NAME

SSL_want, SSL_want_nothing, SSL_want_read, SSL_want_write, SSL_want_x509_lookup, SSL_want_retry_verify, SSL_want_async, SSL_want_async_job, SSL_want_client_hello_cb - obtain state information TLS/SSL I/O operation

SYNOPSIS

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

int SSL_want(const SSL *ssl);
int SSL_want_nothing(const SSL *ssl);
int SSL_want_read(const SSL *ssl);
int SSL_want_write(const SSL *ssl);
int SSL_want_x509_lookup(const SSL *ssl);
int SSL_want_retry_verify(const SSL *ssl);
int SSL_want_async(const SSL *ssl);
int SSL_want_async_job(const SSL *ssl);
int SSL_want_client_hello_cb(const SSL *ssl);
```

DESCRIPTION

SSL_want() returns state information for the SSL object **ssl**.

The other SSL_want_*() calls are shortcuts for the possible states returned by **SSL_want()**.

NOTES

SSL_want() examines the internal state information of the SSL object. Its return values are similar to that of **SSL_get_error**(3). Unlike **SSL_get_error**(3), which also evaluates the error queue, the results are obtained by examining an internal state flag only. The information must therefore only be used for normal operation under nonblocking I/O. Error conditions are not handled and must be treated using **SSL_get_error**(3).

The result returned by **SSL_want()** should always be consistent with the result of **SSL_get_error**(3).

RETURN VALUES

The following return values can currently occur for **SSL_want()**:

SSL_NOTHING

There is no data to be written or to be read.

SSL_WRITING

There are data in the SSL buffer that must be written to the underlying **BIO** layer in order to

complete the actual SSL_*() operation. A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_WRITE**.

SSL_READING
: More data must be read from the underlying **BIO** layer in order to complete the actual SSL_*() operation. A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_READ**.

SSL_X509_LOOKUP
: The operation did not complete because an application callback set by **SSL_CTX_set_client_cert_cb()** has asked to be called again. A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_X509_LOOKUP**.

SSL_RETRY_VERIFY
: The operation did not complete because a certificate verification callback has asked to be called again via **SSL_set_retry_verify**(3). A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_RETRY_VERIFY**.

SSL_ASYNC_PAUSED
: An asynchronous operation partially completed and was then paused. See **SSL_get_all_async_fds**(3). A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_ASYNC**.

SSL_ASYNC_NO_JOBS
: The asynchronous job could not be started because there were no async jobs available in the pool (see **ASYNC_init_thread**(3)). A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_ASYNC_JOB**.

SSL_CLIENT_HELLO_CB
: The operation did not complete because an application callback set by **SSL_CTX_set_client_hello_cb()** has asked to be called again. A call to **SSL_get_error**(3) should return **SSL_ERROR_WANT_CLIENT_HELLO_CB**.

SSL_want_nothing(), **SSL_want_read()**, **SSL_want_write()**, **SSL_want_x509_lookup()**, **SSL_want_retry_verify()**, **SSL_want_async()**, **SSL_want_async_job()**, and **SSL_want_client_hello_cb()** return 1 when the corresponding condition is true or 0 otherwise.

SEE ALSO

ssl(7), **SSL_get_error**(3)

HISTORY

The **SSL_want_client_hello_cb()** function and the SSL_CLIENT_HELLO_CB return value were added in OpenSSL 1.1.1.

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