



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

\$ man wcstoul.3p

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

wcstoul, wcstoull ? convert a wide-character string to an unsigned long

SYNOPSIS

```
#include <wchar.h>

unsigned long wcstoul(const wchar_t *restrict nptr,
    wchar_t **restrict endptr, int base);

unsigned long long wcstoull(const wchar_t *restrict nptr,
    wchar_t **restrict endptr, int base);
```

DESCRIPTION

The functionality described on this reference page is aligned with the ISO C standard. Any conflict between the requirements described here and the ISO C standard is unintentional. This volume of POSIX.1?2017 defers to the ISO C standard.

The `wcstoul()` and `wcstoull()` functions shall convert the initial portion of the wide-character string pointed to by `nptr` to unsigned long and unsigned long long representation, respectively. First, they shall decompose the input wide-character string into three parts:

1. An initial, possibly empty, sequence of white-space wide-character codes (as specified by `isspace()`)
2. A subject sequence interpreted as an integer represented in some radix determined by the value of `base`
3. A final wide-character string of one or more unrecognized wide-character codes, including the terminating null wide-character code of the input wide-character string

Then they shall attempt to convert the subject sequence to an unsigned integer, and return the result.

If `base` is 0, the expected form of the subject sequence is that of a decimal constant, octal constant, or hexadecimal constant, any of which may be preceded by a '+' or '-' sign. A decimal constant begins with a non-zero digit, and consists of a sequence of decimal digits. An octal constant consists of the prefix '0' optionally followed by a sequence of the digits '0' to '7' only. A hexadecimal constant consists of the prefix 0x or 0X followed by a sequence of the decimal digits and letters 'a' (or 'A') to 'f' (or 'F') with values 10 to 15 respectively.

If the value of `base` is between 2 and 36, the expected form of the subject sequence is a sequence of letters and digits representing an integer with the radix specified by `base`, optionally preceded by a '+' or '-' sign, but not including an integer suffix. The letters from 'a' (or 'A') to 'z' (or 'Z') inclusive are ascribed the values 10 to 35; only letters whose ascribed values are less than that of `base` shall be permitted. If the value of `base` is 16, the wide-character codes 0x or 0X may optionally precede the sequence of letters and digits, following the sign if present.

The subject sequence is defined as the longest initial subsequence of the input wide-character string, starting with the first wide-character code that is not white space and is of the expected form. The subject sequence contains no wide-character codes if the input wide-character string is empty or consists entirely of white-space wide-character codes, or if the first wide-character code that is not white space is other than a sign or a permissible letter or digit.

If the subject sequence has the expected form and base is 0, the sequence of wide-character codes starting with the first digit shall be interpreted as an integer constant. If the subject sequence has the expected form and the value of base is between 2 and 36, it shall be used as the base for conversion, ascribing to each letter its value as given above. If the subject sequence begins with a <hyphen-minus>, the value resulting from the conversion shall be negated. A pointer to the final wide-character string shall be stored in the object pointed to by `endptr`, provided that `endptr` is not a null pointer.

In other than the C or POSIX locale, additional locale-specific subject sequence forms may be accepted.

If the subject sequence is empty or does not have the expected form, no conversion shall be performed; the value of `nptr` shall be stored in the object pointed to by `endptr`, provided that `endptr` is not a null pointer.

These functions shall not change the setting of `errno` if successful.

Since 0, `{ULONG_MAX}`, and `{ULLONG_MAX}` are returned on error and 0 is also a valid return on success, an application wishing to check for error situations should set `errno` to 0, then call `wcstoul()` or `wcstoull()`, then check `errno`.

RETURN VALUE

Upon successful completion, the `wcstoul()` and `wcstoull()` functions shall return the converted value, if any. If no conversion could be performed, 0 shall be returned and `errno` may be set to indicate the error. If the correct value is outside the range of representable values, `{ULONG_MAX}` or `{ULLONG_MAX}` respectively shall be returned and `errno` set to `[ERANGE]`.

ERRORS

These functions shall fail if:

`EINVAL` The value of base is not supported.

`ERANGE` The value to be returned is not representable.

These functions may fail if:

`EINVAL` No conversion could be performed.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

`fscanf()`, `iswalpha()`, `wcstod()`, `wcstol()`

The Base Definitions volume of POSIX.1?2017, <wchar.h>

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