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# cmlprune: User Guide and Reference Version 1

CML00062-01

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## 1 Introduction

Code Magus Limited `cmlprune` enables easy and consistent management of directories and files in a file system. `cmlprune` can be configured to run from a scheduling system such as `cron` on Unix and Linux. Some options to `cmlprune` are selection options and others are action options. Any file selected by the selection options is then acted on according to the action options.

A comprehensive log of this process can also be generated. `cmlprune` runs in a consistent manner across all the systems it is built for; currently Linux and Unix.

## 2 Invocation

`cmlprune` is usually invoked from a scheduling package and all options for controlling it are passed as parameters. The default action to be performed on a selected file is to delete the file. This allows directories that are constantly added to (such as a repository for log files) to be kept from filling up a file system. Instead of being deleted files may be moved to another directory.

If run with the parameter `--help` it will print all the parameters that are valid. This is shown below and the parameters are explained in section 3 on page 3.

```
Code Magus Limited Directory Prune V1.0: build 2011-10-28-17.05.17
[29746]# [./cmlprune] $Id: cmlprune.c,v 1.13 2011/07/01 12:29:50 hayward Exp $
# Copyright (c) 2010 by Code Magus Limited. All rights reserved.
# [helpinfo@codemagus.com].
Usage: cmlprune [OPTION...]
  -d, --directory=<directory name>      Directory to prune
  -a, --age=days[:hours[:minutes]]     minimum age of files to delete
  -r, --recurse                          Prune all sub directories below
                                         --directory
  -t, --target-directory=<directory name> Directory to move files to
                                         instead of deleting
  -e, --remove-empty-subdirectories       Remove sub-directories that
                                         become empty
  -F, --skip-files=STRING                Regular Expression: files to
                                         skip in processing
  -D, --skip-directories=STRING          Regular Expression: directories
                                         to skip in processing
  -l, --log-file=<file name>             Log file to write progress to
  -v, --verbose                          Verbose processing mode

Help options:
  -?, --help                             Show this help message
  --usage                                Display brief usage message
```

## 3 Parameters

Shown below are the parameters that control `cmlprune` along with a description of each one.

- `-d, --directory=<directory name>`

This mandatory parameter is a selection parameter and names the directory that is to be acted on. Only files and/or sub directories in this directory may be selected for an action.

- `-a, --age=days[:hours[:minutes]]`

This mandatory parameter is a selection parameter. It specifies an age in days, hours and/or seconds that is used for comparison to the last modification time of each file in the specified directory. If the file is older than this age then it is selected for processing. There is no real restriction on the value of days, hours and minutes; it is just as valid to specify 120 minutes as it is 2 hours or 36 hours instead of 1 day and 12 hours.

### Examples

To specify that files older than 365 days should be acted upon:

```
--age=365
```

... or files older than 60 days and 10 hours:

```
--age=60:10
```

... or files older than 1 day and 10 hours and 32 minutes:

```
--age=1:10:32
```

... or files older than 32 minutes:

```
--age=0:0:32
```

... or files older than an hour and a half:

```
--age=0:1:30
```

```
--age=0:0:90
```

- `-r, --recurse`

This optional parameter is a selection parameter and when specified causes `cmlprune` to recursively check every sub directory under the directory specified in `--directory`.

- `-t, --target-directory=<directory name>`

This optional parameter is an action parameter and, if specified, names an existing directory and changes the action so that all selected files are moved to this directory. The original directory structure is maintained as are all file access and

modification times. Keeping the sub directory allows files of the same name but in different sub directories to be moved without overwriting each other. If the file already exists in the target sub directory it is overwritten.

- `-e, --remove-empty-directories`

This optional parameter is an action parameter and, if specified, will cause `cml-prune` to check if each directory it processes, after actioning all the selected files, is empty and if so the directory is removed. The top level directory, as named with the command line parameter `--directory`, is never removed when empty.

- `-l, --log-file=<file name>`

If specified, the value of this parameter names a file to which any program output is written to. However if the environment variable `CODEMAGUS_OUTPUT_SPEC` is set to a Recio [1] open string such as to the `TEXT` [2] access method this parameter is ignored and the program output is directed to the destination defined by the output open specification. For example to append the log to the Recio destination file called `cmlprune_log.txt` the environment variable can be set as follows:

On Linux and Unix:

```
export CODEMAGUS_OUTPUT_SPEC="text(cmlprune_log.txt,mode=a)"
```

or on Windows:

```
set CODEMAGUS_OUTPUT_SPEC="text(cmlprune_log.txt,mode=a)"
```

or it may be set via the 'System' dialogue window on Windows.

- `-v, --verbose`

This optional parameter, if specified, will cause `cmlprune` to output more detailed diagnostic information about the process; A log record is written for each file that is actioned and all directories that are processed. An alternative to specify this is to set the environment variable `CODEMAGUS_MSGLEVEL` to the value `VERBOSE`.

Furthermore, if the environment variable `CODEMAGUS_MSGLEVEL` is set to the value `TRACE`; a log record is written for each file that is NOT deleted or moved.

## References

- [1] recio: Record Stream I/O Library Version 1. CML Document CML00001-01, Code Magus Limited, July 2008. [PDF](#).
- [2] text: File Access Method Using POSIX Streams Version 1. CML Document CML00031-01, Code Magus Limited, July 2008. [PDF](#).