

NAME

archive_entry_acl_add_entry, **archive_entry_acl_add_entry_w**,
archive_entry_acl_clear, **archive_entry_acl_count**, **archive_entry_acl_next**,
archive_entry_acl_next_w, **archive_entry_acl_reset**, **archive_entry_acl_text_w**
— functions for manipulating Access Control Lists in archive entry descriptions

LIBRARY

Streaming Archive Library (libarchive, -larchive)

SYNOPSIS

```
#include <archive_entry.h>

void
archive_entry_acl_add_entry(struct archive_entry *a, int type, int permset,
    int tag, int qualifier, const char *name);

void
archive_entry_acl_add_entry_w(struct archive_entry *a, int type,
    int permset, int tag, int qualifier, const wchar_t *name);

void
archive_entry_acl_clear(struct archive_entry *a);

int
archive_entry_acl_count(struct archive_entry *a, int type);

int
archive_entry_acl_next(struct archive_entry *a, int type, int *ret_type,
    int *ret_permset, int *ret_tag, int *ret_qual, const char **ret_name);

int
archive_entry_acl_next_w(struct archive_entry *a, int type, int *ret_type,
    int *ret_permset, int *ret_tag, int *ret_qual, const wchar_t **ret_name);

int
archive_entry_acl_reset(struct archive_entry *a, int type);

const wchar_t *
archive_entry_acl_text_w(struct archive_entry *a, int flags);
```

DESCRIPTION

An “Access Control List” is a generalisation of the classic Unix permission system. The ACL interface of **libarchive** is derived from the POSIX.1e draft, but restricted to simplify dealing with practical implementations in various Operating Systems and archive formats.

An ACL consists of a number of independent entries. Each entry specifies the permission set as bitmask of basic permissions. Valid permissions are:

```
    ARCHIVE_ENTRY_ACL_EXECUTE
    ARCHIVE_ENTRY_ACL_WRITE
    ARCHIVE_ENTRY_ACL_READ
```

The permissions correspond to the normal Unix permissions.

The tag specifies the principal to which the permission applies. Valid values are:

```
    ARCHIVE_ENTRY_ACL_USER      The user specified by the name field.
```

<code>ARCHIVE_ENTRY_ACL_USER_OBJ</code>	The owner of the file.
<code>ARCHIVE_ENTRY_ACL_GROUP</code>	The group specified by the name field.
<code>ARCHIVE_ENTRY_ACL_GROUP_OBJ</code>	The group who owns the file.
<code>ARCHIVE_ENTRY_ACL_MASK</code>	The maximum permissions to be obtained via group permissions.
<code>ARCHIVE_ENTRY_ACL_OTHER</code>	Any principal who doesn't have a user or group entry.

The principals `ARCHIVE_ENTRY_ACL_USER_OBJ`, `ARCHIVE_ENTRY_ACL_GROUP_OBJ` and `ARCHIVE_ENTRY_ACL_OTHER` are equivalent to user, group and other in the classic Unix permission model and specify non-extended ACL entries.

All files have an access ACL (`ARCHIVE_ENTRY_ACL_TYPE_ACCESS`). This specifies the permissions required for access to the file itself. Directories have an additional ACL (`ARCHIVE_ENTRY_ACL_TYPE_DEFAULT`), which controls the initial access ACL for newly created directory entries.

`archive_entry_acl_add_entry()` and **`archive_entry_acl_add_entry_w()`** add a single ACL entry. For the access ACL and non-extended principals, the classic Unix permissions are updated.

`archive_entry_acl_clear()` removes all ACL entries and resets the enumeration pointer.

`archive_entry_acl_count()` counts the ACL entries that have the given type mask. *type* can be the bitwise-or of `ARCHIVE_ENTRY_ACL_TYPE_ACCESS` and `ARCHIVE_ENTRY_ACL_TYPE_DEFAULT`. If `ARCHIVE_ENTRY_ACL_TYPE_ACCESS` is included and at least one extended ACL entry is found, the three non-extended ACLs are added.

`archive_entry_acl_next()` and **`archive_entry_acl_next_w()`** return the next entry of the ACL list. This functions may only be called after **`archive_entry_acl_reset()`** has indicated the presence of extended ACL entries.

`archive_entry_acl_reset()` prepare reading the list of ACL entries with **`archive_entry_acl_next()`** or **`archive_entry_acl_next_w()`**. The function returns either 0, if no non-extended ACLs are found. In this case, the access permissions should be obtained by `archive_entry_mode(3)` or set using `chmod(2)`. Otherwise, the function returns the same value as **`archive_entry_acl_count()`**.

`archive_entry_acl_text_w()` converts the ACL entries for the given type mask into a wide string. In addition to the normal type flags, `ARCHIVE_ENTRY_ACL_STYLE_EXTRA_ID` and `ARCHIVE_ENTRY_ACL_STYLE_MARK_DEFAULT` can be specified to further customize the result. The returned long string is valid until the next call to **`archive_entry_acl_clear()`**, **`archive_entry_acl_add_entry()`**, **`archive_entry_acl_add_entry_w()`** or **`archive_entry_acl_text_w()`**.

RETURN VALUES

`archive_entry_acl_count()` and **`archive_entry_acl_reset()`** returns the number of ACL entries that match the given type mask. If the type mask includes `ARCHIVE_ENTRY_ACL_TYPE_ACCESS` and at least one extended ACL entry exists, the three classic Unix permissions are counted.

`archive_entry_acl_next()` and **`archive_entry_acl_next_w()`** return `ARCHIVE_OK` on success, `ARCHIVE_EOF` if no more ACL entries exist and `ARCHIVE_WARN` if **`archive_entry_acl_reset()`** has not been called first.

`archive_entry_text_w()` returns a wide string representation of the ACL entries matching the given type mask. The returned long string is valid until the next call to **`archive_entry_acl_clear()`**, **`archive_entry_acl_add_entry()`**, **`archive_entry_acl_add_entry_w()`** or **`archive_entry_acl_text_w()`**.

SEE ALSO

archive(3), archive_entry(3)

BUGS

ARCHIVE_ENTRY_ACL_STYLE_EXTRA_ID and ARCHIVE_ENTRY_ACL_STYLE_MARK_DEFAULT are not documented.