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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'CMS_add0_recipient_key.3ossl' command

$ man CMS_add0_recipient_key.3ossl

CMS_ADD1_RECIPIENT_CERT(3ossl) OpenSSL CMS_ADD1_RECIPIENT_CERT(3ossl)

NAME

CMS_add1_recipient, CMS_add1_recipient_cert, CMS_add0_recipient_key - add recipients to a CMS enveloped data structure

SYNOPSIS

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

CMS_RecipientInfo *CMS_add1_recipient(CMS_ContentInfo *cms, X509 *recip,
                                      EVP_PKEY *originatorPrivKey,
                                      X509 *originator, unsigned int flags);

CMS_RecipientInfo *CMS_add1_recipient_cert(CMS_ContentInfo *cms,
                                           X509 *recip, unsigned int flags);

CMS_RecipientInfo *CMS_add0_recipient_key(CMS_ContentInfo *cms, int nid,
                                          unsigned char *key, size_t keylen,
                                          unsigned char *id, size_t idlen,
                                          ASN1_GENERALIZEDTIME *date,
                                          ASN1_OBJECT *otherTypeId,
                                          ASN1_TYPE *otherType);
```

DESCRIPTION

CMS_add1_recipient() adds recipient recip and provides the originator pkey originatorPrivKey and originator certificate originator to CMS_ContentInfo. The originator-related fields are relevant only in case when the keyAgreement method of providing of the shared key is in use.

CMS_add1_recipient_cert() adds recipient recip to CMS_ContentInfo enveloped data structure cms as a KeyTransRecipientInfo structure.

CMS_add0_recipient_key() adds symmetric key key of length keylen using wrapping algorithm nid, identifier id of length idlen and optional values date, otherTypeId and otherType to CMS_ContentInfo enveloped data structure cms as a KEKRecipientInfo structure.

The CMS_ContentInfo structure should be obtained from an initial call to CMS_encrypt() with the flag CMS_PARTIAL set.

NOTES

The main purpose of this function is to provide finer control over a CMS enveloped data structure where the simpler CMS_encrypt() function defaults are not appropriate. For example if one or more KEKRecipientInfo structures need to be added. New attributes can also be added using the returned CMS_RecipientInfo structure and the CMS attribute utility functions.

OpenSSL will by default identify recipient certificates using issuer name and serial number. If CMS_USE_KEYID is set it will use the subject key identifier value instead. An error occurs if all recipient certificates do not have a subject key identifier extension.

Currently only AES based key wrapping algorithms are supported for nid, specifically: NID_id_aes128_wrap, NID_id_aes192_wrap and

NID_id_aes256_wrap. If nid is set to NID_undef then an AES wrap algorithm will be used consistent with keylen.

RETURN VALUES

CMS_add1_recipient_cert() and CMS_add0_recipient_key() return an internal pointer to the CMS_RecipientInfo structure just added or NULL if an error occurs.

SEE ALSO

ERR_get_error(3), CMS_decrypt(3), CMS_final(3),

HISTORY

CMS_add1_recipient_cert and CMS_add0_recipient_key were added in OpenSSL 3.0.

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