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

\$ man DSA_sign.3ossl

DSA_SIGN(3ossl) OpenSSL DSA_SIGN(3ossl)

NAME

DSA_sign, DSA_sign_setup, DSA_verify - DSA signatures

SYNOPSIS

```
#include <openssl/dsa.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 DSA_sign(int type, const unsigned char *dgst, int len,  
             unsigned char *sigret, unsigned int *siglen, DSA *dsa);
```

```
int DSA_sign_setup(DSA *dsa, BN_CTX *ctx, BIGNUM **kinvp, BIGNUM **rp);
```

```
int DSA_verify(int type, const unsigned char *dgst, int len,
```

```
unsigned char *sigbuf, int siglen, DSA *dsa);
```

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)`.

`DSA_sign()` computes a digital signature on the `len` byte message digest `dgst` using the private key `dsa` and places its ASN.1 DER encoding at `sigret`. The length of the signature is places in `*siglen`. `sigret` must point to `DSA_size(dsa)` bytes of memory.

`DSA_sign_setup()` is defined only for backward binary compatibility and should not be used. Since OpenSSL 1.1.0 the DSA type is opaque and the output of `DSA_sign_setup()` cannot be used anyway: calling this function will only cause overhead, and does not affect the actual signature (pre-)computation.

`DSA_verify()` verifies that the signature `sigbuf` of size `siglen` matches a given message digest `dgst` of size `len`. `dsa` is the signer's public key.

The `type` parameter is ignored.

The random generator must be seeded when `DSA_sign()` (or `DSA_sign_setup()`) is called. If the automatic seeding or reseeding of the OpenSSL CSPRNG fails due to external circumstances (see `RAND(7)`), the operation will fail.

RETURN VALUES

`DSA_sign()` and `DSA_sign_setup()` return 1 on success, 0 on error.

`DSA_verify()` returns 1 for a valid signature, 0 for an incorrect signature and -1 on error. The error codes can be obtained by

ERR_get_error(3).

CONFORMING TO

US Federal Information Processing Standard FIPS186-4 (Digital Signature Standard, DSS), ANSI X9.30

SEE ALSO

DSA_new(3), ERR_get_error(3), RAND_bytes(3), DSA_do_sign(3), RAND(7)

HISTORY

All of these functions were deprecated in OpenSSL 3.0.

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3.0.7 2023-07-13 DSA_SIGN(3openssl)