

NAME

gnutls_handshake - API function

SYNOPSIS

```
#include <gnutls/gnutls.h>
```

```
int gnutls_handshake(gnutls_session_t session);
```

ARGUMENTS

gnutls_session_t session

is a **gnutls_session_t** type.

DESCRIPTION

This function performs the handshake of the TLS/SSL protocol, and initializes the TLS session parameters.

The non-fatal errors expected by this function are: **GNUTLS_E_INTERRUPTED**, **GNUTLS_E_AGAIN**, **GNUTLS_E_WARNING_ALERT_RECEIVED**. When this function is called for re-handshake under TLS 1.2 or earlier, the non-fatal error code **GNUTLS_E_GOT_APPLICATION_DATA** may also be returned.

The former two interrupt the handshake procedure due to the transport layer being interrupted, and the latter because of a "warning" alert that was sent by the peer (it is always a good idea to check any received alerts). On these non-fatal errors call this function again, until it returns 0; cf.

gnutls_record_get_direction() and **gnutls_error_is_fatal()**. In DTLS sessions the non-fatal error **GNUTLS_E_LARGE_PACKET** is also possible, and indicates that the MTU should be adjusted.

When this function is called by a server after a rehandshake request under TLS 1.2 or earlier the **GNUTLS_E_GOT_APPLICATION_DATA** error code indicates that some data were pending prior to peer initiating the handshake. Under TLS 1.3 this function when called after a successful handshake, is a no-op and always succeeds in server side; in client side this function is equivalent to **gnutls_session_key_update()** with **GNUTLS_KU_PEER** flag.

This function handles both full and abbreviated TLS handshakes (resumption). For abbreviated handshakes, in client side, the **gnutls_session_set_data()** should be called prior to this function to set parameters from a previous session. In server side, resumption is handled by either setting a DB back-end, or setting up keys for session tickets.

RETURNS

GNUTLS_E_SUCCESS on a successful handshake, otherwise a negative error code.

REPORTING BUGS

Report bugs to <bugs@gnutls.org>.

Home page: <https://www.gnutls.org>

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SEE ALSO

The full documentation for **gnutls** is maintained as a Texinfo manual. If the /usr/local/share/doc/gnutls/ directory does not contain the HTML form visit

<https://www.gnutls.org/manual/>