

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.

COPYRIGHT

Copyright 2018 The OpenSSL Project Authors. All Rights Reserved.

Licensed under the Apache License 2.0 (the "License"). You may not use this file except in compliance with the License. You can obtain a copy in the file LICENSE in the source distribution or at <https://www.openssl.org/source/license.html>.