

NAME

curl_easy_setopt - set options for a curl easy handle

SYNOPSIS

```
#include <curl/curl.h>
```

```
CURLcode curl_easy_setopt(CURL *handle, CURLOPToption option, parameter);
```

DESCRIPTION

curl_easy_setopt() is used to tell libcurl how to behave. By using the appropriate options to *curl_easy_setopt*, you can change libcurl's behavior. All options are set with the *option* followed by a *parameter*. That parameter can be a long, a function pointer or an object pointer, all depending on what the specific option expects. Read this manual carefully as bad input values may cause libcurl to behave badly! You can only set one option in each function call. A typical application uses many curl_easy_setopt() calls in the setup phase.

NOTE: strings passed to libcurl as 'char *' arguments, will not be copied by the library. Instead you should keep them available until libcurl no longer needs them. Failing to do so will cause very odd behavior or even crashes. libcurl will need them until you call curl_easy_cleanup() or you set the same option again to use a different pointer.

NOTE2: options set with this function call are valid for the forthcoming data transfers that are performed when you invoke *curl_easy_perform*. The options are not in any way reset between transfers, so if you want subsequent transfers with different options, you must change them between the transfers.

The *handle* is the return code from a *curl_easy_init(3)* or *curl_easy_duphandle(3)* call.

BEHAVIOR OPTIONS**CURLOPT_VERBOSE**

Set the parameter to non-zero to get the library to display a lot of verbose information about its operations. Very useful for libcurl and/or protocol debugging and understanding.

You hardly ever want this set in production use, you will almost always want this when you debug/report problems. Another neat option for debugging is the *CURLOPT_DEBUGFUNCTION*.

CURLOPT_HEADER

A non-zero parameter tells the library to include the header in the body output. This is only relevant for protocols that actually have headers preceding the data (like HTTP).

CURLOPT_NOPROGRESS

A non-zero parameter tells the library to shut of the built-in progress meter completely.

NOTE: future versions of libcurl is likely to not have any built-in progress meter at all.

CURLOPT_NOSIGNAL

Pass a long. If it is non-zero, libcurl will not use any functions that install signal handlers or any functions that cause signals to be sent to the process. This option is mainly here to allow multi-threaded unix applications to still set/use all timeout options etc, without risking getting signals. (Added in 7.10)

CALLBACK OPTIONS**CURLOPT_WRITEFUNCTION**

Function pointer that should match the following prototype: **size_t function(void *ptr, size_t size, size_t nmemb, void *stream);** This function gets called by libcurl as soon as there is data reveiced that needs to be saved. The size of the data pointed to by *ptr* is *size* multiplied with *nmemb*, it will not be zero terminated. Return the number of bytes actually taken care of. If that amount differs from the amount passed to your function, it'll signal an error to the library and it will abort the transfer and return *CURLE_WRITE_ERROR*.

Set the *stream* argument with the **CURLOPT_FILE** option.

NOTE: you will be passed as much data as possible in all invokes, but you cannot possibly make any assumptions. It may be one byte, it may be thousands. The maximum amount of data that can be passed to the write callback is defined in the curl.h header file: **CURL_MAX_WRITE_SIZE**.

CURLOPT_WRITEDATA

Data pointer to pass to the file write function. Note that if you specify the **CURLOPT_WRITEFUNCTION**, this is the pointer you'll get as input. If you don't use a callback, you must pass a *'FILE *'* as libcurl will pass this to `fwrite()` when writing data.

NOTE: If you're using libcurl as a win32 DLL, you **MUST** use the **CURLOPT_WRITEFUNCTION** if you set this option or you will experience crashes.

This option is also known with the older name **CURLOPT_FILE**, the name **CURLOPT_WRITEDATA** was introduced in 7.9.7.

CURLOPT_READFUNCTION

Function pointer that should match the following prototype: **size_t function(void *ptr, size_t size, size_t nmemb, void *stream);** This function gets called by libcurl as soon as it needs to read data in order to send it to the peer. The data area pointed at by the pointer *ptr* may be filled with at most *size* multiplied with *nmemb* number of bytes. Your function must return the actual number of bytes that you stored in that memory area. Returning 0 will signal end-of-file to the library and cause it to stop the current transfer.

CURLOPT_READDATA

Data pointer to pass to the file read function. Note that if you specify the **CURLOPT_READFUNCTION**, this is the pointer you'll get as input. If you don't specify a read callback, this must be a valid *FILE **.

NOTE: If you're using libcurl as a win32 DLL, you **MUST** use a **CURLOPT_READFUNCTION** if you set this option.

This option is also known with the older name **CURLOPT_INFILE**, the name **CURLOPT_READDATA** was introduced in 7.9.7.

CURLOPT_PROGRESSFUNCTION

Function pointer that should match the *curl_progress_callback* prototype found in *<curl/curl.h>*. This function gets called by libcurl instead of its internal equivalent with a frequent interval during data transfer. Unknown/unused argument values will be set to zero (like if you only download data, the upload size will remain 0). Returning a non-zero value from this callback will cause libcurl to abort the transfer and return **CURLE_ABORTED_BY_CALLBACK**.

Also note that **CURLOPT_NOPROGRESS** must be set to **FALSE** to make this function actually get called.

CURLOPT_PROGRESSDATA

Pass a pointer that will be untouched by libcurl and passed as the first argument in the progress callback set with **CURLOPT_PROGRESSFUNCTION**.

CURLOPT_PASSWDFUNCTION

Pass a pointer to a *curl_passwd_callback* function that will be called instead of the internal one if libcurl requests a password. The function must match this prototype: **int getpass(void *client, char *prompt, char* buffer, int buflen);**. If set to **NULL**, it sets back the function to the internal default one. If the function returns a non-zero value, it will abort the operation and an error (**CURLE_BAD_PASSWORD_ENTERED**) will be returned. *client* is a generic pointer, see **CURLOPT_PASSWDATA**. *prompt* is a zero-terminated string that is text that prefixes the input request. *buffer* is a pointer to data where the entered password should be stored and *buflen* is the maximum

number of bytes that may be written in the buffer. (Added in 7.4.2)

CURLOPT_PASSWDATA

Pass a void * to whatever data you want. The passed pointer will be the first argument sent to the specified *CURLOPT_PASSWDFUNCTION* function. (Added in 7.4.2)

CURLOPT_HEADERFUNCTION

Function pointer that should match the following prototype: *size_t function(void *ptr, size_t size, size_t nmemb, void *stream);*. This function gets called by libcurl as soon as there is received header data that needs to be written down. The headers are guaranteed to be written one-by-one and only complete lines are written. Parsing headers should be easy enough using this. The size of the data pointed to by *ptr* is *size* multiplied with *nmemb*. The pointer named *stream* will be the one you passed to libcurl with the *CURLOPT_WRITEHEADER* option. Return the number of bytes actually written or return -1 to signal error to the library (it will cause it to abort the transfer with a *CURLE_WRITE_ERROR* return code). (Added in 7.7.2)

CURLOPT_WRITEHEADER

Pass a pointer to be used to write the header part of the received data to. If you don't use your own callback to take care of the writing, this must be a valid FILE *. See also the *CURLOPT_HEADERFUNCTION* option above on how to set a custom get-all-headers callback.

CURLOPT_DEBUGFUNCTION

Function pointer that should match the following prototype: *int curl_debug_callback (CURL *, curl_infotype, char *, size_t, void *)*; This function will receive debug information if *CURLOPT_VERBOSE* is enabled. The *curl_infotype* argument specifies what kind of information it is. This function must return 0.

NOTE: the data pointed to by the char * passed to this function WILL NOT be zero terminated, but will be exactly of the size as told by the size_t argument.

CURLOPT_DEBUGDATA

Pass a pointer to whatever you want passed in to your *CURLOPT_DEBUGFUNCTION* in the last void * argument. This pointer is not used by libcurl, it is only passed to the callback.

ERROR OPTIONS

CURLOPT_ERRORBUFFER

Pass a char * to a buffer that the libcurl may store human readable error messages in. This may be more helpful than just the return code from the library. The buffer must be at least *CURL_ERROR_SIZE* big.

Use *CURLOPT_VERBOSE* and *CURLOPT_DEBUGFUNCTION* to better debug/trace why errors happen.

Note: if the library does not return an error, the buffer may not have been touched. Do not rely on the contents in those cases.

CURLOPT_STDERR

Pass a FILE * as parameter. This is the stream to use instead of stderr internally when reporting errors.

CURLOPT_FAILONERROR

A non-zero parameter tells the library to fail silently if the HTTP code returned is equal to or larger than 300. The default action would be to return the page normally, ignoring that code.

NETWORK OPTIONS

CURLOPT_URL

The actual URL to deal with. The parameter should be a char * to a zero terminated string. The string must remain present until curl no longer needs it, as it doesn't copy the string.

NOTE: this option is (the only one) required to be set before *curl_easy_perform(3)* is called.

CURLOPT_PROXY

Set HTTP proxy to use. The parameter should be a char * to a zero terminated string holding the host name or dotted IP address. To specify port number in this string, append `:[port]` to the end of the host name. The proxy string may be prefixed with `[protocol]://` since any such prefix will be ignored. The proxy's port number may optionally be specified with the separate option *CURLOPT_PROXYPORT*.

NOTE: when you tell the library to use a HTTP proxy, libcurl will transparently convert operations to HTTP even if you specify a FTP URL etc. This may have an impact on what other features of the library you can use, such as *CURLOPT_QUOTE* and similar FTP specifics that don't work unless you tunnel through the HTTP proxy. Such tunneling is activated with *CURLOPT_HTTPPROXYTUNNEL*.

NOTE2: libcurl respects the environment variables **http_proxy**, **ftp_proxy**, **all_proxy** etc, if any of those is set.

CURLOPT_PROXYPORT

Pass a long with this option to set the proxy port to connect to unless it is specified in the proxy string *CURLOPT_PROXY*.

CURLOPT_PROXYTYPE

Pass a long with this option to set type of the proxy. Available options for this are *CURL_PROXY_HTTP* and *CURLPROXY SOCKS5*, with the HTTP one being default. (Added in 7.10)

CURLOPT_HTTPPROXYTUNNEL

Set the parameter to non-zero to get the library to tunnel all operations through a given HTTP proxy. Note that there is a big difference between using a proxy and to tunnel through it. If you don't know what this means, you probably don't want this tunneling option. (Added in 7.3)

CURLOPT_INTERFACE

Pass a char * as parameter. This set the interface name to use as outgoing network interface. The name can be an interface name, an IP address or a host name. (Added in 7.3)

CURLOPT_DNS_CACHE_TIMEOUT

Pass a long, this sets the timeout in seconds. Name resolves will be kept in memory for this number of seconds. Set to zero (0) to completely disable caching, or set to -1 to make the cached entries remain forever. By default, libcurl caches info for 60 seconds. (Added in 7.9.3)

CURLOPT_DNS_USE_GLOBAL_CACHE

Pass a long. If the value is non-zero, it tells curl to use a global DNS cache that will survive between easy handle creations and deletions. This is not thread-safe and this will use a global variable. (Added in 7.9.3)

CURLOPT_BUFFERSIZE

Pass a long specifying your preferred size for the receive buffer in libcurl. The main point of this would be that the write callback gets called more often and with smaller chunks. This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size. (Added in 7.10)

NAMES and PASSWORDS OPTIONS

CURLOPT_NETRC

This parameter controls the preference of libcurl between using user names and passwords from your `%.netrc` file, relative to user names and passwords in the URL supplied with *CURLOPT_URL*.

Note: libcurl uses a user name (and supplied or prompted password) supplied with *CURLOPT_USERPWD* in preference to any of the options controlled by this parameter.

Pass a long, set to one of the values described below.

CURL_NETRC_OPTIONAL

The use of your *~/.netrc* file is optional, and information in the URL is to be preferred. The file will be scanned with the host and user name (to find the password only) or with the host only, to find the first user name and password after that *machine*, which ever information is not specified in the URL.

Undefined values of the option will have this effect.

CURL_NETRC_IGNORED

The library will ignore the file and use only the information in the URL.

This is the default.

CURL_NETRC_REQUIRED

This value tells the library that use of the file is required, to ignore the information in the URL, and to search the file with the host only.

Only machine name, user name and password are taken into account (init macros and similar things aren't supported).

Note: libcurl does not verify that the file has the correct properties set (as the standard Unix ftp client does). It should only be readable by user.

CURLOPT_USERPWD

Pass a char * as parameter, which should be [user name]:[password] to use for the connection. If the password is left out, you will be prompted for it. *CURLOPT_PASSWDFUNCTION* can be used to set your own prompt function.

CURLOPT_PROXYUSERPWD

Pass a char * as parameter, which should be [user name]:[password] to use for the connection to the HTTP proxy. If the password is left out, you will be prompted for it. *CURLOPT_PASSWDFUNCTION* can be used to set your own prompt function.

HTTP OPTIONS**CURLOPT_ENCODING**

Two encodings are supported *identity*, which does nothing, and *deflate* to request the server to compress its response using the zlib algorithm. This is not an order, the server may or may not do it. See the special file lib/README.encoding for details.

CURLOPT_FOLLOWLOCATION

A non-zero parameter tells the library to follow any Location: header that the server sends as part of a HTTP header.

NOTE: this means that the library will re-send the same request on the new location and follow new Location: headers all the way until no more such headers are returned. *CURLOPT_MAXREDIRS* can be used to limit the number of redirects libcurl will follow.

CURLOPT_MAXREDIRS

Pass a long. The set number will be the redirection limit. If that many redirections have been followed, the next redirect will cause an error (*CURLE_TOO_MANY_REDIRECTS*). This option only makes sense if the *CURLOPT_FOLLOWLOCATION* is used at the same time. (Added in 7.5)

CURLOPT_PUT

A non-zero parameter tells the library to use HTTP PUT to transfer data. The data should be set with *CURLOPT_READDATA* and *CURLOPT_INFILESIZE*.

CURLOPT_POST

A non-zero parameter tells the library to do a regular HTTP post. This is a normal application/x-www-form-urlencoded kind, which is the most commonly used one by HTML forms. See the *CURLOPT_POSTFIELDS* option for how to specify the data to post and *CURLOPT_POSTFIELDSIZE*

in how to set the data size. Starting with libcurl 7.8, this option is obsolete. Using the `CURLOPT_POSTFIELDS` option will imply this option.

CURLOPT_POSTFIELDS

Pass a char * as parameter, which should be the full data to post in a HTTP post operation. This is a normal application/x-www-form-urlencoded kind, which is the most commonly used one by HTML forms. See also the `CURLOPT_POST`. Since 7.8, using `CURLOPT_POSTFIELDS` implies `CURLOPT_POST`.

Note: to make multipart/formdata posts (aka rfc1867-posts), check out the `CURLOPT_HTTPPOST` option.

CURLOPT_POSTFIELDSIZE

If you want to post data to the server without letting libcurl do a `strlen()` to measure the data size, this option must be used. When this option is used you can post fully binary data, which otherwise is likely to fail. If this size is set to zero, the library will use `strlen()` to get the size. (Added in libcurl 7.2)

CURLOPT_HTTPPOST

Tells libcurl you want a multipart/formdata HTTP POST to be made and you instruct what data to pass on to the server. Pass a pointer to a linked list of HTTP post structs as parameter. The linked list should be a fully valid list of 'struct `HttpPost`' structs properly filled in. The best and most elegant way to do this, is to use `curl_formadd(3)` as documented. The data in this list must remain intact until you close this curl handle again with `curl_easy_cleanup(3)`.

CURLOPT_REFERER

Pass a pointer to a zero terminated string as parameter. It will be used to set the Referer: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with `CURLOPT_HTTPHEADER`.

CURLOPT_USERAGENT

Pass a pointer to a zero terminated string as parameter. It will be used to set the User-Agent: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with `CURLOPT_HTTPHEADER`.

CURLOPT_HTTPHEADER

Pass a pointer to a linked list of HTTP headers to pass to the server in your HTTP request. The linked list should be a fully valid list of **struct `curl_slist`** structs properly filled in. Use `curl_slist_append(3)` to create the list and `curl_slist_free_all(3)` to clean up an entire list. If you add a header that is otherwise generated and used by libcurl internally, your added one will be used instead. If you add a header with no contents as in 'Accept:' (no data on the right side of the colon), the internally used header will get disabled. Thus, using this option you can add new headers, replace internal headers and remove internal headers. The headers included in the linked list must not be CRLF-terminated, because curl adds CRLF after each header item. Failure to comply with this will result in strange bugs because the server will most likely ignore part of the headers you specified.

NOTE:The most commonly replaced headers have "shortcuts" in the options `CURLOPT_COOKIE`, `CURLOPT_USERAGENT` and `CURLOPT_REFERER`.

CURLOPT_HTTP200ALIASES

Pass a pointer to a linked list of aliases to be treated as valid HTTP 200 responses. Some servers respond with a custom header response line. For example, IceCast servers respond with "ICY 200 OK". By including this string in your list of aliases, the response will be treated as a valid HTTP header line such as "HTTP/1.0 200 OK". (Added in 7.10.3)

The linked list should be a fully valid list of struct `curl_slist` structs, and be properly filled in. Use `curl_slist_append(3)` to create the list and `curl_slist_free_all(3)` to clean up an entire list.

NOTE:The alias itself is not parsed for any version strings. So if your alias is "MYHTTP/9.9", Libcurl will not treat the server as responding with HTTP version 9.9. Instead Libcurl will use the value set by option *CURLOPT_HTTP_VERSION*.

CURLOPT_COOKIE

Pass a pointer to a zero terminated string as parameter. It will be used to set a cookie in the http request. The format of the string should be NAME=CONTENTS, where NAME is the cookie name and CONTENTS is what the cookie should contain.

If you need to set multiple cookies, you need to set them all using a single option and thus you need to concat them all in one single string. Set multiple cookies in one string like this: "name1=content1; name2=content2;" etc.

Using this option multiple times will only make the latest string override the previously ones.

CURLOPT_COOKIEFILE

Pass a pointer to a zero terminated string as parameter. It should contain the name of your file holding cookie data to read. The cookie data may be in Netscape / Mozilla cookie data format or just regular HTTP-style headers dumped to a file.

Given an empty or non-existing file, this option will enable cookies for this curl handle, making it understand and parse received cookies and then use matching cookies in future request.

CURLOPT_COOKIEJAR

Pass a file name as char *, zero terminated. This will make libcurl write all internally known cookies to the specified file when *curl_easy_cleanup(3)* is called. If no cookies are known, no file will be created. Specify "-" to instead have the cookies written to stdout. Using this option also enables cookies for this session, so if you for example follow a location it will make matching cookies get sent accordingly. (Added in 7.9)

CURLOPT_TIMECONDITION

Pass a long as parameter. This defines how the *CURLOPT_TIMEVALUE* time value is treated. You can set this parameter to *TIMECOND_IFMODSINCE* or *TIMECOND_IFUNMODSINCE*. This is a HTTP-only feature. (TBD)

CURLOPT_TIMEVALUE

Pass a long as parameter. This should be the time in seconds since 1 jan 1970, and the time will be used in a condition as specified with *CURLOPT_TIMECONDITION*.

CURLOPT_HTTPGET

Pass a long. If the long is non-zero, this forces the HTTP request to get back to GET. Only really usable if POST, PUT or a custom request have been used previously using the same curl handle. (Added in 7.8.1)

CURLOPT_HTTP_VERSION

Pass a long, set to one of the values described below. They force libcurl to use the specific HTTP versions. This is not sensible to do unless you have a good reason.

CURL_HTTP_VERSION_NONE

We don't care about what version the library uses. libcurl will use whatever it thinks fit.

CURL_HTTP_VERSION_1_0

Enforce HTTP 1.0 requests.

CURL_HTTP_VERSION_1_1

Enforce HTTP 1.1 requests.

FTP OPTIONS

CURLOPT_FTPPORT

Pass a pointer to a zero terminated string as parameter. It will be used to get the IP address to use for the ftp PORT instruction. The PORT instruction tells the remote server to connect to our specified IP

address. The string may be a plain IP address, a host name, an network interface name (under Unix) or just a '-' letter to let the library use your systems default IP address. Default FTP operations are passive, and thus won't use PORT.

CURLOPT_QUOTE

Pass a pointer to a linked list of FTP commands to pass to the server prior to your ftp request. This will be done before any other FTP commands are issued (even before the CWD command). The linked list should be a fully valid list of to append strings (commands) to the list, and clear the entire list afterwards with *curl_slist_free_all(3)*. Disable this operation again by setting a NULL to this option.

CURLOPT_POSTQUOTE

Pass a pointer to a linked list of FTP commands to pass to the server after your ftp transfer request. The linked list should be a fully valid list of struct curl_slist structs properly filled in as described for *CURLOPT_QUOTE*. Disable this operation again by setting a NULL to this option.

CURLOPT_PREQUOTE

Pass a pointer to a linked list of FTP commands to pass to the server after the transfer type is set. The linked list should be a fully valid list of struct curl_slist structs properly filled in as described for *CURLOPT_QUOTE*. Disable this operation again by setting a NULL to this option.

CURLOPT_FTPLISTONLY

A non-zero parameter tells the library to just list the names of an ftp directory, instead of doing a full directory listing that would include file sizes, dates etc.

This causes an FTP NLST command to be sent. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

CURLOPT_FTPAPPEND

A non-zero parameter tells the library to append to the remote file instead of overwrite it. This is only useful when uploading to a ftp site.

CURLOPT_FTP_USE_EPSV

Pass a long. If the value is non-zero, it tells curl to use the EPSV command when doing passive FTP downloads (which it always does by default). Using EPSV means that it will first attempt to use EPSV before using PASV, but if you pass FALSE (zero) to this option, it will not try using EPSV, only plain PASV.

PROTOCOL OPTIONS

CURLOPT_TRANSFERTEXT

A non-zero parameter tells the library to use ASCII mode for ftp transfers, instead of the default binary transfer. For LDAP transfers it gets the data in plain text instead of HTML and for win32 systems it does not set the stdout to binary mode. This option can be usable when transferring text data between systems with different views on certain characters, such as newlines or similar.

CURLOPT_CRLF

Convert Unix newlines to CRLF newlines on transfers.

CURLOPT_RANGE

Pass a char * as parameter, which should contain the specified range you want. It should be in the format "X-Y", where X or Y may be left out. HTTP transfers also support several intervals, separated with commas as in "X-Y,N-M". Using this kind of multiple intervals will cause the HTTP server to send the response document in pieces (using standard MIME separation techniques).

CURLOPT_RESUME_FROM

Pass a long as parameter. It contains the offset in number of bytes that you want the transfer to start from.

CURLOPT_CUSTOMREQUEST

Pass a pointer to a zero terminated string as parameter. It will be user instead of GET or HEAD when doing the HTTP request. This is useful for doing DELETE or other more or less obscure

HTTP requests. Don't do this at will, make sure your server supports the command first.

CURLOPT_FILETIME

Pass a long. If it is a non-zero value, libcurl will attempt to get the modification date of the remote document in this operation. This requires that the remote server sends the time or replies to a time querying command. The *curl_easy_getinfo(3)* function with the *CURLINFO_FILETIME* argument can be used after a transfer to extract the received time (if any). (Added in 7.5)

CURLOPT_NOBODY

A non-zero parameter tells the library to not include the body-part in the output. This is only relevant for protocols that have separate header and body parts.

CURLOPT_INFILESIZE

When uploading a file to a remote site, this option should be used to tell libcurl what the expected size of the infile is.

CURLOPT_UPLOAD

A non-zero parameter tells the library to prepare for an upload. The *CURLOPT_READDATA* and *CURLOPT_INFILESIZE* are also interesting for uploads.

CONNECTION OPTIONS**CURLOPT_TIMEOUT**

Pass a long as parameter containing the maximum time in seconds that you allow the libcurl transfer operation to take. Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause curl to use the *SIGALRM* to enable time-outing system calls.

NOTE: this is not recommended to use in unix multi-threaded programs, as it uses signals unless *CURLOPT_NOSIGNAL* (see above) is set.

CURLOPT_LOW_SPEED_LIMIT

Pass a long as parameter. It contains the transfer speed in bytes per second that the transfer should be below during *CURLOPT_LOW_SPEED_TIME* seconds for the library to consider it too slow and abort.

CURLOPT_LOW_SPEED_TIME

Pass a long as parameter. It contains the time in seconds that the transfer should be below the *CURLOPT_LOW_SPEED_LIMIT* for the library to consider it too slow and abort.

CURLOPT_MAXCONNECTS

Pass a long. The set number will be the persistent connection cache size. The set amount will be the maximum amount of simultaneously open connections that libcurl may cache. Default is 5, and there isn't much point in changing this value unless you are perfectly aware of how this work and changes libcurl's behaviour. This concerns connection using any of the protocols that support persistent connections.

When reaching the maximum limit, curl uses the *CURLOPT_CLOSEPOLICY* to figure out which of the existing connections to close to prevent the number of open connections to increase.

NOTE: if you already have performed transfers with this curl handle, setting a smaller *MAXCONNECTS* than before may cause open connections to get closed unnecessarily. (Added in 7.7)

CURLOPT_CLOSEPOLICY

Pass a long. This option sets what policy libcurl should use when the connection cache is filled and one of the open connections has to be closed to make room for a new connection. This must be one of the *CURLCLOSEPOLICY_** defines. Use *CURLCLOSEPOLICY_LEAST_RECENTLY_USED* to make libcurl close the connection that was least recently used, that connection is also least likely to be capable of re-use. Use *CURLCLOSEPOLICY_OLDEST* to make libcurl close the oldest connection, the one that was created first among the ones in the connection cache. The other close policies

are not support yet. (Added in 7.7)

CURLOPT_FRESH_CONNECT

Pass a long. Set to non-zero to make the next transfer use a new (fresh) connection by force. If the connection cache is full before this connection, one of the existing connections will be closed as according to the selected or default policy. This option should be used with caution and only if you understand what it does. Set this to 0 to have libcurl attempt re-using an existing connection (default behavior). (Added in 7.7)

CURLOPT_FORBID_REUSE

Pass a long. Set to non-zero to make the next transfer explicitly close the connection when done. Normally, libcurl keep all connections alive when done with one transfer in case there comes a succeeding one that can re-use them. This option should be used with caution and only if you understand what it does. Set to 0 to have libcurl keep the connection open for possibly later re-use (default behavior). (Added in 7.7)

CURLOPT_CONNECTTIMEOUT

Pass a long. It should contain the maximum time in seconds that you allow the connection to the server to take. This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the *CURLOPT_TIMEOUT* option.

NOTE: this is not recommended to use in unix multi-threaded programs, as it uses signals unless *CURLOPT_NOSIGNAL* (see above) is set.

SSL and SECURITY OPTIONS

CURLOPT_SSLCERT

Pass a pointer to a zero terminated string as parameter. The string should be the file name of your certificate. The default format is "PEM" and can be changed with *CURLOPT_SSLCERTTYPE*.

CURLOPT_SSLCERTTYPE

Pass a pointer to a zero terminated string as parameter. The string should be the format of your certificate. Supported formats are "PEM" and "DER". (Added in 7.9.3)

CURLOPT_SSLCERTPASSWD

Pass a pointer to a zero terminated string as parameter. It will be used as the password required to use the *CURLOPT_SSLCERT* certificate. If the password is not supplied, you will be prompted for it. *CURLOPT_PASSWDFUNCTION* can be used to set your own prompt function.

NOTE: This option is replaced by *CURLOPT_SSLKEYPASSWD* and only kept for backward compatibility. You never needed a pass phrase to load a certificate but you need one to load your private key.

CURLOPT_SSLKEY

Pass a pointer to a zero terminated string as parameter. The string should be the file name of your private key. The default format is "PEM" and can be changed with *CURLOPT_SSLKEYTYPE*. (Added in 7.9.3)

CURLOPT_SSLKEYTYPE

Pass a pointer to a zero terminated string as parameter. The string should be the format of your private key. Supported formats are "PEM", "DER" and "ENG". (Added in 7.9.3)

NOTE: The format "ENG" enables you to load the private key from a crypto engine. in this case *CURLOPT_SSLKEY* is used as an identifier passed to the engine. You have to set the crypto engine with *CURLOPT_SSL_ENGINE*.

CURLOPT_SSLKEYPASSWD

Pass a pointer to a zero terminated string as parameter. It will be used as the password required to use the *CURLOPT_SSLKEY* private key. If the password is not supplied, you will be prompted for it.

CURLOPT_PASSWDFUNCTION can be used to set your own prompt function. (Added in 7.9.3)

CURLOPT_SSL_ENGINE

Pass a pointer to a zero terminated string as parameter. It will be used as the identifier for the crypto engine you want to use for your private key. (Added in 7.9.3)

NOTE:If the crypto device cannot be loaded, *CURLE_SSL_ENGINE_NOTFOUND* is returned.

CURLOPT_SSL_ENGINEDEFAULT

Sets the actual crypto engine as the default for (asymmetric) crypto operations. (Added in 7.9.3)

NOTE:If the crypto device cannot be set, *CURLE_SSL_ENGINE_SETFAILED* is returned.

CURLOPT_SSLVERSION

Pass a long as parameter. Set what version of SSL to attempt to use, 2 or 3. By default, the SSL library will try to solve this by itself although some servers make this difficult why you at times may have to use this option.

CURLOPT_SSL_VERIFYPEER

Pass a long that is set to a zero value to stop curl from verifying the peer's certificate (7.10 starting setting this option to TRUE by default). Alternate certificates to verify against can be specified with the *CURLOPT_CAINFO* option (Added in 7.4.2) or a certificate directory can be specified with the *CURLOPT_CAPATH* option (Added in 7.9.8). As of 7.10, curl installs a default bundle. *CURLOPT_SSL_VERIFYHOST* may also need to be set to 1 or 0 if *CURLOPT_SSL_VERIFYPEER* is disabled (it defaults to 2).

CURLOPT_CAINFO

Pass a char * to a zero terminated string naming a file holding one or more certificates to verify the peer with. This only makes sense when used in combination with the *CURLOPT_SSL_VERIFYPEER* option. (Added in 7.4.2)

CURLOPT_CAPATH

Pass a char * to a zero terminated string naming a directory holding multiple CA certificates to verify the peer with. The certificate directory must be prepared using the openssl *c_rehash* utility. This only makes sense when used in combination with the *CURLOPT_SSL_VERIFYPEER* option. The *CAPATH* function apparently does not work in Windows due to some limitation in openssl. (Added in 7.9.8)

CURLOPT_RANDOM_FILE

Pass a char * to a zero terminated file name. The file will be used to read from to seed the random engine for SSL. The more random the specified file is, the more secure the SSL connection will become.

CURLOPT_EGDSOCKET

Pass a char * to the zero terminated path name to the Entropy Gathering Daemon socket. It will be used to seed the random engine for SSL.

CURLOPT_SSL_VERIFYHOST

Pass a long. Set if we should verify the Common name from the peer certificate in the SSL handshake, set 1 to check existence, 2 to ensure that it matches the provided hostname. This is by default set to 2. (Added in 7.8.1, default changed in 7.10)

CURLOPT_SSL_CIPHER_LIST

Pass a char *, pointing to a zero terminated string holding the list of ciphers to use for the SSL connection. The list must be syntactically correct, it consists of one or more cipher strings separated by colons. Commas or spaces are also acceptable separators but colons are normally used, - and + can be used as operators. Valid examples of cipher lists include 'RC4-SHA', 'SHA1+DES', 'TLSv1' and 'DEFAULT'. The default list is normally set when you compile OpenSSL.

You'll find more details about cipher lists on this URL:

<http://www.openssl.org/docs/apps/ciphers.html>

CURLOPT_KRB4LEVEL

Pass a char * as parameter. Set the krb4 security level, this also enables krb4 awareness. This is a string, 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to NULL to disable kerberos4. The kerberos support only works for FTP. (Added in 7.3)

OTHER OPTIONS

CURLOPT_PRIVATE

Pass a char * as parameter, pointing to data that should be associated with the curl handle. The pointer can be subsequently retrieved using the CURLINFO_PRIVATE options to curl_easy_getinfo. (Added in 7.10.3)

RETURN VALUE

CURLE_OK (zero) means that the option was set properly, non-zero means an error occurred as <curl/curl.h> defines. See the *libcurl-errors.3* man page for the full list with descriptions.

SEE ALSO

curl_easy_init(3), curl_easy_cleanup(3),

BUGS

If you find any bugs, or just have questions, subscribe to one of the mailing lists and post. We won't bite.