Package 'libdeflate'

May 7, 2025

Type Package Title DEFLATE Compression Static Library and Headers Version 1.23.0 Description Provides the 'libdeflate' static library	• • • • • • • • • • • • • • • • • • • •
Version 1.23.0 Description Provides the 'libdeflate' static library	Type Package
Description Provides the 'libdeflate' static library	Title DEFLATE Compression Static Library and Headers
(see https://github.com/ebiggers/libdeflate) and 'C' headers for whole-buffer DEFLATE-based compression and decompression, along with an R interface for compressing and decompressing raw vectors. Depends R (>= 3.5.0) License MIT + file LICENSE Encoding UTF-8 SystemRequirements GNU make, CMake RoxygenNote 7.3.2 Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	Version 1.23.0
License MIT + file LICENSE Encoding UTF-8 SystemRequirements GNU make, CMake RoxygenNote 7.3.2 Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	(see https://github.com/ebiggers/libdeflate) and 'C' headers for whole-buffer DEFLATE-based compression and decompression, along with
Encoding UTF-8 SystemRequirements GNU make, CMake RoxygenNote 7.3.2 Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	Depends R (>= $3.5.0$)
SystemRequirements GNU make, CMake RoxygenNote 7.3.2 Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	License MIT + file LICENSE
RoxygenNote 7.3.2 Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	Encoding UTF-8
Config/build/compilation-database true BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	SystemRequirements GNU make, CMake
BugReports https://github.com/tylermorganwall/libdeflate/issues NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	RoxygenNote 7.3.2
NeedsCompilation yes Author Tyler Morgan-Wall [aut, cre] (ORCID:	Config/build/compilation-database true
Author Tyler Morgan-Wall [aut, cre] (ORCID:	<pre>BugReports https://github.com/tylermorganwall/libdeflate/issues</pre>
<hr/> <https: 0000-0002-3131-3814="" orcid.org="">), Eric Biggers [aut, cph], Google LLC [cph], Kevin Ushey [cph] Kevin Ushey [cph] Maintainer Tyler Morgan-Wall <tylermw@gmail.com> Repository CRAN Date/Publication 2025-05-07 13:50:02 UTC Contents 2 alloc_compressor 2 alloc_decompressor 2 deflate_compress 3 deflate_decompress 3 deflate_decompress 3</tylermw@gmail.com></https:>	NeedsCompilation yes
Repository CRAN Date/Publication 2025-05-07 13:50:02 UTC Contents alloc_compressor 2 alloc_decompressor 2 deflate_compress 3 deflate_decompress 3	https://orcid.org/0000-0002-3131-3814), Eric Biggers [aut, cph], Google LLC [cph],
Date/Publication 2025-05-07 13:50:02 UTC Contents 2 alloc_compressor 2 alloc_decompressor 2 deflate_compress 3 deflate_decompress 3 3 3	Maintainer Tyler Morgan-Wall <tylermw@gmail.com></tylermw@gmail.com>
Contentsalloc_compressor2alloc_decompressor2deflate_compress3deflate_decompress3	Repository CRAN
alloc_compressor2alloc_decompressor2deflate_compress3deflate_decompress3	Date/Publication 2025-05-07 13:50:02 UTC
alloc_compressor2alloc_decompressor2deflate_compress3deflate_decompress3	
alloc_decompressor2deflate_compress3deflate_decompress3	Contents
Index	alloc_decompressor 2 deflate_compress 3
inuex 5	Index 5

2 alloc_decompressor

alloc_compressor

Allocate a libdeflate compressor

Description

Create a new libdeflate compressor at the specified compression level.

Usage

```
alloc_compressor(level = 6L)
```

Arguments

level

Default '6L'. Integer in [0, 12] giving the compression level (0 = no compression, 1 = fastest, 6 = default, 12 = slowest).

Value

An external pointer ('externalptr') to a libdeflate compressor.

Examples

```
# allocate a compressor and compress a simple string
cmp = alloc_compressor()
raw_in = charToRaw("Example data")
raw_cmp = deflate_compress(cmp, raw_in)
stopifnot(is.raw(raw_cmp))
```

alloc_decompressor

Allocate a libdeflate decompressor

Description

Create a new libdeflate decompressor for raw DEFLATE streams.

Usage

```
alloc_decompressor()
```

Value

An external pointer ('externalptr') to a libdeflate decompressor.

Examples

```
dcmp = alloc_decompressor()
stopifnot(inherits(dcmp, "externalptr"))
```

deflate_compress 3

deflate_compress

Compress a raw vector with libdeflate

Description

Compress the given raw vector using the specified libdeflate compressor.

Usage

```
deflate_compress(compressor, input)
```

Arguments

compressor An external pointer created by 'alloc_compressor()'.

input A raw vector (or object coercible to raw) containing the data to compress.

Value

A raw vector containing the DEFLATE-compressed output.

Examples

```
# Low compression values might not compress at all
cmp = alloc_compressor(1L)
raw_in = charToRaw("Fast compression test: 1231231231231231")
raw_cmp_1 = deflate_compress(cmp, raw_in)
print(sprintf("Length in: %i Length out: %i", length(raw_in), length(raw_cmp_1) ))
# Max compression is 12
cmp = alloc_compressor(12L)
raw_cmp_12 = deflate_compress(cmp, raw_in)
print(sprintf("Length in: %i Length out: %i", length(raw_in), length(raw_cmp_12) ))
```

deflate_decompress

Decompress a raw vector with libdeflate

Description

Decompress a raw DEFLATE stream to its original length.

Usage

```
deflate_decompress(decompressor, input, out_len)
```

4 deflate_decompress

Arguments

decompressor An external pointer created by 'alloc_decompressor()'.

input A raw vector containing the compressed DEFLATE stream.

out_len Integer giving the expected uncompressed length (in bytes).

Value

A raw vector of length 'out_len' containing the decompressed data.

Examples

```
# round-trip example
msg = "Round-trip test: 123123123123"
raw_in = charToRaw(msg)
cmp = alloc_compressor(12L)
raw_cmp = deflate_compress(cmp, raw_in)
dcmp = alloc_decompressor()
raw_out = deflate_decompress(dcmp, raw_cmp, length(raw_in))
stopifnot(identical(raw_out, raw_in))
```

Index

```
alloc_compressor, 2
alloc_decompressor, 2
deflate_compress, 3
deflate_decompress, 3
```