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## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'MD4\_Init.3oss1' command**

**\$ man MD4\_Init.3oss1**

MD5(3oss1)                    OpenSSL                    MD5(3oss1)

### NAME

MD2, MD4, MD5, MD2\_Init, MD2\_Update, MD2\_Final, MD4\_Init, MD4\_Update, MD4\_Final, MD5\_Init, MD5\_Update, MD5\_Final - MD2, MD4, and MD5 hash functions

### SYNOPSIS

```
#include <openssl/md2.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 *MD2(const unsigned char *d, unsigned long n, unsigned char *md);
```

```
int MD2_Init(MD2_CTX *c);
```

```
int MD2_Update(MD2_CTX *c, const unsigned char *data, unsigned long len);
```

```
int MD2_Final(unsigned char *md, MD2_CTX *c);
```

```
#include <openssl/md4.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 *MD4(const unsigned char *d, unsigned long n, unsigned char *md);
```

```
int MD4_Init(MD4_CTX *c);
```

```
int MD4_Update(MD4_CTX *c, const void *data, unsigned long len);
```

```
int MD4_Final(unsigned char *md, MD4_CTX *c);
```

```
#include <openssl/md5.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 *MD5(const unsigned char *d, unsigned long n, unsigned char *md);
```

```
int MD5_Init(MD5_CTX *c);
```

```
int MD5_Update(MD5_CTX *c, const void *data, unsigned long len);
```

```
int MD5_Final(unsigned char *md, MD5_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).

MD2, MD4, and MD5 are cryptographic hash functions with a 128 bit output.

MD2(), MD4(), and MD5() compute the MD2, MD4, and MD5 message digest of the n bytes at d and place it in md (which must have space for

MD2\_DIGEST\_LENGTH == MD4\_DIGEST\_LENGTH == MD5\_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:

MD2\_Init() initializes a MD2\_CTX structure.

MD2\_Update() can be called repeatedly with chunks of the message to be hashed (len bytes at data).

MD2\_Final() places the message digest in md, which must have space for MD2\_DIGEST\_LENGTH == 16 bytes of output, and erases the MD2\_CTX.

MD4\_Init(), MD4\_Update(), MD4\_Final(), MD5\_Init(), MD5\_Update(), and MD5\_Final() are analogous using an MD4\_CTX and MD5\_CTX structure.

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

#### NOTE

MD2, MD4, and MD5 are recommended only for compatibility with existing applications. In new applications, SHA-1 or RIPEMD-160 should be preferred.

#### RETURN VALUES

MD2(), MD4(), and MD5() return pointers to the hash value.

MD2\_Init(), MD2\_Update(), MD2\_Final(), MD4\_Init(), MD4\_Update(), MD4\_Final(), MD5\_Init(), MD5\_Update(), and MD5\_Final() return 1 for success, 0 otherwise.

#### CONFORMING TO

RFC 1319, RFC 1320, RFC 1321

## SEE ALSO

EVP\_DigestInit(3)

## HISTORY

All of these functions were deprecated in OpenSSL 3.0.

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