NAME

connect – initiate a connection on a socket

SYNOPSIS

cc [*flag* ...] *file* ... **–lsocket –lnsl** [*library* ...]

#include <sys/types.h>
#include <sys/socket.h>

int connect(int *s*, **struct sockaddr** **name*, **int** *namelen***);**

MT-LEVEL

Safe

DESCRIPTION

The parameter *s* is a socket. If it is of type **SOCK_DGRAM**, **connect( )** specifies the peer with which the socket is to be associated; this address is the address to which datagrams are to be sent if a receiver is not explicitly designated; it is the only address from which datagrams are to be received. If the socket *s* is of type **SOCK_STREAM**, **connect( )** attempts to make a connection to another socket. The other socket is specified by *name*. *name* is an address in the communication space of the socket. Each communication space interprets the *name* parameter in its own way. If *s* is not bound, then it will be bound to an address selected by the underlying transport provider. Generally, stream sockets may successfully **connect( )** only once; datagram sockets may use **connect( )** multiple times to change their association. Datagram sockets may dissolve the association by connecting to a null address.

RETURN VALUES

If the connection or binding succeeds, **0** is returned. Otherwise, –**1** is returned and sets **errno** to indicate the error.

ERRORS

The call fails if:

EACCES Search permission is denied for a component of the path prefix of the pathname in *name*.

EADDRINUSE The address is already in use.

EADDRNOTAVAIL The specified address is not available on the remote machine.

EAFNOSUPPORT Addresses in the specified address family cannot be used with this socket.

EALREADY The socket is non-blocking and a previous connection attempt has not yet been completed.

EBADF *s* is not a valid descriptor.

ECONNREFUSED The attempt to connect was forcefully rejected. The calling program should **close**(2) the socket descriptor, and issue another **socket**(3N) call to obtain a new descriptor before attempting another **connect( )** call.

EINPROGRESS The socket is non-blocking and the connection cannot be completed immediately. It is possible to **select**(3C) for completion by selecting the socket for writing. However, this is only possible if the socket STREAMS module is the topmost module on the protocol stack with a write service procedure. This will be the normal case.

EINTR The connection attempt was interrupted before any data arrived by the delivery of a signal.

EINVAL *namelen* is not the size of a valid address for the specified address family.

EIO An I/O error occurred while reading from or writing to the file system.

EISCONN The socket is already connected.

ELOOP Too many symbolic links were encountered in translating the pathname in *name*.

ENETUNREACH The network is not reachable from this host.

ENOENT A component of the path prefix of the pathname in *name* does not exist.

ENOENT The socket referred to by the pathname in *name* does not exist.

ENOSR There were insufficient **STREAMS** resources available to complete the operation.

ENXIO The server exited before the connection was complete.

ETIMEDOUT Connection establishment timed out without establishing a connection.

The following errors are specific to connecting names in the UNIX domain. These errors may not apply in future versions of the UNIX IPC domain.

ENOTDIR A component of the path prefix of the pathname in *name* is not a directory.

ENOTSOCK *s* is not a socket.

ENOTSOCK *name* is not a socket.

EPROTOTYPE The file referred to by *name* is a socket of a type other than type *s* (for example, *s* is a **SOCK_DGRAM** socket, while *name* refers to a **SOCK_STREAM** socket).

SEE ALSO

close(2), **accept**(3N), **getsockname**(3N), **select**(3C), **socket**(3N)