

## 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

## 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:

<code>ARCHIVE_ENTRY_ACL_USER</code>	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 entrise 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.