

**NAME**

MDC2, MDC2\_Init, MDC2\_Update, MDC2\_Final - MDC2 hash function

**SYNOPSIS**

```
#include <openssl/mdc2.h>
```

The following functions have been deprecated since OpenSSL 3.0, and can be hidden entirely by defining **OPENSSL\_API\_COMPAT** with a suitable version value, see **openssl\_user\_macros(7)**:

```
unsigned char *MDC2(const unsigned char *d, unsigned long n,  
                    unsigned char *md);
```

```
int MDC2_Init(MDC2_CTX *c);
```

```
int MDC2_Update(MDC2_CTX *c, const unsigned char *data,  
               unsigned long len);
```

```
int MDC2_Final(unsigned char *md, MDC2_CTX *c);
```

**DESCRIPTION**

All of the functions described on this page are deprecated. Applications should instead use **EVP\_DigestInit\_ex(3)**, **EVP\_DigestUpdate(3)** and **EVP\_DigestFinal\_ex(3)**.

MDC2 is a method to construct hash functions with 128 bit output from block ciphers. These functions are an implementation of MDC2 with DES.

**MDC2()** computes the MDC2 message digest of the **n** bytes at **d** and places it in **md** (which must have space for **MDC2\_DIGEST\_LENGTH** == 16 bytes of output). If **md** is NULL, the digest is placed in a static array.

The following functions may be used if the message is not completely stored in memory:

**MDC2\_Init()** initializes a **MDC2\_CTX** structure.

**MDC2\_Update()** can be called repeatedly with chunks of the message to be hashed (**len** bytes at **data**).

**MDC2\_Final()** places the message digest in **md**, which must have space for **MDC2\_DIGEST\_LENGTH** == 16 bytes of output, and erases the **MDC2\_CTX**.

Applications should use the higher level functions **EVP\_DigestInit(3)** etc. instead of calling the hash functions directly.

**RETURN VALUES**

**MDC2()** returns a pointer to the hash value.

**MDC2\_Init()**, **MDC2\_Update()** and **MDC2\_Final()** return 1 for success, 0 otherwise.

**CONFORMING TO**

ISO/IEC 10118-2:2000 Hash-Function 2, with DES as the underlying block cipher.

**SEE ALSO**

**EVP\_DigestInit(3)**

**HISTORY**

All of these functions were deprecated in OpenSSL 3.0.

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