NAME

zlib – compression/decompression library

SYNOPSIS

[see *zlib.h* for full description]

DESCRIPTION

The *zlib* library is a general purpose data compression library. The code is thread safe, assuming that the standard library functions used are thread safe, such as memory allocation routines. It provides in-memory compression and decompression functions, including integrity checks of the uncompressed data. This version of the library supports only one compression method (deflation) but other algorithms may be added later with the same stream interface.

Compression can be done in a single step if the buffers are large enough or can be done by repeated calls of the compression function. In the latter case, the application must provide more input and/or consume the output (providing more output space) before each call.

The library also supports reading and writing files in *gzip*(1) (.gz) format with an interface similar to that of stdio.

The library does not install any signal handler. The decoder checks the consistency of the compressed data, so the library should never crash even in the case of corrupted input.

All functions of the compression library are documented in the file *zlib.h*. The distribution source includes examples of use of the library in the files *test/example.c* and *test/minigzip.c,* as well as other examples in the *examples/* directory.

Changes to this version are documented in the file *ChangeLog* that accompanies the source.

zlib is built in to many languages and operating systems, including but not limited to Java, Python, .NET, PHP, Perl, Ruby, Swift, and Go.

An experimental package to read and write files in the .zip format, written on top of *zlib* by Gilles Vollant (info@winimage.com), is available at:

> https://www.winimage.com/zLibDll/minizip.html and also in the *contrib/minizip* directory of the main *zlib* source distribution.

SEE ALSO

The *zlib* web site can be found at:

> https://zlib.net/

The data format used by the *zlib* library is described by RFC (Request for Comments) 1950 to 1952 at:

> https://datatracker.ietf.org/doc/html/rfc1950 (for the zlib header and trailer format)
> https://datatracker.ietf.org/doc/html/rfc1951 (for the deflate compressed data format)
> https://datatracker.ietf.org/doc/html/rfc1952 (for the gzip header and trailer format)

Mark Nelson 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/

REPORTING PROBLEMS

Before reporting a problem, please check the *zlib* web site to verify that you have the latest version of *zlib*; otherwise, obtain the latest version and see if the problem still exists. Please read the *zlib* FAQ at:

> https://zlib.net/zlib_faq.html

before asking for help. Send questions and/or comments to zlib@gzip.org, or (for the Windows DLL version) to Gilles Vollant (info@winimage.com).

AUTHORS AND LICENSE

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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*; who are too numerous to cite here.

UNIX manual page by R. P. C. Rodgers, U.S. National Library of Medicine (rodgers@nlm.nih.gov).