Package 'libdeflate'

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Type Package

Title DEFLATE Compression Static Library and Headers

Version 1.23.0

Description Provides the 'libdeflate' static library
(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)

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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:
<https://orcid.org/0000-0002-3131-3814>),
Eric Biggers [aut, cph],
Google LLC [cph],
Kevin Ushey [cph]

Maintainer Tyler Morgan-Wall <tylermw@gmail.com>

Repository CRAN

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Contents

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 *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)
```

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))
```

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