while the DPCM backups disks are updated. The DCM side is updated first to avoid transferring the data base from the DPCM to the DCM. This operation is not necessary after running in DCM degraded mode.

Macros were provided by SOC to backup certain critical files as well as the data base itself. These critical files include: DATAKEY0, DATAKEY1, DPAFILE, DPCMSKEL, DCMSKEL, BUDPCMSKEL, BUDCMSKEL, ASYSH, AFOSGEN (both degraded and dual), TITLEKEY and TITLEDATA files, and STATIONID. A macro called BACKUPSYSA

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copies the critical files onto a separate partition (SYSB) of the Winchester disks. A macro called SAVEFILES copies these critical files onto a separate Phoenix disk to be stored in a safe place outside the AFOS system. BACKUPSYSZ copies files from SYSZ onto this same disk. These macros must be run on both sides. In addition, some of the critical files are also copied onto a floppy disk using the DATASAVE macro, but this need only be done once on the DPCM side, and can be done with AFOS on-line.

A cleanup macro is run to delete any undesired files from SYSZ before it is copied to the disk. This macro was locally written and is displayed in Appendix 2.

Step-by-step instructions for this method are included as Appendix 1.

3. Conclusion

MODIFY in dual mode can take 35 to 50 minutes by itself, plus the additional down time necessary to update the DCM backup disks. Using our method, it only takes 35 to 50 minutes to go through the whole process of running EDITMERGE/MODIFY and backing up the DCM disks. Updating backup disks on the DPCM, including DATASAVE, can then be run in about 25 to 30 minutes, while the DCM is operating on-line in degraded mode. Once the DPCM disks have been backed up, dual mode operation can be restored without the need to transfer data base files from one computer to the other. This method of running EDITMERGE and MODIFY and updating backup disks clearly minimizes down time while providing maximum protection against loss of critical system and data base files.

APPENDIX 1

EDITMERGE AND BACKUP PROCEDURES

Call SOC and ask if we can go off net for EDITMERGE, etc.

Send net message to WSO's and adjacent WSFO's.

Call the WSFO that is your Weather Wire backup and ask them to run programs for your Weather Wire while you are down.

Take AFOS down.

Set PK switch to B.

Boot RDOS on the DCM (if not already running).

Type...DIR DZ0:SYSA (RETURN) on the Dasher.

Type...EDITMERGE (RETURN) (No response from Dasher)

Set PK switch back to A.

Type...DIR DZ0:SYSA (RETURN)

Type...EDITMERGE (RETURN) (Dasher prints: EDITMERGE STARTED RUNNING AT....)

Turn on floppy disk drives (if off)

Insert TRANS floppy into DP2

Dasher prints...

COMMS PRIORITY BEING CHECKED
IN ARCHIVE TRANS FILE
TRANS FILE ARCHIVED
PILEDIT MERGE COMPLETED
EDITMERGE FINISHED RUNNING AT: (DATE/TIME).

EDITMERGE.TX FILE CONTAINS THE FOLLOWING:
LIST OF CONTENTS IN EDITMERGE.TX.

Set PK switch to B

Type...TYPE DCMEM.LG (RETURN)

Dasher prints:

PILEDIT MERGE (DCM) COMPLETED

Start DCM degraded MODIFY

at the Dasher, type...DIR SYSZ (RETURN)
then type...@AFOSDEGMOD@ (RETURN)
when queried, type a carriage return to modify all files

Set PK switch back to A

Start DPCM degraded MODIFY

at the Dasher, type...DIR SYSZ (RETURN)
then type...@AFOSDEGMOD@ (RETURN)
when queried, type a carriage return to modify all files

Set PK switch back to B

While waiting for MODIFY to finish in the DCM, remove the TRANS floppy from DP2

After MODIFY is finished on the DCM, Type...TYPE MODIFY.TX (RETURN). Check the MODIFY.TX file for error 13's and 14's.

Take AFOS down again

Type...DIR DZ0:SYSA (RETURN)

Type...BACKUPSYSA (RETURN) and follow the instructions printed at the Dasher.

While BACKUPSYSA is running, turn on the DCM DPO disk drive (if off), make sure the proper backup disk is in the DPO drive, and then flip the LOAD/READY switch to READY.

When BACKUPSYSA is finished, type...SAVEFILES (RETURN) and respond to the queries.

When SAVEFILES is finished, type...CLEANUP (RETURN)

When CLEANUP is finished, type...BACKUPSYSZ (RETURN)

When BACKUPSYSZ is finished, bring up AFOS in DCM degraded mode.

Make arrangements with your WSFO Weather Wire backup office to resume your Weather Wire responsibilities.

On the DCM, flip the LOAD/READY switch back to LOAD, remove the backup disk, and put the Phoenix backup disk in. If desired, shut off the DPO disk drive.

Set PK switch to A

Type...TYPE MODIFY.TX (RETURN). Check the MODIFY.TX file for error 13's and 14's.

Stop AFOS on the DPCM (CTRL F at Dasher)

Turn on the floppy drives (if off)

Insert DATASAVE floppy into DP3

At the Dasher, type...DATASAVE (RETURN) and respond to the queries.

When DATASAVE is finished, type...DIR SYSA (RETURN)

Type...BACKUPSYSA (RETURN) and follow the instructions printed at the Dasher.

While BACKUPSYSA is running, remove the DATASAVE floppy from DP3.

Turn on the DPCM DP0 drive (if off). Make certain the proper backup disk is in place, and flip the LOAD/READY switch to READY.

When BACKUPSYSA is finished, type...SAVEFILES (RETURN) and respond to the queries.

When SAVEFILES is finished, type...CLEANUP (RETURN)

When CLEANUP is finished, type...BACKUPSYSZ (RETURN)

When BACKUPSYSZ is finished, bring AFOS up in dual mode.

Flip the LOAD/READY switch on the DPCM to LOAD, remove the backup disk, and put the Phoenix backup disk in. If desired, shut off the DPCM DP0 disk drive.

Finished.