

**NAME**

`CMS_compress` - create a CMS CompressedData structure

**SYNOPSIS**

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

```
CMS_ContentInfo *CMS_compress(BIO *in, int comp_nid, unsigned int flags);
```

**DESCRIPTION**

`CMS_compress()` creates and returns a CMS CompressedData structure. **comp\_nid** is the compression algorithm to use or **NID\_undef** to use the default algorithm (zlib compression). **in** is the content to be compressed. **flags** is an optional set of flags.

The only currently supported compression algorithm is zlib using the NID `NID_zlib_compression`.

If zlib support is not compiled into OpenSSL then `CMS_compress()` will return an error.

If the **CMS\_TEXT** flag is set MIME headers for type **text/plain** are prepended to the data.

Normally the supplied content is translated into MIME canonical format (as required by the S/MIME specifications) if **CMS\_BINARY** is set no translation occurs. This option should be used if the supplied data is in binary format otherwise the translation will corrupt it. If **CMS\_BINARY** is set then **CMS\_TEXT** is ignored.

If the **CMS\_STREAM** flag is set a partial **CMS\_ContentInfo** structure is returned suitable for streaming I/O: no data is read from the BIO **in**.

The compressed data is included in the **CMS\_ContentInfo** structure, unless **CMS\_DETACHED** is set in which case it is omitted. This is rarely used in practice and is not supported by `SMIME_write_CMS()`.

If the flag **CMS\_STREAM** is set the returned **CMS\_ContentInfo** structure is **not** complete and outputting its contents via a function that does not properly finalize the **CMS\_ContentInfo** structure will give unpredictable results.

Several functions including `SMIME_write_CMS()`, `i2d_CMS_bio_stream()`, `PEM_write_bio_CMS_stream()` finalize the structure. Alternatively finalization can be performed by obtaining the streaming ASN1 **BIO** directly using `BIO_new_CMS()`.

Additional compression parameters such as the zlib compression level cannot currently be set.

**RETURN VALUES**

**CMS\_compress()** returns either a **CMS\_ContentInfo** structure or **NULL** if an error occurred. The error can be obtained from **ERR\_get\_error(3)**.

**SEE ALSO**

**ERR\_get\_error(3)**, **CMS\_uncompress(3)**

**HISTORY**

The **CMS\_STREAM** flag was added in OpenSSL 1.0.0.

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