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

$ man BIO_new_CMS.3ossl

BIO_NEW_CMS(3ossl) OpenSSL BIO_NEW_CMS(3ossl)

NAME

BIO_new_CMS - CMS streaming filter BIO

SYNOPSIS

#include <openssl/cms.h>

BIO *BIO_new_CMS(BIO *out, CMS_ContentInfo *cms);

DESCRIPTION

BIO_new_CMS() returns a streaming filter BIO chain based on cms. The output of the filter is written to out. Any data written to the chain is automatically translated to a BER format CMS structure of the appropriate type.

NOTES

The chain returned by this function behaves like a standard filter BIO. It supports non blocking I/O. Content is processed and streamed on the fly and not all held in memory at once: so it is possible to encode very large structures. After all content has been written through the chain BIO_flush() must be called to finalise the structure.

The CMS_STREAM flag must be included in the corresponding flags parameter of the cms creation function.

If an application wishes to write additional data to out BIOs should be removed from the chain using BIO_pop() and freed with BIO_free() until out is reached. If no additional data needs to be written BIO_free_all() can be called to free up the whole chain.

Any content written through the filter is used verbatim: no canonical translation is performed.

It is possible to chain multiple BIOs to, for example, create a triple wrapped signed, enveloped, signed structure. In this case it is the applications responsibility to set the inner content type of any outer CMS_ContentInfo structures.

Large numbers of small writes through the chain should be avoided as this will produce an output consisting of lots of OCTET STRING structures. Prepending a BIO_f_buffer() buffering BIO will prevent this.

BUGS

There is currently no corresponding inverse BIO: i.e. one which can decode a CMS structure on the fly.

RETURN VALUES

BIO_new_CMS() returns a BIO chain when successful or NULL if an error occurred. The error can be obtained from ERR_get_error(3).

SEE ALSO

ERR_get_error(3), CMS_sign(3), CMS_encrypt(3)

HISTORY

The BIO_new_CMS() function was added in OpenSSL 1.0.0.

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