Rocky Enterprise Linux 9.2 Manual Pages on command 'SSL_set_bio.3ossl'

$ man SSL_set_bio.3ossl

SSL_SET_BIO(3ossl) OpenSSL SSL_SET_BIO(3ossl)

NAME

SSL_set_bio, SSL_set0_rbio, SSL_set0_wbio - connect the SSL object with a BIO

SYNOPSIS

#include <openssl/ssl.h>

void SSL_set_bio(SSL *ssl, BIO *rbio, BIO *wbio);

void SSL_set0_rbio(SSL *s, BIO *rbio);

void SSL_set0_wbio(SSL *s, BIO *wbio);

DESCRIPTION

SSL_set0_rbio() connects the BIO rbio for the read operations of the ssl object. The SSL engine inherits the behaviour of rbio. If the BIO is nonblocking then the ssl object will also have nonblocking behaviour. This function transfers ownership of rbio to ssl. It will be

automatically freed using BIO_free_all(3) when the ssl is freed. On calling this function, any existing rbio that was previously set will also be freed via a call to BIO_free_all(3) (this includes the case where the rbio is set to the same value as previously).

SSL_set0_wbio() works in the same as SSL_set0_rbio() except that it connects the BIO wbio for the write operations of the ssl object. Note that if the rbio and wbio are the same then SSL_set0_rbio() and SSL_set0_wbio() each take ownership of one reference. Therefore, it may be necessary to increment the number of references available using BIO_up_ref(3) before calling the set0 functions.

SSL_set_bio() is similar to SSL_set0_rbio() and SSL_set0_wbio() except that it connects both the rbio and the wbio at the same time, and transfers the ownership of rbio and wbio to ssl according to the following set of rules:

? If neither the rbio or wbio have changed from their previous values then nothing is done.

? If the rbio and wbio parameters are different and both are different to their previously set values then one reference is consumed for the rbio and one reference is consumed for the wbio.

? If the rbio and wbio parameters are the same and the rbio is not the same as the previously set value then one reference is consumed.

? If the rbio and wbio parameters are the same and the rbio is the same as the previously set value, then no additional references are consumed.

? If the rbio and wbio parameters are different and the rbio is the same as the previously set value then one reference is consumed for

the wbio and no references are consumed for the rbio.

? If the rbio and wbio parameters are different and the wbio is the same as the previously set value and the old rbio and wbio values were the same as each other then one reference is consumed for the rbio and no references are consumed for the wbio.

? If the rbio and wbio parameters are different and the wbio is the same as the previously set value and the old rbio and wbio values were different to each other, then one reference is consumed for the rbio and one reference is consumed for the wbio.

Because of this complexity, this function should be avoided; use SSL_set0_rbio() and SSL_set0_wbio() instead.

RETURN VALUES

SSL_set_bio(), SSL_set0_rbio() and SSL_set0_wbio() cannot fail.

SEE ALSO

SSL_get_rbio(3), SSL_connect(3), SSL_accept(3), SSL_shutdown(3), ssl(7), bio(7)

HISTORY

SSL_set0_rbio() and SSL_set0_wbio() were added in OpenSSL 1.1.0.

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