

Features -- what curl can do

curl tool

- config file support
- multiple URLs in a single command line
- range "globbing" support: [0-13], {one,two,three}
- multiple file upload on a single command line
- custom maximum transfer rate
- redirectable stderr
- metalink support (13)
- parallel transfers

libcurl

- full URL syntax with no length limit
- custom maximum download time
- custom least download speed acceptable
- custom output result after completion
- guesses protocol from host name unless specified
- uses .netrc
- progress bar with time statistics while downloading
- "standard" proxy environment variables support
- compiles on win32 (reported builds on 70+ operating systems)
- selectable network interface for outgoing traffic
- IPv6 support on unix and Windows

- happy eyeballs dual-stack connects
- persistent connections
- SOCKS 4 + 5 support, with or without local name resolving
- supports user name and password in proxy environment variables
- operations through HTTP proxy "tunnel" (using CONNECT)
- replaceable memory functions (malloc, free, realloc, etc)
- asynchronous name resolving (6)
- both a push and a pull style interface
- international domain names (11)

HTTP

- HTTP/0.9 responses are optionally accepted
- HTTP/1.0
- HTTP/1.1
- HTTP/2, including multiplexing and server push (5)
- GET
- PUT
- HEAD
- POST
- multipart formpost (RFC1867-style)
- authentication: Basic, Digest, NTLM (9) and Negotiate (SPNEGO) (3) to server and proxy
- resume (both GET and PUT)
- follow redirects
- maximum amount of redirects to follow

- custom HTTP request
- cookie get/send fully parsed
- reads/writes the netscape cookie file format
- custom headers (replace/remove internally generated headers)
- custom user-agent string
- custom referrer string
- range
- proxy authentication
- time conditions
- via HTTP proxy, HTTPS proxy or SOCKS proxy
- retrieve file modification date
- Content-Encoding support for deflate and gzip
- "Transfer-Encoding: chunked" support in uploads
- automatic data compression (12)

HTTPS (1)

- (all the HTTP features)
- HTTP/3 experimental support
- using client certificates
- verify server certificate
- via HTTP proxy, HTTPS proxy or SOCKS proxy
- select desired encryption
- select usage of a specific SSL version

FTP

- download
- authentication

- Kerberos 5 (14)
- active/passive using PORT, EPRT, PASV or EPSV
- single file size information (compare to HTTP HEAD)
- 'type=' URL support
- dir listing
- dir listing names-only
- upload
- upload append
- upload via http-proxy as HTTP PUT
- download resume
- upload resume
- custom ftp commands (before and/or after the transfer)
- simple "range" support
- via HTTP proxy, HTTPS proxy or SOCKS proxy
- all operations can be tunneled through proxy
- customizable to retrieve file modification date
- no dir depth limit

FTPS (1)

- implicit `ftps://` support that use SSL on both connections
- explicit "AUTH TLS" and "AUTH SSL" usage to "upgrade" plain `ftp://` connection to use SSL for both or one of the connections

SCP (8)

- both password and public key auth

SFTP (7)

- both password and public key auth
- with custom commands sent before/after the transfer

TFTP

- download
- upload

TELNET

- connection negotiation
- custom telnet options
- stdin/stdout I/O

LDAP (2)

- full LDAP URL support

DICT

- extended DICT URL support

FILE

- URL support
- upload

- resume

SMB

- SMBv1 over TCP and SSL
- download
- upload
- authentication with NTLMv1

SMTP

- authentication: Plain, Login, CRAM-MD5, Digest-MD5, NTLM (9), Kerberos 5 (4) and External.
- send e-mails
- mail from support
- mail size support
- mail auth support for trusted server-to-server relaying
- multiple recipients
- via http-proxy

SMTPS (1)

- implicit smtps:// support
- explicit "STARTTLS" usage to "upgrade" plain smtp:// connections to use SSL
- via http-proxy

POP3

- authentication: Clear Text, APOP and SASL
- SASL based authentication: Plain, Login, CRAM-MD5, Digest-MD5, NTLM (9), Kerberos 5 (4) and External.
- list e-mails
- retrieve e-mails
- enhanced command support for: CAPA, DELE, TOP, STAT, UIDL and NOOP via custom requests
- via http-proxy

POP3S (1)

- implicit pop3s:// support
- explicit "STLS" usage to "upgrade" plain pop3://connections to use SSL
- via http-proxy

IMAP

- authentication: Clear Text and SASL
- SASL based authentication: Plain, Login, CRAM-MD5, Digest-MD5, NTLM (9), Kerberos 5 (4) and External.
- list the folders of a mailbox
- select a mailbox with support for verifying the UIDVALIDITY
- fetch e-mails with support for specifying the UID and SECTION
- upload e-mails via the append command

- enhanced command support for: EXAMINE, CREATE, DELETE, RENAME, STATUS, STORE, COPY and UID via custom requests
- via http-proxy

IMAPS (1)

- implicit `imap://` support
- explicit "STARTTLS" usage to "upgrade" plain `imap://` connections to use SSL
- via http-proxy

MQTT

- Subscribe to and publish topics using url scheme `mqtt://broker/topic`

Footnotes

1. requires a TLS library
2. requires OpenLDAP or WinLDAP
3. requires a GSS-API implementation (such as Heimdal or MIT Kerberos) or SSPI (native Windows)
4. requires a GSS-API implementation, however, only Windows SSPI is currently supported
5. requires `nghttp2`
6. requires `c-ares`
7. requires `libssh2`, `libssh` or `wolfSSH`
8. requires `libssh2` or `libssh`

9. requires OpenSSL, GnuTLS, mbedTLS, NSS, yassl, Secure Transport or SSPI (native Windows)
10. -
11. requires libidn2 or Windows
12. requires libz, brotli and/or zstd
13. requires libmetalink, and either an Apple or Microsoft operating system, or OpenSSL, or GnuTLS, or NSS
14. requires a GSS-API implementation (such as Heimdal or MIT Kerberos)