NAME

    X509_add_cert, X509_add_certs - X509 certificate list addition functions

SYNOPSIS

    #include <openssl/x509.h>

    int X509_add_cert(STACK_OF(X509) *sk, X509 *cert, int flags);
    int X509_add_certs(STACK_OF(X509) *sk, STACK_OF(X509) *certs, int flags);

DESCRIPTION

    X509_add_cert() adds a certificate *cert* to the given list *sk*.

    X509_add_certs() adds a list of certificate *certs* to the given list *sk*. The *certs* argument may be NULL, which implies no effect. It does not modify the list *certs* but in case the **X509_ADD_FLAG_UP_REF** flag (described below) is set the reference counters of those of its members added to *sk* are increased.

    Both these functions have a *flags* parameter, which is used to control details of the operation.

    The value **X509_ADD_FLAG_DEFAULT**, which equals 0, means no special semantics.

    If **X509_ADD_FLAG_UP_REF** is set then the reference counts of those certificates added successfully are increased.

    If **X509_ADD_FLAG_PREPEND** is set then the certificates are prepended to *sk*. By default they are appended to *sk*. In both cases the original order of the added certificates is preserved.

    If **X509_ADD_FLAG_NO_DUP** is set then certificates already contained in *sk*, which is determined using **X509_cmp**(3), are ignored.

    If **X509_ADD_FLAG_NO_SS** is set then certificates that are marked self-signed, which is determined using **X509_self_signed**(3), are ignored.

RETURN VALUES

    Both functions return 1 for success and 0 for failure.

NOTES

    If **X509_add_certs()** is used with the flags **X509_ADD_FLAG_NO_DUP** or **X509_ADD_FLAG_NO_SS** it is advisable to use also **X509_ADD_FLAG_UP_REF** because otherwise likely not for all members of the *certs* list the ownership is transferred to the list of certificates *sk*.

Care should also be taken in case the *certs* argument equals *sk*.

SEE ALSO

X509_cmp(3) **X509_self_signed**(3)

HISTORY

The functions **X509_add_cert()** and **X509_add_certs()** were added in OpenSSL 3.0.

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