

NAME

SSL_CTX_set_stateless_cookie_generate_cb, SSL_CTX_set_stateless_cookie_verify_cb,
 SSL_CTX_set_cookie_generate_cb, SSL_CTX_set_cookie_verify_cb - Callback functions for stateless
 TLS1.3 cookies

SYNOPSIS

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

```
void SSL_CTX_set_stateless_cookie_generate_cb(
    SSL_CTX *ctx,
    int (*gen_stateless_cookie_cb) (SSL *ssl,
                                     unsigned char *cookie,
                                     size_t *cookie_len));

void SSL_CTX_set_stateless_cookie_verify_cb(
    SSL_CTX *ctx,
    int (*verify_stateless_cookie_cb) (SSL *ssl,
                                       const unsigned char *cookie,
                                       size_t cookie_len));

void SSL_CTX_set_cookie_generate_cb(SSL_CTX *ctx,
    int (*app_gen_cookie_cb) (SSL *ssl,
                              unsigned char
                              *cookie,
                              unsigned int
                              *cookie_len));

void SSL_CTX_set_cookie_verify_cb(SSL_CTX *ctx,
    int (*app_verify_cookie_cb) (SSL *ssl,
                                 const unsigned
                                 char *cookie,
                                 unsigned int
                                 cookie_len));
```

DESCRIPTION

SSL_CTX_set_stateless_cookie_generate_cb() sets the callback used by **SSL_stateless(3)** to generate the application-controlled portion of the cookie provided to clients in the HelloRetryRequest transmitted as a response to a ClientHello with a missing or invalid cookie. **gen_stateless_cookie_cb()** must write at most **SSL_COOKIE_LENGTH** bytes into **cookie**, and must write the number of bytes written to **cookie_len**. If a cookie cannot be generated, a zero return value can be used to abort the handshake.

SSL_CTX_set_stateless_cookie_verify_cb() sets the callback used by **SSL_stateless(3)** to determine whether the application-controlled portion of a ClientHello cookie is valid. The cookie data is pointed to by **cookie** and is of length **cookie_len**. A nonzero return value from **verify_stateless_cookie_cb()** communicates that the cookie is valid. The integrity of the entire cookie, including the application-controlled portion, is automatically verified by HMAC before **verify_stateless_cookie_cb()** is called.

SSL_CTX_set_cookie_generate_cb() sets the callback used by **DTLSv1_listen(3)** to generate the cookie provided to clients in the HelloVerifyRequest transmitted as a response to a ClientHello with a missing or invalid cookie. **app_gen_cookie_cb()** must write at most **DTLS1_COOKIE_LENGTH** bytes into **cookie**, and must write the number of bytes written to **cookie_len**. If a cookie cannot be generated, a zero return value can be used to abort the handshake.

SSL_CTX_set_cookie_verify_cb() sets the callback used by **DTLSv1_listen(3)** to determine whether the cookie in a ClientHello is valid. The cookie data is pointed to by **cookie** and is of length **cookie_len**. A nonzero return value from **app_verify_cookie_cb()** communicates that the cookie is valid. The integrity of the cookie is not verified by OpenSSL. This is an application responsibility.

RETURN VALUES

Neither function returns a value.

SEE ALSO

ssl(7), **SSL_stateless(3)**, **DTLSv1_listen(3)**

HISTORY

SSL_CTX_set_stateless_cookie_generate_cb() and **SSL_CTX_set_stateless_cookie_verify_cb()** were added in OpenSSL 1.1.1.

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