



**Edinburgh  
Regional  
Computing  
Centre**

# User Note 54

(September 1985)

Title:

**Accessing Archived Files on EMAS**

Author:

Neil Hamilton-Smith et al.

Contact:

Advisory service

Software Support  
Category:

See Note 15

## Synopsis

This Note gives a description of some foreground and background EMAS commands for accessing or destroying archived files.

## Keywords

APERMIT, archived files, ARCHSORT, AWAITRESTORES, DISCARD, DQ, LISTPERM, RESTORE

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Edinburgh Regional Computing Centre

James Clerk Maxwell Building, The King's Buildings, Mayfield Road, Edinburgh, EH9 3JZ. Telephone 031-667 1081

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## Introduction

The commands described in this Note are automatically accessible to all users of EMAS-3 and EMAS 2900. To access LISTPERM, ARCHSORT and DQ the command or option SEARCHDIR may need to be used (see below for details). On-line information about each command may be found by using the HELP command; where printed documentation exists a reference is given in the description.

Six commands which relate to archived files are now described.

## APERMIT

When a file is archived, it retains the individual file permissions that it had when it was on-line. Its permissions can be changed by APERMIT whilst it is still on archive. When a file is restored from archive, it becomes available on-line with those permissions. You can use the RESTORE command to get another user's file restored, provided that you have access permission to the file.

The APERMIT command may be used to extend or restrict access to one of your archived files for other users. It may also be used to find out the access permissions of one of your archived files. The format is

*Command:* APERMIT file, date, user, access

- |        |   |
|--------|---|
| file   | a specific file name. You cannot permit 'all archived files', but if you set a permission for 'all on-line files' by a command like PERMIT .ALL,EKLD??, that permission also applies to all your archived files.  |
| date   | the date the file was archived (you can find this by using the command FILES file,A). If the date is omitted then APERMIT will act on the latest version of the nominated file.   |
| user   | selects all, a group of users or a specific user.<br>If you omit 'user', or specify .ALL or ??????, this means 'all users'.<br>If you specify a user number including up to 5 "?" characters as 'wild cards' instead of letters or digits, this will select a group of users.<br>Or you can specify a user number ( <u>not</u> your own number, nor "="). |
| access | one or more of:<br>R Read<br>E Execute<br>W Read/Write<br>N Debar user(s) from accessing this file<br>C Cancel specific access permission previously given for an individual user or user group.<br>Omitting 'access' altogether gives a default of RE.   |

There is no permission setting which will prevent you from discarding one of your own archived files (cf PERMIT MYFILE,myname,PER for an on-line file).

If the single character "?" is given as the second, third or fourth parameter to APERMIT, then the command will produce a report of the existing general and individual permissions (if any) for the file and whole index permissions (if any), and it will not change any permissions (regardless of the values of any of the other parameters).

**Note**

For a full description of the 'permissions' system, see Chapter 5 of the EMAS 2900 User's Guide or User Note 77.

If you want to interrogate the permissions on all your archived files, use the command LISTPERM ,A. For example, user EKLD92 could issue the command:

*Command: LISTPERM ,A*

*ARCHIVED FILES*

<i>File</i>	<i>Date</i>	<i>All Users</i>	<i>Specific Users</i>
KERN27S	17/06/84	RE	none
MYFILE	01/02/84	no access	EKLD91 R
CALIBAN	16/11/83	no access	EKLD91 R
CALIBAN	19/06/83	no access	EKLD91 no access
PROSPERO	23/03/83	no access	EKLD?? RE
KERN27S	23/12/82	R	none

*6 archived files are explicitly permitted to other users*

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*There are no "all files" permissions*

On EMAS 2900 LISTPERM is accessed via CONLIB.GENERAL.

If you want to interrogate the permissions on a group of archived files, the command LISTPERM mask,A is available, where mask is a string such as B\* or \*SYS\* such as is used for the FILES command (see Chapter 5 of the EMAS 2900 User's Guide). LISTPERM only reports on those files whose permissions differ from the standard Self: read,write,execute Others: none.

You cannot alter or interrogate your own permission to your own archived files: you always have enough permission to restore them, and you can change your own permission to a file when it is restored.

**Example:** User EKLD92 might issue the following commands:

*Command: FILES MYFILE,A*

*MYFILE 01/02/84 4*

*MYFILE 16/11/83 4*

*Command: APERMIT MYFILE,?*

*Access permissions: None*

*Command: APERMIT MYFILE,16/11/83,?*

*Access permissions:*

*EKLD91 R*

*Command: APERMIT MYFILE,16/11/83,EKLD91,C*

*Command: APERMIT MYFILE,01/02/84,EKLD91,R*

## RESTORE

The command RESTORE is used to copy a file from the archive store to the disc store of its owner. Note that the copy in the archive store is not deleted as a result of this command. The format of the command is:

*Command:* RESTORE owner:file, date, newname

- owner:file        the full name of the file being restored. If you are restoring one of your own files then owner: may be omitted. Note that the conjunction is ':' on EMAS-3 and '.' on EMAS 2900.
- date             the date of archiving (optional). This must be typed exactly as it appears in the FILES output, i.e. in the form dd/mm/yy. For this purpose the form of the command is FILES owner:;A.
- By default the most recent copy of a file is restored; the date is only needed when an earlier copy is required and each copy is permitted to the user requesting its restoration.
- newname          the name the restored copy of the file is to have (if different from the name of the archived copy). The EMAS 2900 implementation of RESTORE does not have this facility.

The access permissions of the RESTORED file include all modes to its owner and permissions to other users as at the time it was copied to the ARCHIVE store or subsequently set by use of APERMIT as described above. The file is not CHERISHED.

Example:        User EKLD91 might issue the following commands:

*Command:* FILES EKLD92:A

*Archived files:* 5

KERN27S	17/06/84	12
MYFILE	01/02/84	4
CALIBAN	16/11/83	4
PROSPERO	23/03/83	8
KERN27S	23/12/82	12

*Command:* RESTORE EKLD92:MYFILE,,MYFILE92

*Command:* RESTORE EKLD92:KERN27S,23/12/82

RESTORE will fail immediately if:

- \* A file of the same name already exists in the owner's process.
- \* The date is typed in incorrect format.
- \* There is no reference in the archive index to the requested name, or, if a date is used, no reference to a file of the requested name archived on that date.

If the RESTORE command is successfully interpreted then a request is sent to the VOLUMS process to carry out the operation (see Chapter 1 of the EMAS 2900 User's Guide). The user can then proceed to give other commands to EMAS 2900.

The file is normally recovered from the archive store within 15 minutes.

The RESTORE operation can fail when the VOLUMS process attempts to copy the file to the disc store. This will occur if:

- \* There is insufficient room in the owner's file index.
- \* There is a file of the same name in the owner's file index. This would only occur if the owner had created a file of the same name after the RESTORE command had been typed.

A message from the VOLUMS process will be typed on the interactive terminals of the user who requested the restoration and the owner of the file (if different), indicating the successful restoration of the file or a reason for failure. This message will be typed when each user next logs on if he logs off before the file is restored.

## **AWAITRESTORES**

This command is only of use in Background jobs: if typed during a foreground session it has no effect. Its purpose is to suspend the job until any outstanding restores for the user have been completed. Thus if user EKLD91 wished to compile the source files TRAINS and CALIBAN which are held on archive then the job could contain the following sequence of commands:

```
RESTORE TRAINS
RESTORE EKLD92:CALIBAN
AWAITRESTORES
FORT77 TRAINS,TRAINY
FORT77 EKLD92:CALIBAN,BUSY
```

AWAITRESTORES will delay the job so long as any RESTORES are still waiting for the system's attention. That includes RESTORE commands which were not given in the present job, so that it is possible to give a RESTORE command in an interactive session and then DETACH a job which includes an AWAITRESTORES command. AWAITRESTORES will only wait for RESTORES issued by the same user.

AWAITRESTORES will release the job to continue running immediately if there are no outstanding RESTORES, or if all outstanding RESTORES have already been processed.

AWAITRESTORES will release a job to continue running when all outstanding RESTORES have been dealt with, even if they have not been dealt with successfully.

Thus if a RESTORE action fails (perhaps because restoring the file would exceed the user's file storage allocation), AWAITRESTORES will not suspend the job indefinitely, but the job will be released only to find that a file which it had been expecting is not available.

## ARCHSORT

This command, which is accessed via ERCLIB:GENERAL on EMAS-3 and CONLIB.GENERAL on EMAS 2900, prints a list of your archived files. The format of the command is:

*Command:* ARCHSORT output

By default the list is printed at your terminal, but it can be directed to a line printer or a file if you prefer. The list of names of archived files is sorted into reverse alphabetic order regardless of the date on which the file was archived. If any name occurs more than once then the details are printed across the line starting with the most recent date.

For example:

*Command:* archsort

*Archived files : 9 - accumulated between 23/12/82 and 25/02/85*

PROSPERO (8K)	25/02/85		
MYFILE (4K)	01/02/84	MYFILE (4K)	16/11/83
KERN27S (12K)	17/06/84	KERN27S (12K)	23/12/82
CALIBAN (4K)	16/11/83	CALIBAN (4K)	19/06/83
ALLRTEST (4K)	07/01/85		
ADDRLIST (8K)	24/09/84		

## DQ

This command, which is accessed via ERCLIB:GENERAL on EMAS-3 and CONLIB.GENERAL on EMAS 2900, is used to delete files interactively. The format of the command is:

*Command:* DQ mask, group

where mask and group are similar to the first two parameters of the FILES command. One essential difference is that with DQ group may be used to select either but not both archived and on-line files.

A list of all files which are selected by mask and group is printed. Then for each file in turn you will be asked whether you wish to destroy it or not. Your response can be Y (for yes), N (for no) or .END (meaning do not discard this or any succeeding files in the list). For archived files there are two additional responses; restore (which restores the nominated file and then destroys the archived copy) or all except latest, which is self-explanatory.

Examples:

*Command:* dq a\*

\* ADDRLIST ALLRTEST \* APRIL

\* ADDRLIST Destroy? Y/N/.End: n

ALLRTEST Destroy? Y/N/.End: n

\* APRIL Destroy? Y/N/.End: n

Command: dq m\*,a

Archived files : 9

MYFILE	01/02/84	4
MYFILE	16/11/83	4

MYFILE 01/02/84 4 Destroy? Y/N/Allexceptlatest/Restore/.E: all except latest

Number of files discarded: 1

Command: dq c\*,a

Archived files : 8

CALIBAN	16/11/83	4
CALIBAN	19/06/83	4

CALIBAN 16/11/83 4 Destroy? Y/N/Allexceptlatest/Restore/.E: n  
CALIBAN 19/06/83 4 Destroy? Y/N/Allexceptlatest/Restore/.E: restore  
Restore CALIBAN,19/06/83

Number of files discarded: 1

Command: dq k\*,a

Archived files : 7

KERN2S	17/06/84	12
KERN2S	23/12/82	12

KERN2S 17/06/84 12 Destroy? Y/N/Allexceptlatest/Restore/.E: .end

Number of files discarded: 0

## DISCARD

This command is used to delete files in the archive store. The command takes effect immediately: this means that following a call of DISCARD none of the specified files can be RESTOREd, and a call of FILES ,A will confirm the deletion of these files. The format of the command is:

### DISCARD controlfile

DISCARD can be used with no parameter to delete small numbers of files. After typing DISCARD you will be prompted on your terminal for the name and archive date of each file to be deleted. To terminate the command, reply .END. The following example should make this clear:

*Command:* discard  
*File Date:* myfile 16/11/83  
*File Date:* caliban 19/06/83  
*File Date:* .end

*Number of files discarded:* 2

## Notes

- \* The date must be typed exactly as printed by FILES, i.e. in the form dd/mm/yy.
- \* Anything following the date on the line will be ignored.
- \* Each file is deleted from the archive index as soon as its name and date have been read and checked.

DISCARD can alternatively take as its parameter the name of a file containing names and dates of files to be deleted. The file must contain the names of files to be deleted in the format specified above, i.e. each name and date pair on a separate line.

Note that FILES ,A,FILENAME can be used as a convenient method of generating such a file. Using either the mask facility in FILES or a text editor it is possible to produce a selective list of archived files to be destroyed. An advantage of this method is that it is possible to check the list to ensure that it contains only files which are really unwanted before calling DISCARD.

The following examples should help to explain this:

To destroy all files ending in Y in the archive store:

*Command:* files \*y,a,cfile

*Command:* discard cfile

To destroy all copies of file MYFILE in the archive store except the most recent:

*Command:* files myfile,a,cfile

*Command:* edit cfile

(Use the editor to delete the line giving details of the most recent copy of MYFILE, thus leaving in CFILE the details of all earlier copies.)

*Edit:* e

*Command:* discard cfile

Note that since the command DISCARD ignores any information following the date there is no need to remove the 'number of pages' figure from each line of the file created by FILES.