NAME

zip_file_get_external_attributes - get external attributes for file in zip

LIBRARY

libzip (-lzip)

SYNOPSIS

#include <zip.h>

int

zip_file_get_external_attributes(*zip_t *archive*, *zip_uint64_t index*, *zip_flags_t flags*,
   *zip_uint8_t *opsys*, *zip_uint32_t *attributes*);

DESCRIPTION

The **zip_file_get_external_attributes**() function returns the operating system and external attributes for
the file at position *index* in the zip archive. The external attributes usually contain the operating system-
specific file permissions. If *flags* is set to ZIP_FL_UNCHANGED, the original unchanged values are
returned. If *opsys* or *attributes* are NULL, they are not filled in.

The following operating systems are defined by the zip specification:

        ZIP_OPSYS_ACORN_RISC
        ZIP_OPSYS_ALTERNATE_MVS
        ZIP_OPSYS_AMIGA
        ZIP_OPSYS_ATARI_ST
        ZIP_OPSYS_BEOS
        ZIP_OPSYS_CPM
        ZIP_OPSYS_DOS
        ZIP_OPSYS_MACINTOSH
        ZIP_OPSYS_MVS
        ZIP_OPSYS_OPENVMS
        ZIP_OPSYS_OS_2
        ZIP_OPSYS_OS_400
        ZIP_OPSYS_OS_X
        ZIP_OPSYS_TANDEM
        ZIP_OPSYS_UNIX
        ZIP_OPSYS_VFAT
        ZIP_OPSYS_VM_CMS
        ZIP_OPSYS_VSE
        ZIP_OPSYS_WINDOWS_NTFS (uncommon, use ZIP_OPSYS_DOS instead)
        ZIP_OPSYS_Z_SYSTEM

The defines above follow the PKWARE Inc. Appnote; please note that the InfoZIP Appnote has a slightly different mapping.

RETURN VALUES

Upon successful completion, 0 is returned. In case of an error, -1 is returned and the error code in *archive* is set to indicate the error.

EXAMPLES

The following code can be used to expand *attributes* if the operating system is ZIP_OPSYS_DOS.

```
#include <sys/stat.h>

#define FA_RDONLY     0x01        // FILE_ATTRIBUTE_READONLY
#define FA_DIREC      0x10        // FILE_ATTRIBUTE_DIRECTORY

static mode_t
_zip_dos_attr2mode(zip_uint32_t attr)
{
  mode_t m = S_IRUSR | S_IRGRP | S_IROTH;
  if (0 == (attr & FA_RDONLY))
    m |= S_IWUSR | S_IWGRP | S_IWOTH;

  if (attr & FA_DIREC)
    m = (S_IFDIR | (m & ~S_IFMT)) | S_IXUSR | S_IXGRP | S_IXOTH;

  return m;
}
```

ERRORS

zip_file_get_external_attributes() fails if:

[ZIP_ER_INVAL]   *index* is not a valid file index in *archive*.

SEE ALSO

libzip(3), zip_file_set_external_attributes(3)

HISTORY

zip_file_get_external_attributes() was added in libzip 0.11.2.

AUTHORS

Dieter Baron <*dillo@nih.at*> and Thomas Klausner <*tk@giga.or.at*>