NAME

Mail::Box::Dir − handle folders with a file per message.

INHERITANCE

```
 Mail::Box::Dir
   is a Mail::Box
   is a Mail::Reporter

 Mail::Box::Dir is extended by
   Mail::Box::MH
   Mail::Box::Maildir
```

SYNOPSIS

```
 # Do not instantiate this object
```

DESCRIPTION

This documentation describes the way directory organized mailboxes work. At the moment, this object is extended by

- Mail::Box::MH

  MH folders, which are represented by a directory containing files which are sequentially numbered.

- Mail::Box::Maildir

  Maildir folders, which are located in a directory which has sub-directories named `tmp`, `new`, and `cur`. Each of these directories may contain files with names which are a combination of a numeric timestamp and some status flags.

- Mail::Box::Netzwert

  This folder type was especially developed for Netzwert AG, optimized to run on a cluster of servers with folders on NFS. The code is not publicly available (yet).

Extends “DESCRIPTION” in Mail::Box.

OVERLOADED

Extends “OVERLOADED” in Mail::Box.

overload: **“”**
Inherited, see “OVERLOADED” in Mail::Box

overload: **@{}**
Inherited, see “OVERLOADED” in Mail::Box

overload: **cmp**
Inherited, see “OVERLOADED” in Mail::Box

METHODS

Extends “METHODS” in Mail::Box.

Constructors

Extends “Constructors” in Mail::Box.

Mail::Box::Dir−>**new**(%options)

```
 −Option           −−Defined in     −−Default
  access             Mail::Box        'r'
  body_delayed_type  Mail::Box        Mail::Message::Body::Delayed
  body_type          Mail::Box        Mail::Message::Body::Lines
  coerce_options     Mail::Box        []
  create             Mail::Box        <false>
  directory                           <derived from folder name>
  extract            Mail::Box        10240
  field_type         Mail::Box        undef
  fix_headers        Mail::Box        <false>
  folder             Mail::Box        $ENV{MAIL}
  folderdir          Mail::Box        undef
  head_delayed_type  Mail::Box        Mail::Message::Head::Delayed
  head_type          Mail::Box        Mail::Message::Head::Complete
  keep_dups          Mail::Box        <false>
  lock_file          Mail::Box        <folder>/.lock
  lock_timeout       Mail::Box        1 hour
  lock_type          Mail::Box        Mail::Box::Locker::DotLock
  lock_wait          Mail::Box        10 seconds
  locker             Mail::Box        undef
  log                Mail::Reporter   'WARNINGS'
  manager            Mail::Box        undef
  message_type       Mail::Box        <folder−class>::Message
  multipart_type     Mail::Box        Mail::Message::Body::Multipart
  remove_when_empty  Mail::Box        <true>
  save_on_exit       Mail::Box        <true>
  trace              Mail::Reporter   'WARNINGS'
  trusted            Mail::Box        <depends on folder location>
```

access => MODE
body_delayed_type => CLASS
body_type => CLASS|CODE
coerce_options => ARRAY
create => BOOLEAN
directory => DIRECTORY

For rare folder types, the directory name may differ from the folder name.

extract => INTEGER | CODE | METHOD | ’LAZY’|’ALWAYS’
field_type => CLASS
fix_headers => BOOLEAN
folder => FOLDERNAME
folderdir => DIRECTORY
head_delayed_type => CLASS
head_type => CLASS
keep_dups => BOOLEAN
lock_file => FILENAME
lock_timeout => SECONDS
lock_type => CLASS|STRING|ARRAY
lock_wait => SECONDS
locker => OBJECT
log => LEVEL
manager => MANAGER
message_type => CLASS
multipart_type => CLASS

remove_when_empty => BOOLEAN
save_on_exit => BOOLEAN
trace => LEVEL
trusted => BOOLEAN

The folder

Extends "The folder" in Mail::Box.

`$obj`−>**addMessage**($message, `%options`)
Inherited, see "The folder" in Mail::Box

`$obj`−>**addMessages**(@messages)
Inherited, see "The folder" in Mail::Box

Mail::Box::Dir−>**appendMessages**(%options)
Inherited, see "The folder" in Mail::Box

`$obj`−>**close**(%options)
Inherited, see "The folder" in Mail::Box

`$obj`−>**copyTo**($folder, `%options`)
Inherited, see "The folder" in Mail::Box

`$obj`−>**delete**(%options)
Inherited, see "The folder" in Mail::Box

`$obj`−>**directory**()
Returns the directory related to this folder.

example:

```
 print $folder−>directory;
```

`$obj`−>**folderdir**([$directory])
Inherited, see "The folder" in Mail::Box

`$obj`−>**name**()
Inherited, see "The folder" in Mail::Box

`$obj`−>**organization**()
Inherited, see "The folder" in Mail::Box

`$obj`−>**size**()
Inherited, see "The folder" in Mail::Box

`$obj`−>**type**()
Inherited, see "The folder" in Mail::Box

`$obj`−>**update**(%options)
Inherited, see "The folder" in Mail::Box

`$obj`−>**url**()
Inherited, see "The folder" in Mail::Box

Folder flags

Extends "Folder flags" in Mail::Box.

`$obj`−>**access**()
Inherited, see "Folder flags" in Mail::Box

`$obj`−>**isModified**()
Inherited, see "Folder flags" in Mail::Box

`$obj`−>**modified**([BOOLEAN])
Inherited, see "Folder flags" in Mail::Box

$obj−>**writable**()
Inherited, see ‘‘Folder flags’’ in Mail::Box

The messages

Extends ‘‘The messages’’ in Mail::Box.

$obj−>**current**([$number|$message|$message_id])
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**find**($message_id)
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**findFirstLabeled**($label, [BOOLEAN, [$msgs]])
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**message**($index, [$message])
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**messageId**($message_id, [$message])
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**messageIds**()
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**messages**(<’ALL’|$range|’ACTIVE’|’DELETED’|$label| !$label|$filter>)
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**nrMessages**(%options)
Inherited, see ‘‘The messages’’ in Mail::Box

$obj−>**scanForMessages**($message, $message_ids, $timespan, $window)
Inherited, see ‘‘The messages’’ in Mail::Box

Sub-folders

Extends ‘‘Sub-folders’’ in Mail::Box.

$obj−>**listSubFolders**(%options)
Mail::Box::Dir−>**listSubFolders**(%options)
Inherited, see ‘‘Sub-folders’’ in Mail::Box

$obj−>**nameOfSubFolder**($subname, [$parentname])
Mail::Box::Dir−>**nameOfSubFolder**($subname, [$parentname])
Inherited, see ‘‘Sub-folders’’ in Mail::Box

$obj−>**openRelatedFolder**(%options)
Inherited, see ‘‘Sub-folders’’ in Mail::Box

$obj−>**openSubFolder**($subname, %options)
Inherited, see ‘‘Sub-folders’’ in Mail::Box

$obj−>**topFolderWithMessages**()
Mail::Box::Dir−>**topFolderWithMessages**()
Inherited, see ‘‘Sub-folders’’ in Mail::Box

Internals

Extends ‘‘Internals’’ in Mail::Box.

$obj−>**coerce**($message, %options)
Inherited, see ‘‘Internals’’ in Mail::Box

$obj−>**create**($foldername, %options)
Mail::Box::Dir−>**create**($foldername, %options)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**determineBodyType**($message, `$head`)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**folderToDirectory**($foldername, `$folderdir`)
(class method) Translate a foldername into a filename, with use of the `$folderdir` to replace a leading `=`.

Mail::Box::Dir−>**foundIn**([$foldername], `%options`)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**lineSeparator**([<STRING|’CR’|’LF’|’CRLF’>])
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**locker**()
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**messageInFile**($filename)
Returns the folder message which is found the indicated `filename`. This may be useful when some external tool reports filename to be opened.

`$obj`−>**read**(%options)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**readMessageFilenames**($directory)
Returns a list of all filenames which are found in this folder directory and represent a message. The filenames are returned as relative path.

`$obj`−>**readMessages**(%options)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**storeMessage**($message)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**toBeThreaded**($messages)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**toBeUnthreaded**($messages)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**updateMessages**(%options)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**write**(%options)
Inherited, see ‘‘Internals’’ in Mail::Box

`$obj`−>**writeMessages**(%options)
Inherited, see ‘‘Internals’’ in Mail::Box

Other methods

Extends ‘‘Other methods’’ in Mail::Box.

`$obj`−>**timespan2seconds**($time)
Mail::Box::Dir−>**timespan2seconds**($time)
Inherited, see ‘‘Other methods’’ in Mail::Box

Error handling

Extends ‘‘Error handling’’ in Mail::Box.

`$obj`−>**AUTOLOAD**()
Inherited, see ‘‘Error handling’’ in Mail::Reporter

`$obj`−>**addReport**($object)
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**defaultTrace**([$level]|[$loglevel, $tracelevel]|[$level, $callback])
Mail::Box::Dir−>**defaultTrace**([$level]|[$loglevel, $tracelevel]|[$level, $callback])
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**errors**()
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**log**([$level, [$strings]])
Mail::Box::Dir−>**log**([$level, [$strings]])
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**logPriority**($level)
Mail::Box::Dir−>**logPriority**($level)
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**logSettings**()
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**notImplemented**()
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**report**([$level])
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**reportAll**([$level])
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**trace**([$level])
Inherited, see ‘‘Error handling’’ in Mail::Reporter

$obj−>**warnings**()
Inherited, see ‘‘Error handling’’ in Mail::Reporter

Cleanup

Extends ‘‘Cleanup’’ in Mail::Box.

$obj−>**DESTROY**()
Inherited, see ‘‘Cleanup’’ in Mail::Box

DETAILS

Extends ‘‘DETAILS’’ in Mail::Box.

DIAGNOSTICS

Warning: Changes not written to read-only folder $self.
You have opened the folder read-only −−which is the default set by new(access)−−, made modifications, and now want to close it. Set close(force) if you want to overrule the access mode, or close the folder with close(write) set to NEVER.

Error: Copying failed for one message.
For some reason, for instance disc full, removed by external process, or read-protection, it is impossible to copy one of the messages. Copying will proceed for the other messages.

Error: Destination folder $name is not writable.
The folder where the messages are copied to is not opened with write access (see new(access)). This has no relation with write permission to the folder which is controlled by your operating system.

Warning: Different messages with id $msgid
The message id is discovered more than once within the same folder, but the content of the message seems to be different. This should not be possible: each message must be unique.

Error: Folder $name is opened read-only
You can not write to this folder unless you have opened the folder to write or append with new(access), or the force option is set true.

Error: Folder `$name` not deleted: not writable.

The folder must be opened with write access via new(access), otherwise removing it will be refused. So, you may have write-access according to the operating system, but that will not automatically mean that this `delete` method permits you to. The reverse remark is valid as well.

Warning: Folder directory `$directory` is write-protected.

The folder directory does already exist and is write protected, which may interfere with the requested write access. Change new(access) or the permissions on the directory.

Error: Invalid timespan '$timespan' specified.

The string does not follow the strict rules of the time span syntax which is permitted as parameter.

Warning: Message-id '$msgid' does not contain a domain.

According to the RFCs, message-ids need to contain a unique random part, then an `@`, and then a domain name. This is made to avoid the creation of two messages with the same id. The warning emerges when the `@` is missing from the string.

Warning: No directory `$name` for folder of `$class`

Error: Package `$package` does not implement `$method`.

Fatal error: the specific package (or one of its superclasses) does not implement this method where it should. This message means that some other related classes do implement this method however the class at hand does not. Probably you should investigate this and probably inform the author of the package.

Error: Unable to create subfolder `$name` of `$folder`.

The copy includes the subfolders, but for some reason it was not possible to copy one of these. Copying will proceed for all other sub-folders.

Error: Writing folder `$name` failed

For some reason (you probably got more error messages about this problem) it is impossible to write the folder, although you should because there were changes made.

SEE ALSO

This module is part of Mail-Box distribution version 3.009, built on August 18, 2020. Website: *http://perl.overmeer.net/CPAN/*

LICENSE