

# Package ‘zip’

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**Title** Cross-Platform 'zip' Compression

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**Description** Cross-Platform 'zip' Compression Library. A replacement for the 'zip' function, that does not require any additional external tools on any platform.

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**URL** <https://github.com/r-lib/zip#readme>

**BugReports** <https://github.com/r-lib/zip/issues>

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`unzip`*Uncompress 'zip' Archives*

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### Description

`unzip()` always restores modification times of the extracted files and directories.

### Usage

```
unzip(zipfile, files = NULL, overwrite = TRUE, junkpaths = FALSE, exdir = ".")
```

### Arguments

<code>zipfile</code>	Path to the zip file to uncompress.
<code>files</code>	Character vector of files to extract from the archive. Files within directories can be specified, but they must use a forward slash as path separator, as this is what zip files use internally. If <code>NULL</code> , all files will be extracted.
<code>overwrite</code>	Whether to overwrite existing files. If <code>FALSE</code> and a file already exists, then an error is thrown.
<code>junkpaths</code>	Whether to ignore all directory paths when creating files. If <code>TRUE</code> , all files will be created in <code>exdir</code> .
<code>exdir</code>	Directory to uncompress the archive to. If it does not exist, it will be created.

### Permissions

If the zip archive stores permissions and was created on Unix, the permissions will be restored.

### Examples

```
## temporary directory, to avoid messing up the user's workspace.
dir.create(tmp <- tempfile())
dir.create(file.path(tmp, "mydir"))
cat("first file", file = file.path(tmp, "mydir", "file1"))
cat("second file", file = file.path(tmp, "mydir", "file2"))

zipfile <- tempfile(fileext = ".zip")
zip::zip(zipfile, "mydir", root = tmp)

## List contents
zip_list(zipfile)

## Extract
tmp2 <- tempfile()
unzip(zipfile, exdir = tmp2)
dir(tmp2, recursive = TRUE)
```

---

`unzip_process`*Class for an external unzip process*

---

## Description

`unzip_process()` returns an R6 class that represents an unzip process. It is implemented as a subclass of [processx::process](#).

## Usage

```
unzip_process()
```

## Value

An `unzip_process` R6 class object, a subclass of [processx::process](#).

## Using the `unzip_process` class

```
up <- unzip_process()$new(zipfile, exdir = ".", poll_connection = TRUE,  
                          stderr = tempfile(), ...)
```

See [processx::process](#) for the class methods.

Arguments:

- `zipfile`: Path to the zip file to uncompress.
- `exdir`: Directory to uncompress the archive to. If it does not exist, it will be created.
- `poll_connection`: passed to the `initialize` method of [processx::process](#), it allows using [processx::poll\(\)](#) or the `poll_io()` method to poll for the completion of the process.
- `stderr`: passed to the `initialize` method of [processx::process](#), by default the standard error is written to a temporary file. This file can be used to diagnose errors if the process failed.
- ... passed to the `initialize` method of [processx::process](#).

## Examples

```
ex <- system.file("example.zip", package = "zip")  
tmp <- tempfile()  
up <- unzip_process()$new(ex, exdir = tmp)  
up$wait()  
up$get_exit_status()  
dir(tmp)
```

---

zip *Compress Files into 'zip' Archives*

---

**Description**

zip() creates a new zip archive file.

**Usage**

```
zip(  
  zipfile,  
  files,  
  recurse = TRUE,  
  compression_level = 9,  
  include_directories = TRUE,  
  root = ".",  
  mode = c("mirror", "cherry-pick")  
)
```

```
zipr(  
  zipfile,  
  files,  
  recurse = TRUE,  
  compression_level = 9,  
  include_directories = TRUE,  
  root = ".",  
  mode = c("cherry-pick", "mirror")  
)
```

```
zip_append(  
  zipfile,  
  files,  
  recurse = TRUE,  
  compression_level = 9,  
  include_directories = TRUE,  
  root = ".",  
  mode = c("mirror", "cherry-pick")  
)
```

```
zipr_append(  
  zipfile,  
  files,  
  recurse = TRUE,  
  compression_level = 9,  
  include_directories = TRUE,  
  root = ".",  
  mode = c("cherry-pick", "mirror")  
)
```

)

**Arguments**

zipfile	The zip file to create. If the file exists, zip overwrites it, but zip_append appends to it.
files	List of file to add to the archive. See details below about absolute and relative path names.
recurse	Whether to add the contents of directories recursively.
compression_level	A number between 1 and 9. 9 compresses best, but it also takes the longest.
include_directories	Whether to explicitly include directories in the archive. Including directories might confuse MS Office when reading docx files, so set this to FALSE for creating them.
root	Change to this working directory before creating the archive.
mode	Selects how files and directories are stored in the archive. It can be "mirror" or "cherry-pick". See "Relative Paths" below for details.

**Details**

zip\_append() appends compressed files to an existing 'zip' file.

**Relative paths:**

zip() and zip\_append() can run in two different modes: mirror mode and cherry picking mode. They handle the specified files differently.

*Mirror mode:*

Mirror mode is for creating the zip archive of a directory structure, exactly as it is on the disk. The current working directory will be the root of the archive, and the paths will be fully kept. zip changes the current directory to root before creating the archive.

(Absolute paths are also kept. Note that this might result non-portable archives: some zip tools do not handle zip archives that contain absolute file names, or file names that start with ../ or ../. zip warns you if this should happen.)

E.g. consider the following directory structure:

```

.
|-- foo
|   |-- bar
|   |   |-- file1
|   |   |-- file2
|   |-- bar2
|-- foo2
    |-- file3

```

Assuming the current working directory is foo, the following zip entries are created by zip:

```

setwd("foo")
zip::zip("../test.zip", c("bar/file1", "bar2", "../foo2"))
#> Warning in warn_for_dotdot(data$key): Some paths reference parent directory,
#> creating non-portable zip file

```

```
zip_list("../test.zip")[, "filename", drop = FALSE]
#>      filename
#> 1    bar/file1
#> 2      bar2/
#> 3    ../foo2/
#> 4 ../foo2/file3
```

#### *Cherry picking mode:*

In cherry picking mode, the selected files and directories will be at the root of the archive. This mode is handy if you want to select a subset of files and directories, possibly from different paths and put all of the in the archive, at the top level.

Here is an example with the same directory structure as above:

```
zip::zip(
  "../test2.zip",
  c("bar/file1", "bar2", "../foo2"),
  mode = "cherry-pick"
)
zip_list("../test2.zip")[, "filename", drop = FALSE]
#>      filename
#> 1      file1
#> 2     bar2/
#> 3     foo2/
#> 4 foo2/file3
```

#### **Permissions::**

`zip()` (and `zip_append()`, etc.) add the permissions of the archived files and directories to the ZIP archive, on Unix systems. Most zip and unzip implementations support these, so they will be recovered after extracting the archive.

Note, however that the owner and group (uid and gid) are currently omitted, even on Unix.

#### `zipr()` and `zipr_append()`:

These function exist for historical reasons. They are identical to `zip()` and `zipr_append()` with a different default for the mode argument.

#### **Value**

The name of the created zip file, invisibly.

#### **Examples**

```
## Some files to zip up. We will run all this in the R session's
## temporary directory, to avoid messing up the user's workspace.
dir.create(tmp <- tempfile())
dir.create(file.path(tmp, "mydir"))
cat("first file", file = file.path(tmp, "mydir", "file1"))
cat("second file", file = file.path(tmp, "mydir", "file2"))

zipfile <- tempfile(fileext = ".zip")
zip::zip(zipfile, "mydir", root = tmp)
```

```
## List contents
zip_list(zipfile)

## Add another file
cat("third file", file = file.path(tmp, "mydir", "file3"))
zip_append(zipfile, file.path("mydir", "file3"), root = tmp)
zip_list(zipfile)
```

---

**zip\_list***List Files in a 'zip' Archive*

---

### Description

List Files in a 'zip' Archive

### Usage

```
zip_list(zipfile)
```

### Arguments

zipfile            Path to an existing ZIP file.

### Details

Note that `crc32` is formatted using `as.hexmode()`. `offset` refers to the start of the local zip header for each entry. Following the approach of `seek()` it is stored as a numeric rather than an integer vector and can therefore represent values up to  $2^{53}-1$  (9 PB).

### Value

A data frame with columns: `filename`, `compressed_size`, `uncompressed_size`, `timestamp`, `permissions`, `crc32` and `offset`.

---

**zip\_process***Class for an external zip process*

---

### Description

`zip_process()` returns an R6 class that represents a zip process. It is implemented as a subclass of [processx::process](#).

### Usage

```
zip_process()
```

**Value**

A zip\_process R6 class object, a subclass of [processx::process](#).

**Using the zip\_process class**

```
zp <- zip_process()$new(zipfile, files, recurse = TRUE,  
                        poll_connection = TRUE,  
                        stderr = tempfile(), ...)
```

See [processx::process](#) for the class methods.

Arguments:

- `zipfile`: Path to the zip file to create.
- `files`: List of file to add to the archive. Each specified file or directory in is created as a top-level entry in the zip archive.
- `recurse`: Whether to add the contents of directories recursively.
- `include_directories`: Whether to explicitly include directories in the archive. Including directories might confuse MS Office when reading docx files, so set this to FALSE for creating them.
- `poll_connection`: passed to the `initialize` method of [processx::process](#), it allows using [processx::poll\(\)](#) or the `poll_io()` method to poll for the completion of the process.
- `stderr`: passed to the `initialize` method of [processx::process](#), by default the standard error is written to a temporary file. This file can be used to diagnose errors if the process failed.
- `...` passed to the `initialize` method of [processx::process](#).

**Examples**

```
dir.create(tmp <- tempfile())  
write.table(iris, file = file.path(tmp, "iris.ssv"))  
zipfile <- tempfile(fileext = ".zip")  
zp <- zip_process()$new(zipfile, tmp)  
zp$wait()  
zp$get_exit_status()  
zip_list(zipfile)
```

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