

NAME

`X509_check_private_key`, `X509_REQ_check_private_key` - check the consistency of a private key with the public key in an X509 certificate or certificate request

SYNOPSIS

```
#include <openssl/x509.h>
```

```
int X509_check_private_key(X509 *x, EVP_PKEY *k);
```

```
int X509_REQ_check_private_key(X509_REQ *x, EVP_PKEY *k);
```

DESCRIPTION

`X509_check_private_key()` function checks the consistency of private key **k** with the public key in **x**.

`X509_REQ_check_private_key()` is equivalent to `X509_check_private_key()` except that **x** represents a certificate request of structure `X509_REQ`.

RETURN VALUES

`X509_check_private_key()` and `X509_REQ_check_private_key()` return 1 if the keys match each other, and 0 if not.

If the key is invalid or an error occurred, the reason code can be obtained using `ERR_get_error(3)`.

BUGS

The `check_private_key` functions don't check if **k** itself is indeed a private key or not. It merely compares the public materials (e.g. exponent and modulus of an RSA key) and/or key parameters (e.g. EC params of an EC key) of a key pair. So if you pass a public key to these functions in **k**, it will return success.

SEE ALSO

`ERR_get_error(3)`

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