



# Open Source Used In Cisco DNA Center Virtual Appliance ESXi Launcher 1.0.0

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**In your requests please include the following reference number 78EE117C99-1862461003**

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## 1.2.1 Available under license :

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# 1.3 zlib 1.2.11.dfsg-2ubuntu1.5

## 1.3.1 Available under license :

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```
/* gun.c -- simple gunzip to give an example of the use of inflateBack()
* Copyright (C) 2003, 2005, 2008, 2010, 2012 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
  Version 1.7 12 August 2012 Mark Adler */
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gun.c
```

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```
/* gzclose.c -- zlib gzclose() function
* Copyright (C) 2004, 2010 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzclose.c
```

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MiniZip - Copyright (c) 1998-2010 - by Gilles Vollant - version 1.1 64 bits from Mathias Svensson

Introduction

-----  
MiniZip 1.1 is built from MiniZip 1.0 by Gilles Vollant ( <http://www.winimage.com/zLibDll/minizip.html> )

When adding ZIP64 support into minizip it would result into risk of breaking compatibility with minizip 1.0. All possible work was done for compatibility.

Background

-----  
When adding ZIP64 support Mathias Svensson found that Even Rouault have added ZIP64 support for unzip.c into minizip for a open source project called gdal ( <http://www.gdal.org/> )

That was used as a starting point. And after that ZIP64 support was added to zip.c some refactoring and code cleanup was also done.

Changed from MiniZip 1.0 to MiniZip 1.1

-----  
\* Added ZIP64 support for unzip ( by Even Rouault )  
\* Added ZIP64 support for zip ( by Mathias Svensson

)

- \* Reverted some changes that Even Rouault did.
- \* Bunch of patches received from Gilles Vollant that he received for MiniZip from various users.
- \* Added unzip patch for BZIP Compression method (patch created by Daniel Borca)
- \* Added BZIP Compress method for zip
- \* Did some refactoring and code cleanup

## Credits

Gilles Vollant - Original MiniZip author  
Even Rouault - ZIP64 unzip Support  
Daniel Borca - BZip Compression method support in unzip  
Mathias Svensson - ZIP64 zip support  
Mathias Svensson - BZip Compression method support in zip

## Resources

ZipLayout <http://result42.com/projects/ZipFileLayout>

Command line tool for Windows that shows the layout and information of the headers in a zip archive.  
Used when debugging and validating the creation of zip files using MiniZip64

ZIP App Note <http://www.pkware.com/documents/casestudies/APPNOTE.TXT>  
Zip File specification

## Notes.

- \* To be able to use BZip compression method in zip64.c or unzip64.c the BZIP2 lib is needed and HAVE\_BZIP2 need to be defined.

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not be removed or altered from any source distribution.

-----  
Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/MiniZip64\_info.txt

No license file was found, but licenses were detected in source scan.

/\* compress.c -- compress a memory buffer

\* Copyright (C) 1995-2005, 2014, 2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/compress.c

No license file was found, but licenses were detected in source scan.

/\* zconf.h -- configuration of the zlib compression library

\* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h.in

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zconf.h.cmakein

No license file was found, but licenses were detected in source scan.

/\*

\* gzlog.c

\* Copyright (C) 2004, 2008, 2012, 2016 Mark Adler, all rights reserved

\* For conditions of distribution and use, see copyright notice in gzlog.h

\* version 2.2, 14 Aug 2012

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzlog.c

No license file was found, but licenses were detected in source scan.

/\* deflate.c -- compress data using the deflation algorithm

\* Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/



Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.c

No license file was found, but licenses were detected in source scan.

Not copyrighted -- provided to the public domain

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zlib\_how.html

No license file was found, but licenses were detected in source scan.

/\* zutil.h -- internal interface and configuration of the compression library

\* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.h

No license file was found, but licenses were detected in source scan.

/\* uncompr.c -- decompress a memory buffer

\* Copyright (C) 1995-2003, 2010, 2014, 2016 Jean-loup Gailly, Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/uncompr.c

No license file was found, but licenses were detected in source scan.

# For conditions of distribution and use, see copyright notice in zlib.h

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/msdos/Makefile.emx

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/Makefile.emx

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/msdos/Makefile.dj2

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/old/os2/Makefile.os2

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/\* trees.c -- output deflated data using Huffman coding

\* Copyright (C) 1995-2017 Jean-loup Gailly

\* detect\_data\_type() function provided freely by Cosmin Truta, 2006

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/trees.c

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```
/* gzread.c -- zlib functions for reading gzip files
```

```
* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler
```

```
* For conditions of distribution and use, see copyright notice in zlib.h
```

```
*/
```

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzread.c

No license file was found, but licenses were detected in source scan.

```
/* unzip.c -- IO for uncompress .zip files using zlib
```

```
Version 1.1, February 14h, 2010
```

```
part of the MiniZip project - ( http://www.winimage.com/zLibDll/minizip.html )
```

Copyright (C) 1998-2010 Gilles Vollant (<http://www.winimage.com/zLibDll/minizip.html> )

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

Copyright (C) 2009-2010 Mathias Svensson ( <http://result42.com> )

For more info read MiniZip\_info.txt

-----  
Decryption code comes from crypt.c by Info-ZIP but has been greatly reduced in terms of compatibility with older software. The following is from the original crypt.c.  
Code woven in by Terry Thorsen 1/2003.

Copyright (c) 1990-2000 Info-ZIP. All rights reserved.

See the accompanying

file LICENSE, version 2000-Apr-09 or later

(the contents of which are also included in zip.h) for terms of use.

If, for some reason, all these files are missing, the Info-ZIP license also may be found at: <ftp://ftp.info-zip.org/pub/infozip/license.html>

crypt.c (full version) by Info-ZIP. Last revised: [see crypt.h]

The encryption/decryption parts of this source code (as opposed to the non-echoing password parts) were originally written in Europe. The whole source package can be freely distributed, including from the USA. (Prior to January 2000, re-export from the US was a violation of US law.)

This encryption code is a direct transcription of the algorithm from Roger Schlafly, described by Phil Katz in the file appnote.txt. This file (appnote.txt) is distributed with the PKZIP program (even in the version without encryption capabilities).

-----  
Changes in unzip.c

2007-2008 - Even Rouault - Addition of cpl\_unzGetCurrentFileZStreamPos  
2007-2008 - Even Rouault - Decoration of symbol names unz\* -> cpl\_unz\*  
2007-2008 - Even Rouault - Remove old C style function prototypes  
2007-2008 - Even Rouault - Add unzip support for ZIP64

Copyright (C) 2007-2008 Even Rouault

Oct-2009 - Mathias Svensson - Removed cpl\_\* from symbol names (Even Rouault added them but since this is now moved to a new project (minizip64) I renamed them again).

Oct-2009 - Mathias Svensson - Fixed problem if uncompressed size was > 4G and compressed size was <4G should only read the compressed/uncompressed size from the Zip64 format if the size from normal header was 0xFFFFFFFF

Oct-2009 - Mathias Svensson - Applied some bug fixes from patches received from Gilles Vollant

Oct-2009 - Mathias Svensson - Applied support to unzip files with compression method BZIP2 (bzip2 lib is required)

Patch created by Daniel Borca

Jan-2010 - back to unzip and minizip 1.0 name scheme, with compatibility layer

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\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.c

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/\* example.c -- usage example of the zlib compression library

\* Copyright (C) 1995-2006, 2011, 2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/example.c

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

\*/

No license file was found, but licenses were detected in source scan.

/\* gzwrite.c -- zlib functions for writing gzip files  
\* Copyright (C) 2004-2017 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzwrite.c  
No license file was found, but licenses were detected in source scan.

/\* Adler32.c -- compute the Adler-32 checksum of a data stream  
\* Copyright (C) 1995-2011, 2016 Mark Adler  
\* For conditions of distribution and use, see copyright notice in zlib.h  
\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/adler32.c

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## Frequently Asked Questions about zlib

If your question is not there, please check the zlib home page

<http://zlib.net/> which may have more recent information.

The latest zlib FAQ is at [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html)

### 1. Is zlib Y2K-compliant?

Yes. zlib doesn't handle dates.

### 2. Where can I get a Windows DLL version?

The zlib sources can be compiled without change to produce a DLL. See the file `win32/DLL_FAQ.txt` in the zlib distribution. Pointers to the precompiled DLL are found in the zlib web site at <http://zlib.net/>.

### 3. Where can I get a Visual Basic interface to zlib?

See

\* <http://marknelson.us/1997/01/01/zlib-engine/>

\* `win32/DLL_FAQ.txt` in the zlib distribution

### 4. `compress()` returns `Z_BUF_ERROR`.

Make sure that before the call of `compress()`, the length of the compressed buffer is equal to the available size of the compressed buffer and not zero. For Visual

Basic, check that this parameter is passed by reference ("as any"), not by value ("as long").

### 5. `deflate()` or `inflate()` returns `Z_BUF_ERROR`.

Before making the call, make sure that `avail_in` and `avail_out` are not zero. When setting the parameter `flush` equal to `Z_FINISH`, also make sure that `avail_out` is big enough to allow processing all pending input. Note that a `Z_BUF_ERROR` is not fatal--another call to `deflate()` or `inflate()` can be made with more input or output space. A `Z_BUF_ERROR` may in fact be unavoidable depending on how the functions are used, since it is not possible to tell whether or not there is more output pending when `strm.avail_out` returns with zero. See [http://zlib.net/zlib\\_how.html](http://zlib.net/zlib_how.html) for a heavily annotated example.

### 6. Where's the zlib documentation (man pages, etc.)?

It's in zlib.h . Examples of zlib usage are in the files test/example.c and test/minigzip.c, with more in examples/ .

7. Why don't you use GNU autoconf or libtool or ...?

Because we would like to keep zlib as a very small and simple package. zlib is rather portable and doesn't need much configuration.

8. I found a bug in zlib.

Most of the time, such problems are due to an incorrect usage of zlib. Please try to reproduce the problem with a small program and send the corresponding source to us at [zlib@gzip.org](mailto:zlib@gzip.org) . Do not send multi-megabyte data files without prior agreement.

9. Why do I get "undefined reference to gzputc"?

If "make test" produces something like

```
example.o(.text+0x154): undefined reference to `gzputc'
```

check that you don't have old files libz.\* in /usr/lib, /usr/local/lib or /usr/X11R6/lib. Remove any old versions, then do "make install".

10. I need a Delphi interface to zlib.

See the contrib/delphi directory in the zlib distribution.

11. Can zlib handle .zip archives?

Not by itself, no. See the directory contrib/minizip in the zlib distribution.

12.

Can zlib handle .Z files?

No, sorry. You have to spawn an uncompress or gunzip subprocess, or adapt the code of uncompress on your own.

13. How can I make a Unix shared library?

By default a shared (and a static) library is built for Unix. So:

```
make distclean
./configure
make
```

14. How do I install a shared zlib library on Unix?

After the above, then:

```
make install
```

However, many flavors of Unix come with a shared zlib already installed. Before going to the trouble of compiling a shared version of zlib and trying to install it, you may want to check if it's already there! If you can `#include <zlib.h>`, it's there. The `-lz` option will probably link to it. You can check the version at the top of `zlib.h` or with the `ZLIB_VERSION` symbol defined in `zlib.h`.

15. I have a question about OttoPDF.

We are not the authors of OttoPDF. The real author is on the OttoPDF web site: Joel Hainley, [jhainley@myndkryme.com](mailto:jhainley@myndkryme.com).

16.

Can zlib decode Flate data in an Adobe PDF file?

Yes. See <http://www.pdflib.com/>. To modify PDF forms, see <http://sourceforge.net/projects/acroformtool/>.

17. Why am I getting this "register\_frame\_info not found" error on Solaris?

After installing zlib 1.1.4 on Solaris 2.6, running applications using zlib generates an error such as:

```
ld.so.1: rpm: fatal: relocation error: file /usr/local/lib/libz.so:
symbol __register_frame_info: referenced symbol not found
```

The symbol `__register_frame_info` is not part of zlib, it is generated by the C compiler (`cc` or `gcc`). You must recompile applications using zlib which have this problem. This problem is specific to Solaris. See <http://www.sunfreeware.com> for Solaris versions of zlib and applications using zlib.

18. Why does gzip give an error on a file I make with compress/deflate?

The `compress` and `deflate` functions produce data in the zlib format, which is different and incompatible with the `gzip` format. The `gz*` functions in zlib on the other hand use the `gzip` format. Both the zlib and `gzip` formats use the same compressed data format internally, but have different headers and trailers around the compressed data.

19. Ok, so why are there two different formats?

The gzip format was designed to retain the directory information about a single file, such as the name and last modification date. The zlib format on the other hand was designed for in-memory and communication channel applications, and has a much more compact header and trailer and uses a faster integrity check than gzip.

20. Well that's nice, but how do I make a gzip file in memory?

You can request that deflate write the gzip format instead of the zlib format using `deflateInit2()`. You can also request that inflate decode the gzip format using `inflateInit2()`. Read `zlib.h` for more details.

21. Is zlib thread-safe?

Yes. However any library routines that zlib uses and any application-provided memory allocation routines must also be thread-safe. zlib's `gz*` functions use `stdio` library routines, and most of zlib's functions use the library memory allocation routines by default. zlib's `*Init*` functions allow for the application to provide custom memory allocation routines.

Of course, you should only operate on any given zlib or gzip stream from a single thread at a time.

22. Can I use zlib in my commercial application?

Yes. Please read the license in `zlib.h`.

23. Is zlib under the GNU license?

No. Please read the license in `zlib.h`.

24. The license says that altered source versions must be "plainly marked". So what exactly do I need to do to meet that requirement?

You need to change the `ZLIB_VERSION` and `ZLIB_VERNUM` #defines in `zlib.h`. In particular, the final version number needs to be changed to "f", and an identification string should be appended to `ZLIB_VERSION`. Version numbers `x.x.x.f` are reserved for modifications to zlib by others than the zlib maintainers. For example, if the version of the base zlib you are altering is "1.2.3.4", then in `zlib.h` you should change `ZLIB_VERNUM` to `0x123f`, and `ZLIB_VERSION` to something like "1.2.3.f-zachary-mods-v3". You can also update the version strings in `deflate.c` and `inftrees.c`.

For altered source distributions, you should also note the origin and nature of the changes in `zlib.h`, as well as in `ChangeLog` and `README`, along



with the dates of the alterations. The origin should include at least your name (or your company's name), and an email address to contact for help or issues with the library.

Note that distributing a compiled zlib library along with `zlib.h` and `zconf.h` is also a source distribution, and so you should change `ZLIB_VERSION` and `ZLIB_VERNUM` and note the origin and nature of the changes in `zlib.h` as you would for a full source distribution.

25.

Will zlib work on a big-endian or little-endian architecture, and can I exchange compressed data between them?

Yes and yes.

26. Will zlib work on a 64-bit machine?

Yes. It has been tested on 64-bit machines, and has no dependence on any data types being limited to 32-bits in length. If you have any difficulties, please provide a complete problem report to [zlib@gzip.org](mailto:zlib@gzip.org)

27. Will zlib decompress data from the PKWare Data Compression Library?

No. The PKWare DCL uses a completely different compressed data format than does PKZIP and zlib. However, you can look in zlib's `contrib/blast` directory for a possible solution to your problem.

28. Can I access data randomly in a compressed stream?

No, not without some preparation. If when compressing you periodically use `Z_FULL_FLUSH`, carefully write all the pending data at those points, and keep an index of those locations, then you can start decompression at those points. You have to be careful to not use `Z_FULL_FLUSH` too often, since it can significantly degrade compression. Alternatively, you can scan a deflate stream once to generate an index, and then use that index for random access. See `examples/zran.c`.

29. Does zlib work on MVS, OS/390, CICS, etc.?

It has in the past, but we have not heard of any recent evidence. There were working ports of zlib 1.1.4 to MVS, but those links no longer work. If you know of recent, successful applications of zlib on these operating systems, please let us know. Thanks.

30. Is there some simpler, easier to read version of inflate I can look at to understand the deflate format?

First off, you should read RFC 1951. Second, yes. Look in zlib's contrib/puff directory.

31. Does zlib infringe on any patents?

As far as we know, no. In fact, that was originally the whole point behind zlib. Look here for some more information:

<http://www.gzip.org/#faq11>

32. Can zlib work with greater than 4 GB of data?

Yes. inflate() and deflate() will process any amount of data correctly. Each call of inflate() or deflate() is limited to input and output chunks of the maximum value that can be stored in the compiler's "unsigned int" type, but there is no limit to the number of chunks. Note however that the strm.total\_in and strm\_total\_out counters may be limited to 4 GB. These counters are provided as a convenience and are not used internally by inflate() or deflate(). The application can easily set up its own counters updated after each call of inflate() or deflate() to count beyond 4 GB. compress() and uncompress() may be limited to 4 GB, since they operate in a single call. gzseek() and gztell() may be limited to 4 GB depending on how zlib is compiled. See the zlibCompileFlags() function in zlib.h.

The word "may" appears several times above since there is a 4 GB limit only if the compiler's "long" type is 32 bits. If the compiler's "long" type is 64 bits, then the limit is 16 exabytes.

33. Does zlib have any security vulnerabilities?

The only one that we are aware of is potentially in gzprintf(). If zlib is compiled to use sprintf() or vsprintf(), then there is no protection against a buffer overflow of an 8K string space (or other value as set by gzbuffer()), other than the caller of gzprintf() assuring that the output will not exceed 8K. On the other hand, if zlib is compiled to use snprintf() or vsnprintf(), which should normally be the case, then there is no vulnerability. The ./configure script will display warnings if an insecure variation of sprintf() will be used by gzprintf(). Also the zlibCompileFlags() function will return information on what variant of sprintf() is used by gzprintf().

If you don't have snprintf() or vsnprintf() and would like one, you can find a portable implementation here:

<http://www.ijs.si/software/snprintf/>

Note that you should be using the most recent version of zlib. Versions 1.1.3 and before were subject to a double-free vulnerability, and versions 1.2.1 and 1.2.2 were subject to an access exception when decompressing invalid compressed data.

34. Is there a Java version of zlib?

Probably what you want is to use zlib in Java. zlib is already included as part of the Java SDK in the `java.util.zip` package. If you really want a version of zlib written in the Java language, look on the zlib home page for links: <http://zlib.net/>.

35. I get this or that compiler or source-code scanner warning when I crank it up to maximally-pedantic. Can't you guys write proper code?

Many years ago, we gave up attempting to avoid warnings on every compiler in the universe. It just got to be a waste of time, and some compilers were downright silly as well as contradicted each other. So now, we simply make sure that the code always works.

36. Valgrind (or some similar memory access checker) says that deflate is performing a conditional jump that depends on an uninitialized value. Isn't that a bug?

No. That is intentional for performance reasons, and the output of deflate is not affected. This only started showing up recently since zlib 1.2.x uses `malloc()` by default for allocations, whereas earlier versions used `calloc()`, which zeros out the allocated memory. Even though the code was correct, versions 1.2.4 and later was changed to not stimulate these checkers.

37. Will zlib read the (insert any ancient or arcane format here) compressed data format?

Probably not. Look in the `comp.compression` FAQ for pointers to various formats and associated software.

38. How can I encrypt/decrypt zip files with zlib?

zlib doesn't support encryption. The original PKZIP encryption is very weak and can be broken with freely available programs. To get strong encryption, use GnuPG, <http://www.gnupg.org/>, which already includes zlib compression. For PKZIP compatible "encryption", look at <http://www.info-zip.org/>

39. What's the difference between the "gzip" and "deflate" HTTP 1.1 encodings?

"gzip" is the gzip format, and "deflate" is the zlib format. They should probably have called the second one "zlib" instead to avoid confusion with the raw deflate compressed data format. While the HTTP 1.1 RFC 2616 correctly points to the zlib specification in RFC 1950 for the "deflate" transfer encoding, there have been reports of servers and browsers that incorrectly produce or expect raw deflate data per the deflate specification in RFC 1951, most notably Microsoft. So even though the "deflate" transfer encoding using the zlib format would be the more efficient approach (and in fact exactly what the zlib format was designed for), using the "gzip" transfer encoding is probably more reliable due to an unfortunate choice of name on the part of the HTTP 1.1 authors.

Bottom line: use the gzip format for HTTP 1.1 encoding.

40. Does zlib support the new "Deflate64" format introduced by PKWare?

No. PKWare has apparently decided to keep that format proprietary, since they have not documented it as they have previous compression formats. In any case, the compression improvements are so modest compared to other more modern approaches, that it's not worth the effort to implement.

41. I'm having a problem with the zip functions in zlib, can you help?

There are no zip functions in zlib. You are probably using minizip by Giles Vollant, which is found in the contrib directory of zlib. It is not part of zlib. In fact none of the stuff in contrib is part of zlib. The files in there are not supported by the zlib authors. You need to contact the authors of the respective contribution for help.

42. The match.asm code in contrib is under the GNU General Public License.

Since it's part of zlib, doesn't that mean that all of zlib falls under the GNU GPL?

No. The files in contrib are not part of zlib. They were contributed by other authors and are provided as a convenience to the user within the zlib distribution. Each item in contrib has its own license.

43. Is zlib subject to export controls? What is its ECCN?

zlib is not subject to export controls, and so is classified as EAR99.

44. Can you please sign these lengthy legal documents and fax them back to us so that we can use your software in our product?

No. Go away. Shoo.

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/FAQ

No license file was found, but licenses were detected in source scan.

/\* inftrees.h -- header to use inftrees.c

\* Copyright (C) 1995-2005, 2010 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/infrees.h

No license file was found, but licenses were detected in source scan.

/\* gzappend -- command to append to a gzip file

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version 1.2, 11 Oct 2012

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\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzappend.c

No license file was found, but licenses were detected in source scan.

/\* deflate.h -- internal compression state

\* Copyright (C) 1995-2016 Jean-loup Gailly

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/deflate.h

No license file was found, but licenses were detected in source scan.

/\*

Additional tools for Minizip

Code: Xavier Roche '2004

License: Same as ZLIB ([www.gzip.org](http://www.gzip.org))

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.h

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/mztools.c

No license file was found, but licenses were detected in source scan.

/\* unzip.h -- IO for uncompress .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - (<http://www.winimage.com/zLibDll/minizip.html>)

Copyright (C) 1998-2010 Gilles Vollant (<http://www.winimage.com/zLibDll/minizip.html>)

Modifications of Unzip for Zip64

Copyright (C) 2007-2008 Even Rouault

Modifications for Zip64 support on both zip and unzip

Copyright (C) 2009-2010 Mathias Svensson (<http://result42.com>)

For more info read MiniZip\_info.txt

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#### Changes

See header of unzip64.c

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/unzip.h

No license file was found, but licenses were detected in source scan.

/\* gzjoin -- command to join gzip files into one gzip file

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version 1.2, 14 Aug 2012

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\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/gzjoin.c

No license file was found, but licenses were detected in source scan.

```
/* crc32.c -- compute the CRC-32 of a data stream
* Copyright (C) 1995-2006, 2010, 2011, 2012, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*
* Thanks to Rodney Brown <rbrown64@csc.com.au> for his contribution of faster
* CRC methods: exclusive-oring 32 bits of data at a time, and pre-computing
* tables for updating the shift register in one step with three exclusive-ors
* instead of four steps with four exclusive-ors. This results in about a
* factor of two increase in speed on a Power PC G4 (PPC7455) using gcc -O3.
*/
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/crc32.c
No license file was found, but licenses were detected in source scan.
```

```
/* inffast.c -- fast decoding
* Copyright (C) 1995-2017 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.c
No license file was found, but licenses were detected in source scan.
```

```
/* zutil.c -- target dependent utility functions for the compression library
* Copyright (C) 1995-2017 Jean-loup Gailly
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zutil.c
No license file was found, but licenses were detected in source scan.
```

```
/* inflate.h -- internal inflate state definition
* Copyright (C) 1995-2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inflate.h
No license file was found, but licenses were detected in source scan.
```

```
/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017
```

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jloup@gzip.org      madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), [rfc1951](http://tools.ietf.org/html/rfc1951) (deflate format) and [rfc1952](http://tools.ietf.org/html/rfc1952) (gzip format).

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zlib.h

No license file was found, but licenses were detected in source scan.

/\* gzguts.h -- zlib internal header definitions for gz\* operations

\* Copyright (C) 2004, 2005, 2010, 2011, 2012, 2013, 2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/gzguts.h

No license file was found, but licenses were detected in source scan.

/\* zip.h -- IO on .zip files using zlib

Version 1.1, February 14h, 2010

part of the MiniZip project - ( <http://www.winimage.com/zLibDll/minizip.html> )

Copyright (C) 1998-2010 Gilles Vollant ( <http://www.winimage.com/zLibDll/minizip.html> )

Modifications for Zip64 support

Copyright (C) 2009-2010 Mathias Svensson ( <http://result42.com> )

For more info read MiniZip\_info.txt

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-----  
Changes

See header of zip.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/contrib/minizip/zip.h

No license file was found, but licenses were detected in source scan.

/\* infrees.c -- generate Huffman trees for efficient decoding

\* Copyright (C) 1995-2017 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/infrees.c

No license file was found, but licenses were detected in source scan.

/\* inflate.c -- zlib decompression

\* Copyright (C) 1995-2016 Mark Adler

\* For conditions of distribution and use, see copyright notice in zlib.h

\*/

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inflate.c
```

No license file was found, but licenses were detected in source scan.

```
/* zpipe.c: example of proper use of zlib's inflate() and deflate()
```

```
Not copyrighted -- provided to the public domain
```

```
Version 1.4 11 December 2005 Mark Adler */
```

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-
```

```
1.2.11.dfsg/examples/zpipe.c
```

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## ZLIB DATA COMPRESSION LIBRARY

zlib 1.2.11 is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), [rfc1951](http://tools.ietf.org/html/rfc1951) (deflate format) and [rfc1952](http://tools.ietf.org/html/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](mailto: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>](mailto:zlib@gzip.org), or to Gilles Vollant [<info@winimage.com>](mailto:info@winimage.com) for the Windows DLL version. The zlib home page is <http://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 [http://zlib.net/zlib\\_faq.html](http://zlib.net/zlib_faq.html) before asking for help.

Mark Nelson [<markn@ieee.org>](mailto:markn@ieee.org) wrote an article about zlib for the Jan. 1997 issue of Dr. Dobbs's Journal; a copy of the article is available at <http://marknelson.us/1997/01/01/zlib-engine/>.

The changes made in version 1.2.11 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, documented at <http://java.sun.com/developer/technicalArticles/Programming/compression/>

.

A Perl interface to zlib written by Paul Marquess <pmqs@cpan.org> is available at CPAN (Comprehensive Perl Archive Network) sites, including <http://search.cpan.org/~pmqs/IO-Compress-Zlib/> .

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

zlib is built into tcl: <http://wiki.tcl.tk/4610> .

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 (formely 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.
- gzdopen is not supported on RISCOS or BEOS.
- For PalmOs, see <http://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.

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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.

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.

Found in path(s):

```
* /opt/cola/permits/1445162814_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/README
No license file was found, but licenses were detected in source scan.
```

```
/* minigzip.c -- simulate gzip using the zlib compression library
* Copyright (C) 1995-2006, 2010, 2011, 2016 Jean-loup Gailly
* For conditions of distribution and use, see copyright notice in zlib.h
*/
```

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/minigzip.c

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\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/zlib.3

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/\* inffast.h -- header to use inffast.c

\* Copyright (C) 1995-2003, 2010 Mark Adler

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\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/inffast.h

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/\* zran.c -- example of zlib/gzip stream indexing and random access

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Version 1.1 29 Sep 2012 Mark Adler \*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/examples/zran.c

No license file was found, but licenses were detected in source scan.

/\* inffback.c -- inflate using a call-back interface

\* Copyright (C) 1995-2016 Mark Adler

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Found in path(s):

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/\* gzlog.h

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Mark Adler madler@alumni.caltech.edu

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/\* fitblk.c: example of fitting compressed output to a specified size

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Found in path(s):

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/\* gzlib.c -- zlib functions common to reading and writing gzip files

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\*/

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/\* infcover.c -- test zlib's inflate routines with full code coverage

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\*/

Found in path(s):

\* /opt/cola/permits/1445162814\_1666092919.423293/0/zlib-1-2-11-dfsg-orig-2-tar-gz/zlib-1.2.11.dfsg/test/infcover.c

# 1.4 zlib 1.2.13

## 1.4.1 Available under license :

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jloup@gzip.org      madler@alumni.caltech.edu

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# 1.5 xz 5.2.9-0.0

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=====  
getopt, getopt\_long, and getopt\_long\_only  
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=====  
gdtoa: Converting between IEEE floating point numbers and ASCII  
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## 1.6 python 3.11.6

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
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2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
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```
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This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

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```
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program `Gnomovision' (a program to direct compilers to make passes
at assemblers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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#### A. HISTORY OF THE SOFTWARE

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Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <https://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All

Python releases are Open Source (see <https://opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no



1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now		
PSF	yes			

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(2) According to Richard Stallman, 1.6.1 is not GPL-compatible, because its license has a choice of law clause. According to CNRI, however, Stallman's lawyer has told CNRI's lawyer that 1.6.1 is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under Guido's direction to make these releases possible.

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