### **NAME**

SSL do handshake - perform a TLS/SSL handshake

### **SYNOPSIS**

```
#include <openssl/ssl.h>
int SSL do handshake(SSL *ssl);
```

# **DESCRIPTION**

**SSL\_do\_handshake()** will wait for a SSL/TLS handshake to take place. If the connection is in client mode, the handshake will be started. The handshake routines may have to be explicitly set in advance using either **SSL\_set\_connect\_state(3)** or **SSL\_set\_accept\_state(3)**.

### **NOTES**

The behaviour of **SSL\_do\_handshake()** depends on the underlying BIO.

If the underlying BIO is **blocking**, **SSL\_do\_handshake**() will only return once the handshake has been finished or an error occurred.

If the underlying BIO is **nonblocking**, **SSL\_do\_handshake**() will also return when the underlying BIO could not satisfy the needs of **SSL\_do\_handshake**() to continue the handshake. In this case a call to **SSL\_get\_error**() with the return value of **SSL\_do\_handshake**() will yield **SSL\_ERROR\_WANT\_READ** or **SSL\_ERROR\_WANT\_WRITE**. The calling process then must repeat the call after taking appropriate action to satisfy the needs of **SSL\_do\_handshake**(). The action depends on the underlying BIO. When using a nonblocking socket, nothing is to be done, but **select**() can be used to check for the required condition. When using a buffering BIO, like a BIO pair, data must be written into or retrieved out of the BIO before being able to continue.

### **RETURN VALUES**

The following return values can occur:

- O The TLS/SSL handshake was not successful but was shut down controlled and by the specifications of the TLS/SSL protocol. Call **SSL\_get\_error**() with the return value **ret** to find out the reason.
- 1 The TLS/SSL handshake was successfully completed, a TLS/SSL connection has been established.
- <0 The TLS/SSL handshake was not successful because a fatal error occurred either at the protocol level or a connection failure occurred. The shutdown was not clean. It can also occur if action is</p>

needed to continue the operation for nonblocking BIOs. Call **SSL\_get\_error**() with the return value **ret** to find out the reason.

# **SEE ALSO**

SSL\_get\_error(3), SSL\_connect(3), SSL\_accept(3), ssl(7), bio(7), SSL\_set\_connect\_state(3)

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