

**NAME**

`CMS_add1_recipient_cert`, `CMS_add0_recipient_key` - add recipients to a CMS envelope

**SYNOPSIS**

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

```
CMS_RecipientInfo *CMS_add1_recipient_cert(CMS_ContentInfo *cms, X509 *recip, un
```

```
CMS_RecipientInfo *CMS_add0_recipient_key(CMS_ContentInfo *cms, int nid, unsigne
```

**DESCRIPTION**

`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 to OpenSSL 0.9.8