

DIETFileManagementAPI

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Chapter 1

DIET File Management Index Page

This documentation aims at presenting the API of the DIET File Management System. The API is only composed of a header called [diet-fms-lib.h](#)

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1.1

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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

[diet_stat_t](#) (A specific data structure for file information representation through DIET) 7

Chapter 3

File Index

3.1 File List

Here is a list of all files with brief descriptions:

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Chapter 4

Class Documentation

4.1 diet_stat_t Struct Reference

A specific data structure for file information representation through DIET.

```
#include <diet-fms-lib.h>
```

Public Attributes

- char [path](#) [PATH_MAX]
- char [owner](#) [_POSIX_LOGIN_NAME_MAX]
- char [group](#) [_POSIX_LOGIN_NAME_MAX]
- mode_t [perms](#)
- uid_t [uid](#)
- gid_t [gid](#)
- size_t [size](#)
- time_t [atime](#)
- time_t [mtime](#)
- time_t [ctime](#)
- [diet_file_type_t](#) [type](#)

4.1.1 Detailed Description

A specific data structure for file information representation through DIET.

4.1.2 Member Data Documentation

4.1.2.1 time_t diet_stat_t::atime

The file size (in bytes).

4.1.2.2 time_t diet_stat_t::ctime

The last modification time.

4.1.2.3 gid_t diet_stat_t::gid

The owner numeric UID.

4.1.2.4 char diet_stat_t::group[_POSIX_LOGIN_NAME_MAX]

The owner of the file.

4.1.2.5 time_t diet_stat_t::mtime

The last access time.

4.1.2.6 char diet_stat_t::owner[_POSIX_LOGIN_NAME_MAX]

The file path.

4.1.2.7 char diet_stat_t::path[PATH_MAX]**4.1.2.8 mode_t diet_stat_t::perms**

The group of the file.

4.1.2.9 size_t diet_stat_t::size

The group numeric GID.

4.1.2.10 diet_file_type_t diet_stat_t::type

The last inode change time.

4.1.2.11 uid_t diet_stat_t::uid

The access permissions of the file.

The documentation for this struct was generated from the following file:

- [diet-fms-lib.h](#)

Chapter 5

File Documentation

5.1 diet-fms-lib.h File Reference

```
#include <sys/types.h>
#include <limits.h>
#include <pthread.h>
```

Classes

- struct [diet_stat_t](#)

A specific data structure for file information representation through DIET.

Enumerations

- enum [diet_file_type_t](#) {
 [DFMS_BLOCK](#), [DFMS_CHARACTER](#), [DFMS_DIRECTORY](#), [DFMS_SYMLINK](#),
 [DFMS_SOCKET](#), [DFMS_FIFO](#), [DFMS_REGULAR](#) }

An enum for the file type specifications.

Functions

- int [dietchgrp](#) (const char *path, const char *group)
- int [dietchmod](#) (const char *path, const mode_t mode)
- int [dietcp](#) (const char *src, const char *dest)
- int [dietcp_async](#) (const char *src, const char *dest, unsigned long long *thrRef)
- int [diethead](#) (const char *path, const unsigned int nline, char *buffer, const size_t maxsize)
- int [dietls](#) (const char *path, char *buffer, const size_t maxsize)
- int [dietmkdir](#) (const char *path, const mode_t mode)
- int [dietmv](#) (const char *src, const char *dest)
- int [dietmv_async](#) (const char *src, const char *dest, unsigned long long *thrRef)
- int [dietrm](#) (const char *path)

- int [dietrmdir](#) (const char *path)
- int [dietail](#) (const char *path, const unsigned int nline, char *buffer, const size_t maxsize)
- int [dietstat](#) (const char *path, struct [diet_stat_t](#) *buf)
- int [dietwait](#) (const unsigned long long thrID)

5.1.1 Enumeration Type Documentation

5.1.1.1 enum diet_file_type_t

An enum for the file type specifications.

Enumerator:

- DFMS_BLOCK***
- DFMS_CHARACTER*** Enum value for block special files.
- DFMS_DIRECTORY*** Enum value for character files.
- DFMS_SYMLINK*** Enum value for directories.
- DFMS_SOCKET*** Enum value for symbolic links.
- DFMS_FIFO*** Enum value for sockets.
- DFMS_REGULAR*** Enum value for FIFO files.
Enum value for regular files.

5.1.2 Function Documentation

5.1.2.1 int dietchgrp (const char * *path*, const char * *group*)

dietchgrp - change the group of a file

Parameters:

- path* the file path using host:path format
- group* the name of the new group to use for this file

Returns:

0 if everything is OK, another value otherwise

5.1.2.2 int dietchmod (const char * *path*, const mode_t *mode*)

dietchmod - change the permissions of a file

Parameters:

- path,:* the file path using host:path format
- mode,:* the permission mode to use for this file

Returns:

0 if everything is OK, another value otherwise

5.1.2.3 int dietcp (const char * *src*, const char * *dest*)

dietcp - copy the file

Parameters:

src,: the "source" file path using host:path format

dest,: the "destination" file path using host:path format

Returns:

0 if everything is OK, another value otherwise

5.1.2.4 int dietcp_async (const char * *src*, const char * *dest*, unsigned long long * *thrRef*)

dietcp_async - copy the file in a asynchronous mode

Parameters:

src,: the "source" file path using host:path format

dest,: the "destination" file path using host:path format

thrRef,: the thread ID that can be used by dietwait

See also:

[dietwait](#)

Returns:

0 if everything is OK, another value otherwise

5.1.2.5 int diethead (const char * *path*, const unsigned int *nline*, char * *buffer*, const size_t *maxsize*)

diethead - get the first lines of a file

Parameters:

path,: the file path using host:path format

nline,: the maximum number of lines to get

buffer,: an user-allocated buffer to store the result

maxsize,: the maximum size to use to prevent buffer overflows

Returns:

0 if everything is OK, another value otherwise

5.1.2.6 int dietls (const char * *path*, char * *buffer*, const size_t *maxsize*)

dietls - get the list of files and subdirectories of a directory

Parameters:

path,: the directory path using host:path format

buffer,: an user-allocated buffer to store the result

maxsize,: the maximum size to use to prevent buffer overflows

Returns:

0 if everything is OK, another value otherwise

5.1.2.7 int dietmkdir (const char * *path*, const mode_t *mode*)

dietmkdir - create a directory

Parameters:

path,: the directory path using host:path format

mode,: the permission mode to use for the new directory

Returns:

0 if everything is OK, another value otherwise

5.1.2.8 int dietmv (const char * *src*, const char * *dest*)

dietmv - move a file

Parameters:

src,: the "source" file path using host:path format

dest,: the "destination" file path using host:path format

Returns:

0 if everything is OK, another value otherwise

5.1.2.9 int dietmv_async (const char * *src*, const char * *dest*, unsigned long long * *thrRef*)

dietmv_async - move a file in a asynchronous mode

Parameters:

src,: the "source" file path using host:path format

dest,: the "destination" file path using host:path format

thrRef,: the thread ID that can be use by dietwait

See also:

[dietwait](#)

Returns:

0 if everything is OK, another value otherwise

5.1.2.10 int dietrm (const char * *path*)

dietrm - remove a file

Parameters:

path,: the file path using host:path format

Returns:

0 if everything is OK, another value otherwise

5.1.2.11 int dietrmdir (const char * *path*)

dietrmdir - remove an empty directory

Parameters:

path,: the directory path using host:path format

Returns:

0 if everything is OK, another value otherwise

5.1.2.12 int dietstat (const char * *path*, struct diet_stat_t * *buf*)

dietstat - obtain informations about a file

Parameters:

path,: the file path using host:path format

buf,: a buffer to store the informations

Returns:

0 if everything is OK, another value otherwise

5.1.2.13 int diettail (const char * *path*, const unsigned int *nline*, char * *buffer*, const size_t *maxsize*)

diettail - get the last lines of a file

Parameters:

path,: the file path using host:path format

nline,: the maximum number of lines to get

buffer,: an user-allocated buffer to store the result

maxsize,: the maximum size to use to prevent buffer overflows

Returns:

0 if everything is OK, another value otherwise

5.1.2.14 int dietwait (const unsigned long long *thrID*)

dietwait - wait for the end of a transfer

Parameters:

thrID,: the transfer id obtained after a call to dietcp_async or dietmv_async.

Returns:

0 if everything is OK, another value otherwise

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