

GitHub - madler/zlib: A massively spiffy yet delicately unobtrusive compression library.

By madler

Archived: 2026-04-05 19:45:58 UTC

ZLIB DATA COMPRESSION LIBRARY

zlib 1.3.2.1 is a general purpose data compression library. All the code is thread safe (though see the FAQ for caveats). The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 at <https://datatracker.ietf.org/doc/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

All functions of the compression library are documented in the file `zlib.h` (volunteer to write man pages welcome, contact `zlib@gzip.org`). A usage example of the library is given in the file `test/example.c` which also tests that the library is working correctly. Another example is given in the file `test/minigzip.c`. The compression library itself is composed of all source files in the root directory.

To compile all files and run the test program, follow the instructions given at the top of `Makefile.in`. In short `./configure; make test`, and if that goes well, `make install` should work for most flavors of Unix. For Windows, use one of the special makefiles in `win32/` or `contrib/vstudio/`. For VMS, use `make_vms.com`.

Questions about zlib should be sent to `<zlib@gzip.org>`, or to Gilles Vollant `<info@winimage.com>` for the Windows DLL version. The zlib home page is <https://zlib.net/>. Before reporting a problem, please check this site to verify that you have the latest version of zlib; otherwise get the latest version and check whether the problem still exists or not.

PLEASE read the zlib FAQ https://zlib.net/zlib_faq.html before asking for help.

Mark Nelson `<markn@ieee.org>` wrote an article about zlib for the Jan. 1997 issue of Dr. Dobb's Journal; a copy of the article is available at <https://zlib.net/nelson/>.

The changes made in version 1.3.2.1 are documented in the file `Changelog`.

Unsupported third party contributions are provided in directory `contrib/`.

zlib is available in Java using the `java.util.zip` package. Follow the API Documentation link at: <https://docs.oracle.com/search/?q=java.util.zip> .

A Perl interface to zlib and bzip2 written by Paul Marquess <pmqs@cpan.org> can be found at <https://github.com/pmqs/IO-Compress> .

A Python interface to zlib written by A.M. Kuchling <amk@amk.ca> is available in Python 1.5 and later versions, see <https://docs.python.org/3/library/zlib.html> .

zlib is built into tcl: <https://wiki.tcl-lang.org/page/zlib> .

An experimental package to read and write files in .zip format, written on top of zlib by Gilles Vollant <info@winimage.com>, is available in the contrib/minizip directory of zlib.

Notes for some targets:

- For Windows DLL versions, please see win32/DLL_FAQ.txt
- For 64-bit Irix, deflate.c must be compiled without any optimization. With -O, one libpng test fails. The test works in 32 bit mode (with the -n32 compiler flag). The compiler bug has been reported to SGI.
- zlib doesn't work with gcc 2.6.3 on a DEC 3000/300LX under OSF/1 2.1 it works when compiled with cc.
- On Digital Unix 4.0D (formerly OSF/1) on AlphaServer, the cc option -std1 is necessary to get gzprintf working correctly. This is done by configure.
- zlib doesn't work on HP-UX 9.05 with some versions of /bin/cc. It works with other compilers. Use "make test" to check your compiler.
- For PalmOs, see <https://palmzlib.sourceforge.net/>

Acknowledgments:

The deflate format used by zlib was defined by Phil Katz. The deflate and zlib specifications were written by L. Peter Deutsch. Thanks to all the people who reported problems and suggested various improvements in zlib; they are too numerous to cite here.

Copyright notice:

(C) 1995-2026 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly	Mark Adler
jloup@gzip.org	madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate *not* receiving lengthy legal documents to sign. The sources are provided for free but without warranty of any kind. The library has been entirely written by Jean-loup Gailly and Mark Adler; it does not include third-party code. We make all contributions to and distributions of this project solely in our personal capacity, and are not conveying any rights to any intellectual property of any third parties.

If you redistribute modified sources, we would appreciate that you include in the file ChangeLog history information documenting your changes. Please read the FAQ for more information on the distribution of modified source versions.