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Rocky Enterprise Linux 9.2 Manual Pages on command 'RSA_sign.3ossl'

\$ man RSA_sign.3ossl

RSA_SIGN(3ossl) OpenSSL RSA_SIGN(3ossl)

NAME

RSA_sign, RSA_verify - RSA signatures

SYNOPSIS

```
#include <openssl/rsa.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):

```
int RSA_sign(int type, const unsigned char *m, unsigned int m_len,  
             unsigned char *sigret, unsigned int *siglen, RSA *rsa);
```

```
int RSA_verify(int type, const unsigned char *m, unsigned int m_len,  
              unsigned char *sigbuf, unsigned int siglen, RSA *rsa);
```

DESCRIPTION

All of the functions described on this page are deprecated.

Applications should instead use `EVP_PKEY_sign_init(3)`, `EVP_PKEY_sign(3)`, `EVP_PKEY_verify_init(3)` and `EVP_PKEY_verify(3)`.

`RSA_sign()` signs the message digest `m` of size `m_len` using the private key `rsa` using RSASSA-PKCS1-v1_5 as specified in RFC 3447. It stores the signature in `sigret` and the signature size in `siglen`. `sigret` must point to `RSA_size(rsa)` bytes of memory. Note that PKCS #1 adds meta-data, placing limits on the size of the key that can be used. See `RSA_private_encrypt(3)` for lower-level operations.

`type` denotes the message digest algorithm that was used to generate `m`.

If `type` is `NID_md5_sha1`, an SSL signature (MD5 and SHA1 message digests with PKCS #1 padding and no algorithm identifier) is created.

`RSA_verify()` verifies that the signature `sigbuf` of size `siglen` matches a given message digest `m` of size `m_len`. `type` denotes the message digest algorithm that was used to generate the signature. `rsa` is the signer's public key.

RETURN VALUES

`RSA_sign()` returns 1 on success. `RSA_verify()` returns 1 on successful verification.

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

CONFORMING TO

SSL, PKCS #1 v2.0

SEE ALSO

`ERR_get_error(3)`, `RSA_private_encrypt(3)`, `RSA_public_decrypt(3)`

HISTORY

All of these functions were deprecated in OpenSSL 3.0.

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3.0.7 2023-07-13 RSA_SIGN(3ossl)