

NAME

`EVP_PKEY_copy_parameters`, `EVP_PKEY_missing_parameters`, `EVP_PKEY_cmp_parameters`,
`EVP_PKEY_cmp` - public key parameter and comparison functions

SYNOPSIS

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

int EVP_PKEY_missing_parameters(const EVP_PKEY *pkey);
int EVP_PKEY_copy_parameters(EVP_PKEY *to, const EVP_PKEY *from);

int EVP_PKEY_cmp_parameters(const EVP_PKEY *a, const EVP_PKEY *b);
int EVP_PKEY_cmp(const EVP_PKEY *a, const EVP_PKEY *b);
```

DESCRIPTION

The function `EVP_PKEY_missing_parameters()` returns 1 if the public key parameters of **pkey** are missing and 0 if they are present or the algorithm doesn't use parameters.

The function `EVP_PKEY_copy_parameters()` copies the parameters from key **from** to key **to**.

The function `EVP_PKEY_cmp_parameters()` compares the parameters of keys **a** and **b**.

The function `EVP_PKEY_cmp()` compares the public key components and parameters (if present) of keys **a** and **b**.

NOTES

The main purpose of the functions `EVP_PKEY_missing_parameters()` and `EVP_PKEY_copy_parameters()` is to handle public keys in certificates where the parameters are sometimes omitted from a public key if they are inherited from the CA that signed it.

Since OpenSSL private keys contain public key components too the function `EVP_PKEY_cmp()` can also be used to determine if a private key matches a public key.

RETURN VALUES

The function `EVP_PKEY_missing_parameters()` returns 1 if the public key parameters of **pkey** are missing and 0 if they are present or the algorithm doesn't use parameters.

These functions `EVP_PKEY_copy_parameters()` returns 1 for success and 0 for failure.

The function `EVP_PKEY_cmp_parameters()` and `EVP_PKEY_cmp()` return 1 if the keys match, 0 if they don't match, -1 if the key types are different and -2 if the operation is not supported.

SEE ALSO

[EVP_PKEY_CTX_new\(3\)](#), [EVP_PKEY_keygen\(3\)](#)