NAME

scanw, **wscanw**, **mvscanw**, **mvwscanw**, **vwscanw**, **vw_scanw** - read formatted input from a *curses* window

SYNOPSIS

```
#include <curses.h>

int scanw(const char *fmt, ...);
int wscanw(WINDOW *win, const char *fmt, ...);
int mvscanw(int y, int x, const char *fmt, ...);
int mvwscanw(WINDOW *win, int y, int x, const char *fmt, ...);

int vw_scanw(WINDOW *win, const char *fmt, va_list varglist);

/* obsolete */
int vwscanw(WINDOW *win, const char *fmt, va_list varglist);
```

DESCRIPTION

scanw, **wscanw**, **mvscanw**, and **mvwscanw** are analogous to *scanf*(3). In effect, they call **wgetstr**(3X) with *win* (or **stdscr**) as its first argument, then attempt conversion of the resulting string with *vsscanf*(3). Fields in the string that do not map to a variable in the *fmt* parameter are discarded.

vwscanw and **vw_scanw** are analogous to *vscanf*(3), and perform a **wscanw** using a variable argument list. The third argument is a *va_list*, a pointer to a list of arguments, as defined in *stdarg.h*.

RETURN VALUE

These functions return **ERR** upon failure and otherwise a count of successful conversions; this quantity may be zero.

In *ncurses*, failure occurs if *vsscanf*(3) returns **EOF**, or if the window pointer *win* is null.

Functions prefixed with "mv" first perform cursor movement and fail if the position (*y*, *x*) is outside the window boundaries.

NOTES

No wide character counterpart functions are defined by the "wide" *ncurses* configuration nor by any standard. They are unnecessary: to retrieve and convert a wide-character string from a *curses* terminal keyboard, use these functions with the *scanf*(3) conversions "%lc" and "%ls" for wide characters and strings, respectively.

ncurses implements *vsscanf*(3) internally if it is unavailable when the library is configured.

PORTABILITY

X/Open Curses, Issue 4 describes these functions. It specifies no error conditions for them.

ncurses defines **vw_scanw** and **vwscanw** identically to support legacy applications. However, the latter is obsolete.

- X/Open Curses, Issue 4 Version 2 (1996), marked **vwscanw** as requiring *varargs.h* and "TO BE WITHDRAWN", and specified **vw_scanw** using the *stdarg.h* interface.

- X/Open Curses, Issue 5, Draft 2 (December 2007) marked **vwscanw** (along with **vwscanw** and the *termcap* interface) as withdrawn. After incorporating review comments, this became X/Open Curses, Issue 7 (2009).

- *ncurses* provides **vwscanw**, but marks it as deprecated.

X/Open Curses Issues 4 and 7 both state that these functions return **ERR** or **OK**. This is likely an erratum.

- Since the underlying *scanf*(3) returns the number of successful conversions, and SVr4 *curses* was documented to use this feature, this may have been an editorial solecism introduced by X/Open, rather than an intentional change.

- This implementation retains compatibility with SVr4 *curses*. As of 2018, NetBSD *curses* also returns the number of successful conversions. Both *ncurses* and NetBSD *curses* call *vsscanf*(3) to scan the string, which returns **EOF** on error.

- Portable applications should test only if the return value is **ERR**, and not compare it to **OK**, since that value (zero) might be misleading.

  One portable way to get useful results would be to use a "%n" conversion at the end of the format string, and check the value of the corresponding variable to determine how many conversions succeeded.

HISTORY

scanw was implemented in 4BSD (November 1980); that early version of *curses* preceded the ANSI C standard of 1989. The function was unused in Berkeley distributions for over ten years, until 4.4BSD, which employed it in a game. The 4BSD **scanw** did not use *varargs.h*, though that had been available since Seventh Edition Unix (1979). In 1991 (a couple of years after SVr4 was generally available, and

after the C standard was published), other developers updated the library, using *stdarg.h* internally in 4.4BSD *curses*. Even with this improvement, BSD *curses* did not use function prototypes (nor even declare functions) in *curses.h* until 1992.

SVr2 (1984) documented **scanw** and **wscanw** tersely as "scanf through **stdscr**" and "scanf through *win*", respectively.

SVr3 (1987) added **mvscanw**, and **mvwscanw**, stating

> "[t]hese routines correspond to *scanf*(3S), as do their arguments and return values. **wgetstr**() is called on the window, and the resulting line is used as input for the scan."

SVr3 also implemented **vwscanw**, describing its third parameter as a *va_list*, defined in *varargs.h*, and referred the reader to the manual pages for *varargs* and *vprintf* for detailed descriptions. (Because the SVr3 documentation does not mention *vscanf*, the reference to *vprintf* might not be an error).

SVr4 (1989) introduced no new variations of *scanw*, but provided for using either *varargs.h* or *stdarg.h* to define the *va_list* type.

X/Open Curses, Issue 4 (1995), defined *vw_scanw* to replace *vwscanw*, stating that its *va_list* type is defined in *stdarg.h*.

SEE ALSO

curses(3X), **curs_getstr**(3X), **curs_printw**(3X), **scanf**(3), **vscanf**(3)