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

$ man writev.3p

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

writev ? write a vector

SYNOPSIS

#include <sys/uio.h>

ssize_t writev(int fildes, const struct iovec *iov, int iovcnt);

DESCRIPTION

The writev() function shall be equivalent to write(), except as de? scribed below. The writev() function shall gather output data from the iovcnt buffers specified by the members of the iov array: iov[0], iov[1], ..., iov[iovcnt-1]. The iovcnt argument is valid if greater than 0 and less than or equal to {IOV_MAX}, as defined in <limits.h>.

Each iovec entry specifies the base address and length of an area in memory from which data should be written. The writev() function shall always write a complete area before proceeding to the next.

If fildes refers to a regular file and all of the iov_len members in the array pointed to by iov are 0, writev() shall return 0 and have no other effect. For other file types, the behavior is unspecified.

If the sum of the iov_len values is greater than {SSIZE_MAX}, the oper?

ation shall fail and no data shall be transferred.

RETURN VALUE

Upon successful completion, writev() shall return the number of bytes

actually written. Otherwise, it shall return a value of -1, the file-

pointer shall remain unchanged, and errno shall be set to indicate an

error.

ERRORS

Refer to write().

In addition, the writev() function shall fail if:

EINVAL The sum of the iov_len values in the iov array would overflow an

ssize_t.

The writev() function may fail and set errno to:

EINVAL The iovcnt argument was less than or equal to 0, or greater than

{IOV_MAX}.

The following sections are informative.

EXAMPLES

Writing Data from an Array

The following example writes data from the buffers specified by members

of the iov array to the file associated with the file descriptor fd.

```
#include <sys/types.h>
#include <sys/uio.h>
#include <unistd.h>
...
ssize_t bytes_written;
int fd;
char *buf0 = "short string\n";
char *buf1 = "This is a longer string\n";
char *buf2 = "This is the longest string in this example\n";
int iovcnt;
struct iovec iov[3];
iov[0].iov_base = buf0;
iov[0].iov_len = strlen(buf0);
```

```
iov[1].iov_base = buf1;
iov[1].iov_len = strlen(buf1);
iov[2].iov_base = buf2;
iov[2].iov_len = strlen(buf2);
...
iovcnt = sizeof(iov) / sizeof(struct iovec);
bytes_written = writev(fd, iov, iovcnt);
...
```

APPLICATION USAGE

None.

RATIONALE

Refer to write().

FUTURE DIRECTIONS

None.

SEE ALSO

readv(), write()

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