

# listen(3p) — Linux manual page

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**LISTEN(3P)****POSIX Programmer's Manual****LISTEN(3P)**

## PROLOG

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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

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`listen` – listen for socket connections and limit the queue of incoming connections

## SYNOPSIS

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

```
int listen(int socket, int backlog);
```

## DESCRIPTION

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The `listen()` function shall mark a connection-mode socket, specified by the `socket` argument, as accepting connections.

The `backlog` argument provides a hint to the implementation which the implementation shall use to limit the number of outstanding connections in the socket's listen queue. Implementations may impose a limit on `backlog` and silently reduce the specified value. Normally, a larger `backlog` argument value shall result in a larger or equal length of the listen queue. Implementations shall support values of `backlog` up to `SOMAXCONN`, defined in `<sys/socket.h>`.

The implementation may include incomplete connections in its listen queue. The limits on the number of incomplete connections and completed connections queued may be different.

The implementation may have an upper limit on the length of the listen queue—either global or per accepting socket. If `backlog` exceeds this limit, the length of the listen queue is set to the limit.

If `listen()` is called with a `backlog` argument value that is less than 0, the function behaves as if it had been called with a `backlog` argument value of 0.

A `backlog` argument of 0 may allow the socket to accept connections, in which case the length of the listen queue may be set to an implementation-defined minimum value.

The socket in use may require the process to have appropriate privileges to use the `listen()` function.

## RETURN VALUE

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Upon successful completions, `listen()` shall return 0; otherwise, -1 shall be returned and `errno` set to indicate the error.

## ERRORS

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The `listen()` function shall fail if:

**EBADF** The `socket` argument is not a valid file descriptor.

### EDESTADDRREQ

The socket is not bound to a local address, and the protocol does not support listening on an unbound socket.

**EINVAL** The `socket` is already connected.

### ENOTSOCK

The `socket` argument does not refer to a socket.

### EOPNOTSUPP

The socket protocol does not support `listen()`.

The `listen()` function may fail if:

**EACCES** The calling process does not have appropriate privileges.

**EINVAL** The `socket` has been shut down.

### ENOBUFS

Insufficient resources are available in the system to complete the call.

*The following sections are informative.*

## EXAMPLES

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None.

## APPLICATION USAGE [top](#)

None.

## RATIONALE [top](#)

None.

## FUTURE DIRECTIONS [top](#)

None.

## SEE ALSO [top](#)

[accept\(3p\)](#), [connect\(3p\)](#), [socket\(3p\)](#)

The Base Definitions volume of POSIX.1-2017, [sys\\_socket.h\(0p\)](#)

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Pages that refer to this page: [sys\\_socket.h\(0p\)](#), [accept\(3p\)](#), [bind\(3p\)](#), [socket\(3p\)](#)

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