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Rocky Enterprise Linux 9.2 Manual Pages on command 'fwprintf.3'

$ man fwprintf.3

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

NAME

    wprintf, fwprintf, swprintf, vwprintf, vfwprintf, vswprintf - formatted

    wide-character output conversion

SYNOPSIS

    #include <stdio.h>

    #include <wchar.h>

    int wprintf(const wchar_t *format, ...);

    int fwprintf(FILE *stream, const wchar_t *format, ...);

    int swprintf(wchar_t *wcs, size_t maxlen,

            const wchar_t *format, ...);

    int vwprintf(const wchar_t *format, va_list args);

    int vfwprintf(FILE *stream, const wchar_t *format, va_list args);

    int vswprintf(wchar_t *wcs, size_t maxlen,

            const wchar_t *format, va_list args);

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

    All functions shown above:

        _XOPEN_SOURCE >= 500 || _ISOC99_SOURCE ||

_POSIX_C_SOURCE >= 200112L

DESCRIPTION

The wprintf() family of functions is the wide-character equivalent of
the printf(3) family of functions. It performs formatted output of
wide characters.

The wprintf() and vwprintf() functions perform wide-character output to
stdout. stdout must not be byte oriented; see fwide(3) for more infor‐
mation.

The fwprintf() and vfwprintf() functions perform wide-character output
to stream. stream must not be byte oriented; see fwide(3) for more in‐
formation.

The swprintf() and vswprintf() functions perform wide-character output
to an array of wide characters. The programmer must ensure that there
is room for at least maxlen wide characters at wcs.

These functions are like the printf(3), vprintf(3), fprintf(3), vf‐
printf(3), sprintf(3), vsprintf(3) functions except for the following
differences:

?   The format string is a wide-character string.

?   The output consists of wide characters, not bytes.

?   swprintf() and vswprintf() take a maxlen argument, sprintf(3)
       and vsprintf(3) do not. (snprintf(3) and vsnprintf(3) take a
       maxlen argument, but these functions do not return -1 upon buf‐
       fer overflow on Linux.)

The treatment of the conversion characters c and s is different:

c   If no l modifier is present, the int argument is converted to a
       wide character by a call to the btowc(3) function, and the re‐
       sulting wide character is written. If an l modifier is present,
       the wint_t (wide character) argument is written.

s   If no l modifier is present: the const char * argument is ex‐
       pected to be a pointer to an array of character type (pointer to
       a string) containing a multibyte character sequence beginning in
       the initial shift state.   Characters from the array are con‐
       verted to wide characters (each by a call to the mbrtowc(3)

function with a conversion state starting in the initial state before the first byte). The resulting wide characters are writ‐ ten up to (but not including) the terminating null wide charac‐ ter (L'\0'). If a precision is specified, no more wide charac‐ ters than the number specified are written. Note that the pre‐ cision determines the number of wide characters written, not the number of bytes or screen positions. The array must contain a terminating null byte ('\0'), unless a precision is given and it is so small that the number of converted wide characters reaches it before the end of the array is reached. If an l modifier is present: the const wchar_t * argument is expected to be a pointer to an array of wide characters. Wide characters from the array are written up to (but not including) a terminating null wide character. If a precision is specified, no more than the number specified are written. The array must contain a ter‐ minating null wide character, unless a precision is given and it is smaller than or equal to the number of wide characters in the array.

RETURN VALUE

The functions return the number of wide characters written, excluding the terminating null wide character in case of the functions swprintf() and vswprintf(). They return -1 when an error occurs.

ATTRIBUTES

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

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┌────────────────────────────────────────────────────────────┐
│Interface           │ Attribute    │ Value        │
├────────────────────────────────────────────────────────────┤
│wprintf(), fwprintf(),   │ Thread safety │ MT-Safe locale │
│swprintf(), vwprintf(),  │             │             │
│vfwprintf(), vswprintf() │             │             │
└────────────────────────────────────────────────────────────┘
```

CONFORMING TO

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

NOTES

The behavior of wprintf() et al. depends on the LC_CTYPE category of the current locale.

If the format string contains non-ASCII wide characters, the program will work correctly only if the LC_CTYPE category of the current locale at run time is the same as the LC_CTYPE category of the current locale at compile time. This is because the wchar_t representation is plat‐ form- and locale-dependent. (The glibc represents wide characters us‐ ing their Unicode (ISO-10646) code point, but other platforms don't do this. Also, the use of C99 universal character names of the form \unnnn does not solve this problem.) Therefore, in internationalized programs, the format string should consist of ASCII wide characters only, or should be constructed at run time in an internationalized way (e.g., using gettext(3) or iconv(3), followed by mbstowcs(3)).

SEE ALSO

fprintf(3), fputwc(3), fwide(3), printf(3), snprintf(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/.

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