



Full credit is given to the above companies including the OS that this PDF file was generated!

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

\$ man EVP_VerifyUpdate.3ossl

EVP_VERIFYINIT(3ossl) OpenSSL EVP_VERIFYINIT(3ossl)

NAME

EVP_VerifyInit_ex, EVP_VerifyInit, EVP_VerifyUpdate,
EVP_VerifyFinal_ex, EVP_VerifyFinal - EVP signature verification
functions

SYNOPSIS

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

```
int EVP_VerifyInit_ex(EVP_MD_CTX *ctx, const EVP_MD *type, ENGINE *impl);
```

```
int EVP_VerifyUpdate(EVP_MD_CTX *ctx, const void *d, unsigned int cnt);
```

```
int EVP_VerifyFinal_ex(EVP_MD_CTX *ctx, const unsigned char *sigbuf,  
                      unsigned int siglen, EVP_PKEY *pkey,  
                      OSSL_LIB_CTX *libctx, const char *propq);
```

```
int EVP_VerifyFinal(EVP_MD_CTX *ctx, unsigned char *sigbuf, unsigned int siglen,  
                    EVP_PKEY *pkey);
```

```
int EVP_VerifyInit(EVP_MD_CTX *ctx, const EVP_MD *type);
```

DESCRIPTION

The EVP signature verification routines are a high-level interface to digital signatures.

EVP_VerifyInit_ex() sets up verification context ctx to use digest type from ENGINE impl. ctx must be created by calling EVP_MD_CTX_new() before calling this function.

EVP_VerifyUpdate() hashes cnt bytes of data at d into the verification context ctx. This function can be called several times on the same ctx to include additional data.

EVP_VerifyFinal_ex() verifies the data in ctx using the public key pkey and siglen bytes in sigbuf. The library context libctx and property query propq are used when creating a context to use with the key pkey.

EVP_VerifyFinal() is similar to EVP_VerifyFinal_ex() but uses default values of NULL for the library context libctx and the property query propq.

EVP_VerifyInit() initializes verification context ctx to use the default implementation of digest type.

RETURN VALUES

EVP_VerifyInit_ex() and EVP_VerifyUpdate() return 1 for success and 0 for failure.

EVP_VerifyFinal_ex() and EVP_VerifyFinal() return 1 for a correct signature, 0 for failure and -1 if some other error occurred.

The error codes can be obtained by ERR_get_error(3).

NOTES

The EVP interface to digital signatures should almost always be used in preference to the low-level interfaces. This is because the code then becomes transparent to the algorithm used and much more flexible.

The call to `EVP_VerifyFinal()` internally finalizes a copy of the digest context. This means that calls to `EVP_VerifyUpdate()` and `EVP_VerifyFinal()` can be called later to digest and verify additional data.

Since only a copy of the digest context is ever finalized the context must be cleaned up after use by calling `EVP_MD_CTX_free()` or a memory leak will occur.

BUGS

Older versions of this documentation wrongly stated that calls to `EVP_VerifyUpdate()` could not be made after calling `EVP_VerifyFinal()`.

Since the public key is passed in the call to `EVP_SignFinal()` any error relating to the private key (for example an unsuitable key and digest combination) will not be indicated until after potentially large amounts of data have been passed through `EVP_SignUpdate()`.

It is not possible to change the signing parameters using these function.

The previous two bugs are fixed in the newer `EVP_DigestVerify*()` function.

SEE ALSO

`evp(7)`, `EVP_SignInit(3)`, `EVP_DigestInit(3)`, `evp(7)`, `HMAC(3)`, `MD2(3)`, `MD5(3)`, `MDC2(3)`, `RIPEMD160(3)`, `SHA1(3)`, `openssl-dgst(1)`

HISTORY

The function `EVP_VerifyFinal_ex()` was added in OpenSSL 3.0.

Copyright 2000-2021 The OpenSSL Project Authors. All Rights Reserved.

Licensed under the Apache License 2.0 (the "License"). You may not use this file except in compliance with the License. You can obtain a copy in the file LICENSE in the source distribution or at <https://www.openssl.org/source/license.html>.

3.0.7 2023-07-13 EVP_VERIFYINIT(3ossl)