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

$ man SSL_set_wfd.3ossl

SSL_SET_FD(3ossl) OpenSSL SSL_SET_FD(3ossl)

NAME

SSL_set_fd, SSL_set_rfd, SSL_set_wfd - connect the SSL object with a file descriptor

SYNOPSIS

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

int SSL_set_fd(SSL *ssl, int fd);
int SSL_set_rfd(SSL *ssl, int fd);
int SSL_set_wfd(SSL *ssl, int fd);
```

DESCRIPTION

SSL_set_fd() sets the file descriptor fd as the input/output facility for the TLS/SSL (encrypted) side of ssl. fd will typically be the socket file descriptor of a network connection.

When performing the operation, a socket BIO is automatically created to interface between the ssl and fd. The BIO and hence the SSL engine inherit the behaviour of fd. If fd is nonblocking, the ssl will also have nonblocking behaviour.

If there was already a BIO connected to ssl, BIO_free() will be called (for both the reading and writing side, if different).

SSL_set_rfd() and SSL_set_wfd() perform the respective action, but only for the read channel or the write channel, which can be set independently.

RETURN VALUES

The following return values can occur:

0 The operation failed. Check the error stack to find out why.

1 The operation succeeded.

NOTES

On Windows, a socket handle is a 64-bit data type (UINT_PTR), which leads to a compiler warning (conversion from 'SOCKET' to 'int', possible loss of data) when passing the socket handle to SSL_set_*fd(). For the time being, this warning can safely be ignored, because although the Microsoft documentation claims that the upper limit is INVALID_SOCKET-1 (2^64 - 2), in practice the current socket() implementation returns an index into the kernel handle table, the size of which is limited to 2^24.

SEE ALSO

SSL_get_fd(3), SSL_set_bio(3), SSL_connect(3), SSL_accept(3), SSL_shutdown(3), ssl(7) , bio(7)

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