#### **NAME**

PEM\_X509\_INFO\_read\_ex, PEM\_X509\_INFO\_read, PEM\_X509\_INFO\_read\_bio\_ex, PEM\_X509\_INFO\_read\_bio - read PEM-encoded data structures into one or more X509\_INFO objects

#### **SYNOPSIS**

#include <openssl/pem.h>

```
STACK_OF(X509_INFO) *PEM_X509_INFO_read_ex(FILE *fp, STACK_OF(X509_INFO) *sk, pem_password_cb *cb, void *u, OSSL_LIB_CTX *libctx, const char *propq);

STACK_OF(X509_INFO) *PEM_X509_INFO_read(FILE *fp, STACK_OF(X509_INFO) *sk, pem_password_cb *cb, void *u);

STACK_OF(X509_INFO) *PEM_X509_INFO_read_bio_ex(BIO *bio, STACK_OF(X509_INFO) *sk, pem_password_cb *cb, void *u, OSSL_LIB_CTX *libctx, const char *propq);

STACK_OF(X509_INFO) *PEM_X509_INFO_read_bio(BIO *bp, STACK_OF(X509_INFO) *sk, pem_password_cb *cb, void *u);
```

# **DESCRIPTION**

**PEM\_X509\_INFO\_read\_ex()** loads the **X509\_INFO** objects from a file *fp*.

**PEM\_X509\_INFO\_read()** is similar to **PEM\_X509\_INFO\_read\_ex()** but uses the default (NULL) library context *libctx* and empty property query *propq*.

**PEM\_X509\_INFO\_read\_bio\_ex()** loads the **X509\_INFO** objects using a bio bp.

**PEM\_X509\_INFO\_read\_bio()** is similar to **PEM\_X509\_INFO\_read\_bio\_ex()** but uses the default (NULL) library context *libctx* and empty property query *propq*.

Each of the loaded **X509\_INFO** objects can contain a CRL, a certificate, and/or a private key. The elements are read sequentially, and as far as they are of different type than the elements read before, they are combined into the same **X509\_INFO** object. The idea behind this is that if, for instance, a certificate is followed by a private key, the private key is supposed to correspond to the certificate.

If the input stack sk is NULL a new stack is allocated, else the given stack is extended.

The optional cb and u parameters can be used for providing a pass phrase needed for decrypting

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encrypted PEM structures (normally only private keys). See PEM\_read\_bio\_PrivateKey(3) and passphrase-encoding(7) for details.

The library context *libctx* and property query *propq* are used for fetching algorithms from providers.

### **RETURN VALUES**

PEM\_X509\_INFO\_read\_ex(), PEM\_X509\_INFO\_read(), PEM\_X509\_INFO\_read\_bio\_ex() and PEM X509 INFO read bio() return a stack of X509 INFO objects or NULL on failure.

## **SEE ALSO**

PEM\_read\_bio\_ex(3), PEM\_read\_bio\_PrivateKey(3), passphrase-encoding(7)

## **HISTORY**

The functions PEM\_X509\_INFO\_read\_ex() and PEM\_X509\_INFO\_read\_bio\_ex() were added in OpenSSL 3.0.

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