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SSL_CTX_SET_STATELESS_COOKIE_GESSL_CTX_SET_STATELESS_COOKIE_GENERATE_CB(3ossl)

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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