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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'socketpair.2' command

\$ man socketpair.2

SOCKETPAIR(2) Linux Programmer's Manual SOCKETPAIR(2)

NAME

socketpair - create a pair of connected sockets

SYNOPSIS

```
#include <sys/types.h>      /* See NOTES */
#include <sys/socket.h>

int socketpair(int domain, int type, int protocol, int sv[2]);
```

DESCRIPTION

The `socketpair()` call creates an unnamed pair of connected sockets in the specified domain, of the specified type, and using the optionally specified protocol. For further details of these arguments, see `socket(2)`.

The file descriptors used in referencing the new sockets are returned in `sv[0]` and `sv[1]`. The two sockets are indistinguishable.

RETURN VALUE

On success, zero is returned. On error, -1 is returned, `errno` is set appropriately, and `sv` is left unchanged.

On Linux (and other systems), `socketpair()` does not modify `sv` on failure. A requirement standardizing this behavior was added in POSIX.1-2008 TC2.

ERRORS

EAFNOSUPPORT

The specified address family is not supported on this machine.

EFAULT The address `sv` does not specify a valid part of the process address space.

EMFILE The per-process limit on the number of open file descriptors has been reached.

ENFILE The system-wide limit on the total number of open files has been reached.

EOPNOTSUPP

The specified protocol does not support creation of socket pairs.

EPROTONOSUPPORT

The specified protocol is not supported on this machine.

CONFORMING TO

POSIX.1-2001, POSIX.1-2008, 4.4BSD. `socketpair()` first appeared in 4.2BSD. It is generally portable to/from non-BSD systems supporting clones of the BSD socket layer (including System V variants).

NOTES

On Linux, the only supported domains for this call are `AF_UNIX` (or synonymously, `AF_LOCAL`) and `AF_TIPC` (since Linux 4.12).

Since Linux 2.6.27, `socketpair()` supports the `SOCK_NONBLOCK` and `SOCK_CLOEXEC` flags in the type argument, as described in `socket(2)`.

POSIX.1 does not require the inclusion of `<sys/types.h>`, and this header file is not required on Linux. However, some historical (BSD) implementations required this header file, and portable applications are probably wise to include it.

SEE ALSO

`pipe(2)`, `read(2)`, `socket(2)`, `write(2)`, `socket(7)`, `unix(7)`

COLOPHON

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