NAME

accept – accept a connection on a socket

SYNOPSIS

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

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

int accept(int *s*, **struct sockaddr** **addr*, **int** **addrlen***);**

MT-LEVEL

Safe

DESCRIPTION

The argument *s* is a socket that has been created with **socket**(3N) and bound to an address with **bind**(3N), and that is listening for connections after a call to **listen**(3N). **accept( )** extracts the first connection on the queue of pending connections, creates a new socket with the properties of *s*, and allocates a new file descriptor, *ns*, for the socket. If no pending connections are present on the queue and the socket is not marked as non-blocking, **accept( )** blocks the caller until a connection is present. If the socket is marked as non-blocking and no pending connections are present on the queue, **accept( )** returns an error as described below. **accept( )** uses the **netconfig**(4) file to determine the STREAMS device file name associated with *s*. This is the device on which the connect indication will be accepted. The accepted socket, *ns*, is used to read and write data to and from the socket that connected to *ns*; it is not used to accept more connections. The original socket (*s*) remains open for accepting further connections.

The argument *addr* is a result parameter that is filled in with the address of the connecting entity as it is known to the communications layer. The exact format of the *addr* parameter is determined by the domain in which the communication occurs.

addrlen is a value-result parameter. Initially, it contains the amount of space pointed to by *addr*; on return it contains the length in bytes of the address returned.

accept( ) is used with connection-based socket types, currently with **SOCK_STREAM**.

It is possible to **select**(3C) or **poll**(2) a socket for the purpose of an **accept( )** by selecting or polling it for a read. However, this will only indicate when a connect indication is pending; it is still necessary to call **accept( )**.

RETURN VALUES

accept( ) returns **–1** on error. If it succeeds, it returns a non-negative integer that is a descriptor for the accepted socket.

ERRORS

accept( ) will fail if:

EBADF The descriptor is invalid.

EINTR The accept attempt was interrupted by the delivery of a signal.

ENODEV The protocol family and type corresponding to *s* could not be found in the **netconfig** file.

ENOMEM There was insufficient user memory available to complete the operation.

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

ENOTSOCK The descriptor does not reference a socket.

EOPNOTSUPP The referenced socket is not of type **SOCK_STREAM**.

EPROTO A protocol error has occurred; for example, the STREAMS protocol stack has not been initialized.

EWOULDBLOCK The socket is marked as non-blocking and no connections are present to be accepted.

SEE ALSO **poll**(2), **bind**(3N), **connect**(3N), **listen**(3N), **select**(3C), **socket**(3N), **netconfig**(4)