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## ***Rocky Enterprise Linux 9.2 Manual Pages on command 'SSL\_CTX\_set\_stateless\_cookie\_generate\_cb.3ossl'***

```
$ man SSL_CTX_set_stateless_cookie_generate_cb.3ossl
```

```
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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3.0.7            SSL\_CTX\_SET\_STATELESS\_COOKIE\_GENERATE\_CB(3ossl)