

**NAME**

`ne_ssl_clcert_read`, `ne_ssl_clcert_name`, `ne_ssl_clcert_encrypted`, `ne_ssl_clcert_decrypt`,  
`ne_ssl_clcert_owner`, `ne_ssl_clcert_free` - SSL client certificate handling

**SYNOPSIS**

```
#include <ne_ssl.h>
```

```
ne_ssl_client_cert *ne_ssl_clcert_read(const char *filename);
```

```
const char *ne_ssl_clcert_name(const ne_ssl_client_cert *ccert);
```

```
int ne_ssl_clcert_encrypted(const ne_ssl_client_cert *ccert);
```

```
int ne_ssl_clcert_decrypt(ne_ssl_client_cert *ccert, const char *password);
```

```
const ne_ssl_certificate *ne_ssl_clcert_owner(const ne_ssl_client_cert *ccert);
```

```
void ne_ssl_clcert_free(ne_ssl_client_cert *ccert);
```

**DESCRIPTION**

The `ne_ssl_clcert_read` function reads a client certificate from a PKCS#12-formatted file, and returns an `ne_ssl_client_cert` object. If the client certificate is encrypted, it must be decrypted before it is used. An `ne_ssl_client_cert` object holds a client certificate and the associated private key, not just a certificate; the term "client certificate" will be used to refer to this pair.

A client certificate can be in one of two states: *encrypted* or *decrypted*. The `ne_ssl_clcert_encrypted` function will return non-zero if the client certificate is in the *encrypted* state. A client certificate object returned by `ne_ssl_clcert_read` may be initially in either state, depending on whether the file was encrypted or not.

`ne_ssl_clcert_decrypt` can be used to decrypt a client certificate using the appropriate password. This function must only be called if the object is in the *encrypted* state; if decryption fails, the certificate state does not change, so decryption can be attempted more than once using different passwords.

A client certificate can be given a "friendly name" when it is created; `ne_ssl_clcert_name` will return this name (or NULL if no friendly name was specified). `ne_ssl_clcert_name` can be used when the client certificate is in either the encrypted or decrypted state, and will return the same string for the lifetime of the object.

The function `ne_ssl_clcert_owner` returns the certificate part of the client certificate; it must only be

called if the client certificate is in the *decrypted* state.

When the client certificate is no longer needed, the **ne\_ssl\_clcert\_free** function should be used to destroy the object.

## RETURN VALUE

**ne\_ssl\_clcert\_read** returns a client certificate object, or NULL if the file could not be read.

**ne\_ssl\_clcert\_encrypted** returns zero if the object is in the decrypted state, or non-zero if it is in the encrypted state. **ne\_ssl\_clcert\_name** returns a NUL-terminated friendly name string, or NULL.

**ne\_ssl\_clcert\_owner** returns a certificate object.

## EXAMPLES

The following code reads a client certificate and decrypts it if necessary, then loads it into an HTTP session.

```
ne_ssl_client_cert *ccert;

ccert = ne_ssl_clcert_read("/path/to/client.p12");

if (ccert == NULL) {
    /* handle error... */
} else if (ne_ssl_clcert_encrypted(ccert)) {
    char *password = prompt_for_password();

    if (ne_ssl_clcert_decrypt(ccert, password)) {
        /* could not decrypt! handle error... */
    }
}

ne_ssl_set_clcert(sess, ccert);
```

## SEE ALSO

ne\_ssl\_cert\_read

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