

1 APR::Finfo - Perl API for APR fileinfo structure

1.1 Synopsis

```

use APR::Finfo ();
use APR::Const -compile => qw(FINFO_NORM);
my $finfo = APR::Finfo::stat("/tmp/test", APR::Const::FINFO_NORM, $pool);

$device = $finfo->device;      # (stat $file)[0]
$inode  = $finfo->inode;      # (stat $file)[1]
# stat returns an octal number while protection is hex
$prot   = $finfo->protection; # (stat $file)[2]
$nlink  = $finfo->nlink;      # (stat $file)[3]
$gid    = $finfo->group;      # (stat $file)[4]
$uid    = $finfo->user;       # (stat $file)[5]
$size   = $finfo->size;       # (stat $file)[7]
$atime  = $finfo->atime;      # (stat $file)[8]
$mtime  = $finfo->mtime;      # (stat $file)[9]
$ctime  = $finfo->ctime;      # (stat $file)[10]

$ssize = $finfo->ssize; # consumed size: not portable!

$filetype = $finfo->filetype; # file/dir/socket/etc

$name = $finfo->fname;
$name = $finfo->name; # in filesystem case:

# valid fields that can be queried
$valid = $finfo->valid;

```

1.2 Description

APR fileinfo structure provides somewhat similar information to Perl's `stat()` call, but you will want to use this module's API to query an already `stat()`'ed filehandle to avoid an extra system call or to query attributes specific to APR file handles.

During the HTTP request handlers coming after `PerlMapToStorageHandler`, `$r->finfo` already contains the cached values from the apr's `stat()` call. So you don't want to perform it again, but instead get the `APR::Finfo` object via:

```
my $finfo = $r->finfo;
```

1.3 API

`APR::Finfo` provides the following functions and/or methods:

1.3.1 *atime*

Get the time the file was last accessed:

```
$atime = $finfo->atime;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$atime (integer)`

Last access time in seconds since the epoch

- **since:** **2.0.00**

This method returns the same value as Perl's:

```
(stat $filename)[8]
```

Note that this method may not be reliable on all platforms, most notably Win32 -- FAT32 filesystems appear to work properly, but NTFS filesystems do not.

1.3.2 *csize*

Get the storage size consumed by the file

```
$csize = $finfo->csize;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$csize (integer)`
- **since:** **2.0.00**

Chances are that you don't want to use this method, since its functionality is not supported on most platforms (in which case it always returns 0).

1.3.3 *ctime*

Get the time the file was last changed

```
$ctime = $finfo->ctime;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$ctime (integer)`

Inode change time in seconds since the epoch

- **since:** **2.0.00**

This method returns the same value as Perl's:

```
(stat $filename)[10]
```

The `ctime` field is non-portable. In particular, you cannot expect it to be a "creation time", see "Files and Filesystems" in the *perlport* manpage for details.

1.3.4 device

Get the id of the device the file is on.

```
$device = $finfo->device;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$device (integer)`
- **since:** **2.0.00**

This method returns the same value as Perl's:

```
(stat $filename)[0]
```

Note that this method is non-portable. It doesn't work on all platforms, most notably Win32.

1.3.5 filetype

Get the type of file.

```
$filetype = $finfo->filetype;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$filetype (:filetype constant)`
- **since:** **2.0.00**

For example:

```
use APR::Pool;
use APR::Finfo;
use APR::Const -compile => qw(FILETYPE_DIR FILETYPE_REG FINFO_NORM);
my $pool = APR::Pool->new();
my $finfo = APR::Finfo::stat("/tmp", APR::Const::FINFO_NORM, $pool);
my $finfo = $finfo->filetype;
if ($finfo == APR::Const::FILETYPE_REG) {
    print "regular file";
}
elsif ($finfo == APR::Const::FILETYPE_REG) {
    print "directory";
}
else {
    print "other file";
}
```

Since `/tmp` is a directory, this will print:

```
directory
```

1.3.6 *fname*

Get the pathname of the file (possibly unrooted)

```
$fname = $finfo->fname;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$filetype (string)`
- **since:** 2.0.00

1.3.7 *group*

Get the group id that owns the file:

```
$gid = $finfo->group;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$gid (number)`
- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[5]
```

Note that this method may not be meaningful on all platforms, most notably Win32. Incorrect results have also been reported on some versions of OSX.

1.3.8 *inode*

Get the inode of the file.

```
$inode = $finfo->inode;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$inode (integer)`
- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[1]
```

Note that this method may not be meaningful on all platforms, most notably Win32.

1.3.9 *mtime*

The time the file was last modified

```
$mtime = $finfo->mtime;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$mtime (integer)`

Last modify time in seconds since the epoch

- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[9]
```

1.3.10 *name*

Get the file's name (no path) in filesystem case:

```
$name = $finfo->name;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$device (string)`
- **since:** 2.0.00

1.3.11 *nlink*

Get the number of hard links to the file.

```
$nlink = $finfo->nlink;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$nlink (integer)`
- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[3]
```

1.3.12 *protection*

Get the access permissions of the file. Mimics Unix access rights.

```
$prot = $finfo->protection;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$prot (:fprot constant)`
- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[2]
```

Note: Perl's `stat` returns an octal number while `mod_perl's protection` returns a hex number.

See `perldoc -f stat` and APR's `file_io` for more information on each.

1.3.13 *size*

Get the size of the file

```
$size = $finfo->size;
```

- **obj:** `$finfo (APR::Finfo object)`
- **return:** `$size (integer)`

Total size of file, in bytes

- **since:** 2.0.00

This method returns the same value as Perl's:

```
(stat $filename)[7]
```

1.3.14 *stat*

Get the specified file's stats.

```
$finfo = APR::Finfo::stat($fname, $wanted_fields, $p);
```

- **arg1:** `$fname (string)`
The path to the file to `stat()`.
- **arg2:** `$wanted_fields (:finfo constant)`

The desired fields, as a bitmask flag of `APR::FINFO_*` constants.

Notice that you can also use the constants that already combine several elements in one. For example `APR::Const::FINFO_PROT` asks for all protection bits, `APR::Const::FINFO_MIN` asks for the following fields: `type`, `mtime`, `ctime`, `atime`, `size` and `APR::Const::FINFO_NORM` asks for all atomic unix `apr_stat()` fields (similar to perl's `stat()`).

- **arg3: \$p (APR::Pool object)**

the pool to use to allocate the file stat structure.

- **ret: \$finfo (APR::Finfo object)**
- **since: 2.0.00**

For example, here is how to get most of the stat fields:

```
use APR::Pool ();
use APR::Finfo ();
use APR::Const -compile => qw(FINFO_NORM);
my $pool = APR::Pool->new();
my $finfo = APR::Finfo::stat("/tmp/test", APR::Const::FINFO_NORM, $pool);
```

1.3.15 user

Get the user id that owns the file:

```
$uid = $finfo->user;
```

- **obj: \$finfo (APR::Finfo object)**
- **return: \$uid (number)**
- **since: 2.0.00**

This method returns the same value as Perl's:

```
(stat $filename)[4]
```

Note that this method may not be meaningful on all platforms, most notably Win32.

1.3.16 valid

The bitmask describing valid fields of this apr_finfo_t structure including all available 'wanted' fields and potentially more

```
$valid = $finfo->valid;
```

- **obj: \$finfo (APR::Finfo object)**
- **arg1: \$valid (bitmask)**

This bitmask flag should be bit-OR'ed against :finfo constant constants.

- **since: 2.0.00**

1.4 See Also

mod_perl 2.0 documentation.

1.5 Copyright

mod_perl 2.0 and its core modules are copyrighted under The Apache Software License, Version 2.0.

1.6 Authors

The mod_perl development team and numerous contributors.

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