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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'catopen.3p' command

\$ man catopen.3p

CATOPEN(3P) POSIX Programmer's Manual CATOPEN(3P)

PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

NAME

catopen ? open a message catalog

SYNOPSIS

```
#include <nl_types.h>

nl_catd catopen(const char *name, int oflag);
```

DESCRIPTION

The `catopen()` function shall open a message catalog and return a message catalog descriptor. The `name` argument specifies the name of the message catalog to be opened. If `name` contains a '/', then `name` specifies a pathname for the message catalog. Otherwise, the environment variable `NLSPATH` is used with `name` substituted for the `%N` conversion specification (see the Base Definitions volume of POSIX.1?2017, Chapter 8, Environment Variables); if `NLSPATH` exists in the environment when the process starts, then if the process has appropriate privileges, the behavior of `catopen()` is undefined. If `NLSPATH` does not exist in the environment, or if a message catalog cannot be found in any of the components specified by `NLSPATH`, then an implementation-defined default

path shall be used. This default may be affected by the setting of LC_MESSAGES if the value of oflag is NL_CAT_LOCALE, or the LANG environment variable if oflag is 0.

A message catalog descriptor shall remain valid in a process until that process closes it, or a successful call to one of the exec functions. A change in the setting of the LC_MESSAGES category may invalidate existing open catalogs.

If a file descriptor is used to implement message catalog descriptors, the FD_CLOEXEC flag shall be set; see <fcntl.h>.

If the value of the oflag argument is 0, the LANG environment variable is used to locate the catalog without regard to the LC_MESSAGES category. If the oflag argument is NL_CAT_LOCALE, the LC_MESSAGES category is used to locate the message catalog (see the Base Definitions volume of POSIX.1?2017, Section 8.2, Internationalization Variables).

RETURN VALUE

Upon successful completion, catopen() shall return a message catalog descriptor for use on subsequent calls to catgets() and catclose().

Otherwise, catopen() shall return (nl_catd) -1 and set errno to indicate the error.

ERRORS

The catopen() function may fail if:

EACCES Search permission is denied for the component of the path prefix of the message catalog or read permission is denied for the message catalog.

EMFILE All file descriptors available to the process are currently open.

ENAMETOOLONG

The length of a component of a pathname is longer than {NAME_MAX}.

ENAMETOOLONG

The length of a pathname exceeds {PATH_MAX}, or pathname resolution of a symbolic link produced an intermediate result with a length that exceeds {PATH_MAX}.

ENFILE Too many files are currently open in the system.

ENOENT The message catalog does not exist or the name argument points to an empty string.

ENOMEM Insufficient storage space is available.

ENOTDIR

A component of the path prefix of the message catalog names an existing file that is neither a directory nor a symbolic link to a directory, or the pathname of the message catalog contains at least one non-`<slash>` character and ends with one or more trailing `<slash>` characters and the last pathname component names an existing file that is neither a directory nor a symbolic link to a directory.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

Some implementations of `catopen()` use `malloc()` to allocate space for internal buffer areas. The `catopen()` function may fail if there is insufficient storage space available to accommodate these buffers.

Conforming applications must assume that message catalog descriptors are not valid after a call to one of the `exec` functions.

Application developers should be aware that guidelines for the location of message catalogs have not yet been developed. Therefore they should take care to avoid conflicting with catalogs used by other applications and the standard utilities.

To be sure that messages produced by an application running with appropriate privileges cannot be used by an attacker setting an unexpected value for `NLSPATH` in the environment to confuse a system administrator, such applications should use pathnames containing a `'` to get defined behavior when using `catopen()` to open a message catalog.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

`catclose()`, `catgets()`

The Base Definitions volume of POSIX.1-2017, Chapter 8, Environment Variables, `<fcntl.h>`, `<nl_types.h>`,

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2017

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