



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'BIO_connect.3ossl' command

\$ man BIO_connect.3ossl

BIO_CONNECT(3ossl) OpenSSL BIO_CONNECT(3ossl)

NAME

BIO_socket, BIO_bind, BIO_connect, BIO_listen, BIO_accept_ex,
BIO_closesocket - BIO socket communication setup routines

SYNOPSIS

```
#include <openssl/bio.h>
```

```
int BIO_socket(int domain, int socktype, int protocol, int options);  
int BIO_bind(int sock, const BIO_ADDR *addr, int options);  
int BIO_connect(int sock, const BIO_ADDR *addr, int options);  
int BIO_listen(int sock, const BIO_ADDR *addr, int options);  
int BIO_accept_ex(int accept_sock, BIO_ADDR *peer, int options);  
int BIO_closesocket(int sock);
```

DESCRIPTION

BIO_socket() creates a socket in the domain domain, of type socktype and protocol. Socket options are currently unused, but is present for future use.

BIO_bind() binds the source address and service to a socket and may be useful before calling BIO_connect(). The options may include

BIO_SOCKET_REUSEADDR, which is described in "FLAGS" below.

BIO_connect() connects sock to the address and service given by addr.

Connection options may be zero or any combination of

BIO_SOCKET_KEEPALIVE, BIO_SOCKET_NONBLOCK and BIO_SOCKET_NODELAY. The flags are described in "FLAGS" below.

BIO_listen() has sock start listening on the address and service given

by addr. Connection options may be zero or any combination of

BIO_SOCKET_KEEPALIVE, BIO_SOCKET_NONBLOCK, BIO_SOCKET_NODELAY, BIO_SOCKET_REUSEADDR and BIO_SOCKET_V6_ONLY. The flags are described in "FLAGS" below.

BIO_accept_ex() waits for an incoming connections on the given socket

accept_sock. When it gets a connection, the address and port of the

peer gets stored in peer if that one is non-NULL. Accept options may

be zero or BIO_SOCKET_NONBLOCK, and is applied on the accepted socket.

The flags are described in "FLAGS" below.

BIO_closesocket() closes sock.

FLAGS

BIO_SOCKET_KEEPALIVE

Enables regular sending of keep-alive messages.

BIO_SOCKET_NONBLOCK

Sets the socket to nonblocking mode.

BIO_SOCKET_NODELAY

Corresponds to TCP_NODELAY, and disables the Nagle algorithm. With this set, any data will be sent as soon as possible instead of being buffered until there's enough for the socket to send out in one go.

BIO_SOCKET_REUSEADDR

Try to reuse the address and port combination for a recently closed port.

BIO_SOCKET_V6_ONLY

When creating an IPv6 socket, make it only listen for IPv6 addresses and not IPv4 addresses mapped to IPv6.

These flags are bit flags, so they are to be combined with the "|" operator, for example:

```
BIO_connect(sock, addr, BIO_SOCKET_KEEPALIVE | BIO_SOCKET_NONBLOCK);
```

RETURN VALUES

BIO_socket() returns the socket number on success or INVALID_SOCKET (-1) on error. When an error has occurred, the OpenSSL error stack will hold the error data and errno has the system error.

BIO_bind(), BIO_connect() and BIO_listen() return 1 on success or 0 on error. When an error has occurred, the OpenSSL error stack will hold the error data and errno has the system error.

BIO_accept_ex() returns the accepted socket on success or INVALID_SOCKET (-1) on error. When an error has occurred, the OpenSSL error stack will hold the error data and errno has the system error.

SEE ALSO

BIO_ADDR(3)

HISTORY

BIO_gethostname(), BIO_get_port(), BIO_get_host_ip(), BIO_get_accept_socket() and BIO_accept() were deprecated in OpenSSL

1.1.0. Use the functions described above instead.

COPYRIGHT

Copyright 2016-2020 The OpenSSL Project Authors. All Rights Reserved.

Licensed under the Apache License 2.0 (the "License"). You may not use this file except in compliance with the License. You can obtain a copy in the file LICENSE in the source distribution or at <https://www.openssl.org/source/license.html>.

3.0.7 2023-07-13 BIO_CONNECT(3ossl)