



*Full credit is given to the above companies including the OS that this PDF file was generated!*

### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'SSL\_SESSION\_new.3ossl'***

***\$ man SSL\_SESSION\_new.3ossl***

SSL\_SESSION\_FREE(3ossl)      OpenSSL      SSL\_SESSION\_FREE(3ossl)

#### NAME

SSL\_SESSION\_new, SSL\_SESSION\_dup, SSL\_SESSION\_up\_ref, SSL\_SESSION\_free

- create, free and manage SSL\_SESSION structures

#### SYNOPSIS

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

SSL_SESSION *SSL_SESSION_new(void);

SSL_SESSION *SSL_SESSION_dup(const SSL_SESSION *src);

int SSL_SESSION_up_ref(SSL_SESSION *ses);

void SSL_SESSION_free(SSL_SESSION *session);
```

#### DESCRIPTION

SSL\_SESSION\_new() creates a new SSL\_SESSION structure and returns a pointer to it.

SSL\_SESSION\_dup() copies the contents of the SSL\_SESSION structure in src and returns a pointer to it.

SSL\_SESSION\_up\_ref() increments the reference count on the given SSL\_SESSION structure.

SSL\_SESSION\_free() decrements the reference count of session and

removes the `SSL_SESSION` structure pointed to by `session` and frees up the allocated memory, if the reference count has reached 0. If `session` is `NULL` nothing is done.

## NOTES

`SSL_SESSION` objects are allocated, when a TLS/SSL handshake operation is successfully completed. Depending on the settings, see

`SSL_CTX_set_session_cache_mode(3)`, the `SSL_SESSION` objects are internally referenced by the `SSL_CTX` and linked into its session cache.

SSL objects may be using the `SSL_SESSION` object; as a session may be reused, several SSL objects may be using one `SSL_SESSION` object at the same time. It is therefore crucial to keep the reference count (usage information) correct and not delete a `SSL_SESSION` object that is still used, as this may lead to program failures due to dangling pointers.

These failures may also appear delayed, e.g. when an `SSL_SESSION` object was completely freed as the reference count incorrectly became 0, but it is still referenced in the internal session cache and the cache list is processed during a `SSL_CTX_flush_sessions(3)` operation.

`SSL_SESSION_free()` must only be called for `SSL_SESSION` objects, for which the reference count was explicitly incremented (e.g. by calling `SSL_get1_session()`, see `SSL_get_session(3)`) or when the `SSL_SESSION` object was generated outside a TLS handshake operation, e.g. by using `d2i_SSL_SESSION(3)`. It must not be called on other `SSL_SESSION` objects, as this would cause incorrect reference counts and therefore program failures.

## RETURN VALUES

`SSL_SESSION_new` returns a pointer to the newly allocated `SSL_SESSION` structure or `NULL` on error.

`SSL_SESSION_up_ref` returns 1 on success or 0 on error.

## SEE ALSO

`ssl(7)`, `SSL_get_session(3)`, `SSL_CTX_set_session_cache_mode(3)`,  
`SSL_CTX_flush_sessions(3)`, `d2i_SSL_SESSION(3)`

## HISTORY

The `SSL_SESSION_dup()` function was added in OpenSSL 1.1.1.

## COPYRIGHT

Copyright 2000-2016 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>](https://www.openssl.org/source/license.html).

3.0.7                    2023-07-13        SSL\_SESSION\_FREE(3ossl)