Full credit is given to the above companies including the OS that this PDF file was generated!

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

$ man erf.3

ERF(3) Linux Programmer's Manual ERF(3)

NAME

erf, erff, erfl - error function

SYNOPSIS

```
#include <math.h>

double erf(double x);

float erff(float x);

long double erfl(long double x);
```

Link with -lm.

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

erf():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L || _XOPEN_SOURCE

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

erff(), erfl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

DESCRIPTION

These functions return the error function of x, defined as

erf(x) = 2/sqrt(pi) * integral from 0 to x of exp(-t*t) dt

RETURN VALUE

On success, these functions return the value of the error function of

x, a value in the range [-1, 1].

If x is a NaN, a NaN is returned.

If x is +0 (-0), +0 (-0) is returned.

If x is positive infinity (negative infinity), +1 (-1) is returned.

If x is subnormal, a range error occurs, and the return value is 2*x/sqrt(pi).

ERRORS

See math_error(7) for information on how to determine whether an error has occurred when calling these functions.

The following errors can occur:

Range error: result underflow (x is subnormal)

An underflow floating-point exception (FE_UNDERFLOW) is raised.

These functions do not set errno.

ATTRIBUTES

For an explanation of the terms used in this section, see at? tributes(7).

Interface	Attribute	Value
erf(), erff(), erfl()	Thread safety	MT-Safe

CONFORMING TO

C99, POSIX.1-2001, POSIX.1-2008.

The variant returning double also conforms to SVr4, 4.3BSD.

SEE ALSO

cerf(3), erfc(3), exp(3)

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at https://www.kernel.org/doc/man-pages/.