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

\$ man EVP_PKEY_CTX_get_params.3ossl

EVP_PKEY_CTX_SET_PARAMS(3ossl) OpenSSL EVP_PKEY_CTX_SET_PARAMS(3ossl)

NAME

EVP_PKEY_CTX_set_params, EVP_PKEY_CTX_settable_params,
EVP_PKEY_CTX_get_params, EVP_PKEY_CTX_gettable_params - provider
parameter passing operations

SYNOPSIS

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

int EVP_PKEY_CTX_set_params(EVP_PKEY_CTX *ctx, const OSSL_PARAM *params);
const OSSL_PARAM *EVP_PKEY_CTX_settable_params(const EVP_PKEY_CTX *ctx);
int EVP_PKEY_CTX_get_params(EVP_PKEY_CTX *ctx, OSSL_PARAM *params);
const OSSL_PARAM *EVP_PKEY_CTX_gettable_params(const EVP_PKEY_CTX *ctx);
```

DESCRIPTION

The EVP_PKEY_CTX_get_params() and EVP_PKEY_CTX_set_params() functions allow transfer of arbitrary key parameters to and from providers. Not all parameters may be supported by all providers. See OSSL_PROVIDER(3) for more information on providers. See OSSL_PARAM(3) for more information on parameters. These functions must only be called after the EVP_PKEY_CTX has been initialised for use in an operation. These

methods replace the `EVP_PKEY_CTX_ctrl()` mechanism. (`EVP_PKEY_CTX_ctrl` now calls these methods internally to interact with providers).

`EVP_PKEY_CTX_gettable_params()` and `EVP_PKEY_CTX_settable_params()` get a constant `OSSL_PARAM` array that describes the gettable and settable parameters for the current algorithm implementation, i.e. parameters that can be used with `EVP_PKEY_CTX_get_params()` and `EVP_PKEY_CTX_set_params()` respectively. See `OSSL_PARAM(3)` for the use of `OSSL_PARAM` as parameter descriptor. These functions must only be called after the `EVP_PKEY_CTX` has been initialised for use in an operation.

Parameters

Examples of `EVP_PKEY` parameters include the following:

"Common parameters" in `provider-keymgmt(7)` "Key Exchange parameters" in `provider-keyexch(7)` "Signature parameters" in `provider-signature(7)`

"Common RSA parameters" in `EVP_PKEY-RSA(7)` "RSA key generation parameters" in `EVP_PKEY-RSA(7)` "FFC parameters" in `EVP_PKEY-FFC(7)` "FFC key generation parameters" in `EVP_PKEY-FFC(7)` "DSA parameters" in

`EVP_PKEY-DSA(7)` "DSA key generation parameters" in `EVP_PKEY-DSA(7)` "DH parameters" in `EVP_PKEY-DH(7)` "DH key generation parameters" in

`EVP_PKEY-DH(7)` "Common EC parameters" in `EVP_PKEY-EC(7)` "Common X25519, X448, ED25519 and ED448 parameters" in `EVP_PKEY-X25519(7)`

RETURN VALUES

`EVP_PKEY_CTX_set_params()` returns 1 for success or 0 otherwise.

`EVP_PKEY_CTX_settable_params()` returns an `OSSL_PARAM` array on success or `NULL` on error. It may also return `NULL` if there are no settable parameters available.

All other functions and macros described on this page return a positive value for success and 0 or a negative value for failure. In particular a return value of -2 indicates the operation is not supported by the public key algorithm.

SEE ALSO

`EVP_PKEY_CTX_new(3)`, `EVP_PKEY_encrypt(3)`, `EVP_PKEY_decrypt(3)`,
`EVP_PKEY_sign(3)`, `EVP_PKEY_verify(3)`, `EVP_PKEY_verify_recover(3)`,

EVP_PKEY_derive(3), EVP_PKEY_keygen(3)

HISTORY

All functions were added in OpenSSL 3.0.

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