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Title:

DOMUS - Utility EXEC
User's Guide

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Abstract:

This manual is a user's guide for the DOMUS Batch Processor EXEC.

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1. INTRODUCTION

1.

The EXEC program is the DOMUS batch processor module, which executes utility-program calls and S-functions in a sequential user defined sequence. Commands are supplied by the user as ASCII characters on a discfile or external device.

In contrary to the DOMUS INT (ERPRET) function each termination of a utility-program is awaited and the success of the call is checked. In case of error the whole job is aborted is specified so by the user in the EXEC call.

The command file is read to the internal workfile .XEC before interpretation, hereby releasing the input device for use in the job.

2. PARAMETER FORMAT

2.

The syntax of the call follows the general rules given in [2], and the parameters are:

EXEC IN.<filename> LIST.<filename> STOP<boolean> CONT.<filename>

- IN: This is the file containing a number of lines with normal S-functions, internal commands or utility calls in the same format as used when entering commands to the S-process from the operator console. The syntax check is left to the S-process, and the function of the EXEC program is mainly to split the file into single commands send for interpretation and execution at the S-process.
- LIST: A log of the commands is produced on this file. The file can not be used by programs loaded during the job.
- STOP: If this parameter equals YES, a check is performed on each utility termination, and if the program reports a non-successful termination, the whole job is terminated with an error message.
- CONT: If specified, this file must be a command file for DOMUS. When the EXEC command FINISH is executed, the EXEC program will be removed, and the operating system is requested to interpret this file.
- Default: EXEC IN.\$PTR LIST.<0>...<0> STOP.NO CONT.<0>...<0>

3. COMMAND FILE SYNTAX

3.

The only check performed by the EXEC program is a check on the identifier found as the first item on each line, and a final check is left to the operating system and the programs loaded.

The syntax is then the one described in [1] and [2], and the only operation done by the EXEC module is the line separation, as the lines are handed over to the S-process for execution line by line.

However, following exception exists:

- BEGIN and END commands are blind and the rest of the line is skipped, hereby left for comments.
- A DRIVE function implies that following program-loads are performed from the catalog unit given as parameter, until a new DRIVE function is found, and the END function will not reset the drive number to zero.
- A CONNECT command implies that the filenames stated in the following utility program calls will be interpreted as belonging to the stated catalog. Note, that an END-command has no effect in the command file.
- A RELEASE command will change the current catalog to the catalog that was current, when the EXEC program was loaded. Note, that if connection to the main catalog is wanted, the command CONNECT CAT must be used.
- Comments can be given anywhere in the command file as !<any number of characters except!>!. The whole comment is skipped and replaced by a single space, but transferred to the list-file unchanged. Newline characters in a comment string have no effect.
- LIST functions are ignored by the S-process.

- Each line must not exceed 500 characters in length, including comments which are counted as one character.
- Characters which are interpreted as blind or illegal by the S-process are skipped.
- Tabulation characters are converted to spaces on the listfile.

The action taken by the EXEC module depends on the identifier found as the first item on each line, and is given in the below table. Internal functions can be viewed on as utility functions, although no load is performed.

- BEGIN The line is ignored by the EXEC program.
- BOOT The line is send to the S-process for execution. If the command is accepted, the DOMUS system, including the EXEC-program, is overwritten and properly termination of log output or job can not be expected.
- CLEAN The line is send to the S-process.
- CLEAR The line is send to the S-process.
- CONNECT The current catalog is changed to the one given as parameter. Note that the current catalog is not changed even if an END-command is met.
- DRIVE The drive-number specified as a parameter will be the catalog unit from where the following program loads are performed. Note that the drive-number is not changed even if an END command is found in contrary to normal use of console entered commands.
- Before a DRIVE command or a load from a catalog unit different from zero is used, an INIT command should be given. Only decimal drive numbers are allowed.
- END The command is ignored by the EXEC program.

- FINISH This is an internal command. Job execution is terminated, and the EXEC program is removed from the core, and all processes loaded during run is removed too by the operating system.
- The command must be the last in the command file.
- FREE The line is send to the S-process.
- GET The line is send to the S-process.
- INIT The line is send to the S-process.
- INT The line is send to the S-process.
- KILL The line is send to the S-process.
The process to kill must not have messages pending at the EXEC process, else this is breaked with breakcause 1.
- LIST Ignored by the operating system.
- LOAD The line is send to the S-process.
LOAD function can be used for utility program loads like
- LOAD (DELETE PIP)
- but the termination of the utility program is not awaited. The termination messages will, however, be granted and the utility program is removed when the message is send. If the utility function has not terminated when EXEC program finds a FINISH command, it is removed unconditionally.
- PAUSE This is an internal command. A number sign (#) is output on the operator console, and the EXEC process waits for operator intervention. If operator inputs STOP the EXEC process will stop execution as if a FINISH command was

met, and the outputs the message 'EXECUTION STOPPED BY THE OPERATOR', else the execution is continued.

RELEASE Changes the current catalog to the one that was current catalog of DOMUS, when EXEC was called. This is not necessarily the main catalog. To change to the main catalog, use the command CONNECT CAT.

START The line is send to the S-process.

STOP The line is send to the S-process.

<any other name> The line is send to the S-process as a utility program load function. A termination message from the utility module is awaited, and if this indicates an unsuccessful run the execution is aborted is STOP.YES is specified, else job execution is continued. If the job is aborted the text 'UTILITY PROGRAM ERROR, PROGRAM <name>' is output on the operator console.

Note:

Do not load other modules than utility programs in this way, as a missing termination message will hang up EXEC for ever.

4. OPERATOR COMMUNICATION

4.

The EXEC program accepts input from operator during run.

If operator inputs STOP the execution of the command-file is aborted and the program outputs

EXECUTION STOPPED BY OPERATOR

If a PAUSE command is met a numbersign (#) is output, and the program waits for input. If the operator inputs STOP the execution is aborted as above explained, else the execution is continued.

Example (input marked with _):

```
control G  
>EXEC  
STOP  
EXECUTION STOPPED BY OPERATOR  
>S  
FINISH EXEC
```

5. CHAINED PROGRAMS

5.

When utility programs sends a termination message, this message can hold a string of commands, which is requested to be interpreted and executed when removal of the program from core has taken place.

The EXEC module interprets such commands as if they were present in the operator specified command file after the previous executed line, and the commands must therefore obey the rules given in section 3. The list file output is ignored during execution of these commands, and they are invisible to operator, as if the requesting program was still running, and can be repeated any number of times, only limited by disc space.

Example:

Command file PROG1 request PROG2 request PROG3 request

PROG1

 PROG2

 PROG4

 PROG5

 PROG3

 PROG6

Resulting sequence of program calls:

PROG1

PROG2

PROG4

PROG5

PROG3

PROG6

} Not listed on log.

If the file TESTC contains the text:

```

CHATR ASC1
EDIT ASC1                ! UNPROTECT, EDIT AND !
CHATR ASC1 PW            ! PROTECT SOURCE 1    !
PAUSE                    ! WAITING FOR READER  !
COPY $PTR ASC2          ! READ ,EDIT AND    !
EDIT ASC2                ! PROTECT SOURCE 2  !
CHATR ASC2 PW
DOMAC LIST.$LPT BIN.R1 ASC1
DELETE XXX
DOMAC LIST.XXX BIN.R2 ASC2
PRINT XXX
PRINT XXX                ! PROCEDURE TWO LISTING OF ASC2 !
DELETE TEST
LINK TEST LOG.$LPT FORM.R IN.R1 R2
TEST                      ! LOAD THE PROGRAM    !
FINISH

```

the call EXEC TESTC

will call the Editor twice, assemble the two sources and load the resulting program. Listing of the code is produced for both modules, with two copies of the source read from paper tape.

APPENDIX A - REFERENCES

- [1] DOMUS User's Guide, Part 1.
- [2] DOMUS User's Guide, Part 2.

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