Package 'packager'

March 13, 2020

Title Create, Build and Maintain Packages

Version 1.1.0

Description Helper functions for package creation, building and maintenance. Designed to work with a build system such as 'GNU make' or package 'fakemake' to help you to conditionally work through the stages of package development (such as spell checking, linting, testing, before building and checking a package).

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URL https://gitlab.com/fvafrCU/packager

Depends R (>= 3.3.0)

Imports callr, checkmate, codetools, crayon, cyclocomp, desc, devtools, fakemake, git2r, httr, methods, pkgbuild, pkgload, rcmdcheck, remotes, rprojroot, tools, usethis, utils, whisker, whoami, withr

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R topics documented:

`packager-package` *Helps Me Create, Build and Maintain Packages*

Description

Helper functions for package creation, building and maintenance, heavily borrowing from **devtools** 1.13.3.

Details

You will find the details in
`vignette("An_Introduction_to_packager",package = "packager")`.

`check_archive` *Check a Package Archive*

Description

This is a wrapper to `callr::rcmd_safe("check")`, similar to, but leaner than `rcmdcheck::rcmdcheck`. While the latter parses the output of `rcmd_safe` and uses **clisymbols** in the callback, we here just return bare output and use `writeLines` as callback. This should result in a screen display that is identical to the output of `R CMD check`.

Usage

```
check_archive(path, cmdargs = NULL)

check_archive_as_cran(path)
```

Arguments

path	Path to the package archive.
cmdargs	Command line arguments (see callr::rcmd).

Value

A list with standard output, standard error and exit status of the check (see callr::rcmd).

Note

check_archive_as_cran is a convenience Wrapper to check_archive.

See Also

Other maintenance functions: check_codetags(), check_cyclomatic_complexity(), check_news(), check_usage(), get_check_status()

Other maintenance functions: check_codetags(), check_cyclomatic_complexity(), check_news(), check_usage(), get_check_status()

Examples

```
## Not run:
package_path <- file.path(tempdir(), "fakepack")
usethis::create_package(path = package_path)
file.copy(system.file("templates", "throw.R", package = "fakemake"),
          file.path(package_path, "R"))
roxygen2::roxygenize(package_path)
print(tarball <- get_pkg_archive_path(package_path))
devtools::build(pkg = package_path, path = package_path)
print(check_archive(tarball))

## End(Not run)
```

---

check_codetags *Check for Code Tags*

Description

You do use code tags (see PEP 350 for example)? This function searches for files under a directory containing such tags.

Usage

```
check_codetags(
  path = ".",
  exclude_pattern = "\\.Rcheck/",
  include_pattern = "\\.[Rr]$|\\.[Rr]md$",
  pattern = "XXX:|FIXME:|TODO:"
)
```

Arguments

path	to a directory, typically a package root.
exclude_pattern	A pattern for exclusions based on the file names. Stronger than include_pattern.
include_pattern	A pattern for inclusions based on the file names.
pattern	The pattern to search for.

Value

A character vector of hits.

See Also

Other maintenance functions: check_archive(), check_cyclomatic_complexity(), check_news(), check_usage(), get_check_status()

Examples

```
dir <- system.file("templates", package = "packager")
check_codetags(dir)
```

---

check_cyclomatic_complexity *Check* Cyclomatic Complexity

Description

Run cyclocomp_package_dir on the package throwing an error when the maximum complexity is exceeded.

Usage

```
check_cyclomatic_complexity(path = ".", max_complexity = 10)
```

Arguments

path	Path to the package directory (see devtools::as.package).
max_complexity	The maximum cyclomatic complexity (which must not be exceeded).

Value

Invisibly TRUE if maximum cyclomatic complexity is not exceeded, throws an error otherwise.

See Also

Other maintenance functions: check_archive(), check_codetags(), check_news(), check_usage(), get_check_status()

Examples

```
## Not run:
# download and untar sources of some archived package
package  <- "excerptr"
root <- paste0("http://cran.r-project.org/src/contrib/Archive/", package)
version <- "1.0.0"
tarball <- paste0(paste(package, version, sep = "_"), ".tar.gz")
remote_tarball <- paste(root, tarball, sep = "/")
local_tarball <- file.path(tempdir(), tarball)
utils::download.file(remote_tarball, local_tarball)
utils::untar(local_tarball, exdir = tempdir())
res <- tryCatch(check_cyclomatic_complexity(path = file.path(tempdir(),
                                                             package)),
                error = identity)
print(res)

## End(Not run)
```

---

check_news *Check for 'NEWS.md' Being Up to Date*

Description

Compare your 'NEWS.md' file to the 'Version' entry in DESCRIPTION.

Usage

```
check_news(path = ".")
```

Arguments

path	Path to the package directory (see devtools::as.package).

Value

Invisibly TRUE if 'NEWS.md' matches DESCRIPTION, throws an error otherwise.

See Also

Other maintenance functions: check_archive(), check_codetags(), check_cyclomatic_complexity(), check_usage(), get_check_status()

check_usage *Check Usage with* **codetools**' checkUsagePackage

Description

This is just a convenience wrapper to checkUsagePackage (which needs loading of the [development version of the] package).

Usage

```
check_usage(path = ".")
```

Arguments

path	Path to the package directory (see devtools::as.package).

Value

A character vector of issues found by checkUsagePackage.

See Also

Other maintenance functions: check_archive(), check_codetags(), check_cyclomatic_complexity(), check_news(), get_check_status()

create *Create a Package Template*

Description

This is just a wrapper to create a package using usethis::create_package and infect it using infect.

Usage

```
create(path, force = TRUE, ...)
```

Arguments

path	See usethis::create_package.
force	Recursively unlink path before calling usethis::create_package(path)?
...	Arguments to be passed to infect.

Value

Invisibly NULL.

See Also

infect

Examples

```
path <- file.path(tempdir(), "myFirstPackage")
packager::create(path = path, fakemake = "roxygen2")
list.files(path, recursive = TRUE)
## Not run:
  ml <- packager::get_package_makelist(is_cran = TRUE)
  d <- file.path(tempdir(), "somePackage")
  dir.create(d)
  packager::create(d, fakemake = FALSE)
  withr::with_dir(d, fakemake::make("check", ml))
  check_log <- file.path(d, "log", "check.Rout")
  status <- packager::get_check_status(check_log)
  RUnit::checkEqualsNumeric(status[["status"]][["errors"]], 0)
  list.files(d, recursive = TRUE)
  unlink(d, recursive = TRUE)

## End(Not run)
```

---

get_options *Get Options For Packages*

Description

A convenience function for getOption.

Usage

```
get_options(package_name, ..., remove_names = FALSE, flatten_list = TRUE)
```

Arguments

package_name	The package's name.
...	See getOption.
remove_names	[boolean(1)] Remove the names?
flatten_list	[boolean(1)] Return a vector?

Value

A (possibly named) list or a vector.

See Also

Other option functions: set_options()

get_package_makelist *Provide a* makelist *Suitable for Packages with* **packager**

Description

Provide a makelist Suitable for Packages with **packager**

Usage

```
get_package_makelist(is_cran = FALSE, gitlab_token = NULL)
```

Arguments

is_cran	Streamline makelist for usage on CRAN?
gitlab_token	A private gitlab token. Used to query logs on https://gitlab.com.

Value

A list for fakemake::make.

Examples

```
ml <- packager::get_package_makelist()
cbind(lapply(ml, function(x) x[["target"]]),
      lapply(ml, function(x) x[["alias"]]))

cl <- packager::get_package_makelist(is_cran = TRUE)
setdiff(sapply(ml, function(x) x[["target"]]),
        sapply(cl, function(x) x[["target"]]))
```

get_pkg_archive_path *Create a Package's Archive Path From the Package's* 'DESCRIPTION'

Description

The archive file does not have to exist. Use file.exists(get_pkg_archive_path()) to test existence.

Usage

```
get_pkg_archive_path(path = ".", absolute = TRUE)
```

Arguments

path	Path to the package directory (see devtools::as.package).
absolute	Return the absolute path?

Value

Path to the package's archive file.

Examples

```
package_path <- file.path(tempdir(), "anRpackage")
usethis::create_package(path = package_path)
print(tarball <- get_pkg_archive_path(package_path))
file.exists(tarball)
```

`git_add_commit` *Git Add All Changes and Commit*

Description

Much like `git commit -am"M"`, where `M` is the `message`.

Usage

```
git_add_commit(
  path,
  message = "Uncommented Changes: Backing Up",
  untracked = FALSE,
  ...
)
```

Arguments

`path`	The path to the repository.
`message`	The commit message to use.
`untracked`	Add files not tracked yet before committing?
`...`	Arguments passed to `git2r::status`.

Value

The return value of `git2r::commit`.

See Also

Other git wrappers: `git_tag()`

git_tag *Create a Git Tag Based on the Current Version Number*

Description

This is basically the same as `git tag -a T -m M` where T is the version read from the package's DESCRIPTION file and M is given by `message` (see below).

Usage

```
git_tag(path = ".", tag_uncommited = FALSE, message = "CRAN release")
```

Arguments

`path`	Path to the package.
`tag_uncommited`	Tag if there are uncommitted changes?
`message`	The tag message to be used.

Value

`FALSE` or the value of `git2r::tag`.

See Also

Other git wrappers: `git_add_commit()`

infect *Adjust a Package*

Description

Add a variety of extensions to a package (skeleton) and run `fakemake::make` on it.

Usage

```
infect(path, fakemake = "check", git_add_and_commit = TRUE, ...)
```

Arguments

`path`	Path to the package directory (see `devtools::as.package`).
`fakemake`	The name for a `makelist` for **fakemake**. Set to `NULL` or `FALSE` to disable running `fakemake::make`.
`git_add_and_commit`	Add and commit changes in git?
`...`	Arguments to be passed to `set_package_info`.

Value

Invisibly NULL.

See Also

create

Examples

```
## Not run:
path <- file.path(tempdir(), "mySecondPackage")
usethis::create_package(path = path, open = FALSE)
l1 <- list.files(path, recursive = TRUE)
packager::infect(path = path, fakemake = "roxygen2")
l2 <- list.files(path, recursive = TRUE)
print(l1); print(l2)
unlink(path, recursive = TRUE)

## End(Not run)
```

---

mark_lints *Mark Lints by Name Suffix*

Description

I often use internals from other packages and save them in files named ..._internals..., ..._verbatim... or ..._modified... .
I want these to be marked in **lintr**'s output.

Usage

```
mark_lints(
  x,
  sort = TRUE,
  invert = FALSE,
  file_name_markers = c("_internals", "_verbatim", "_modified")
)

print_lints(
  x,
  sort = TRUE,
  invert = FALSE,
  file_name_markers = c("_internals", "_verbatim", "_modified")
)
```

Arguments

x	A list of lints.
sort	Sort by file name suffix?
invert	Invert the sorting?
file_name_markers	Parts of the file name which mark copied code.

Value

The list of lints with names marked.

Note

print_lints is an old, stale name for mark_lints.

Examples

```
files <- file.path(system.file("files", package = "packager"),
                   c("a_verbatim.R", "a.R"))
lints <- lintr:::flatten_lints(lapply(files,
                                      function(file) {
                                          lintr::lint(file,
                                                      parse_settings = FALSE)}))

mark_lints(lints, invert = FALSE)
mark_lints(lints, invert = TRUE)
```

---

provide_cran_comments *Provide a Template for Your Comments To CRAN*

Description

submit reads a file 'cran-comments.md'. This function provides a template based on your R version, your R CMD check output and the package's 'NEWS.md'.

Usage

```
provide_cran_comments(
  check_log = NULL,
  path = ".",
  initial = FALSE,
  write_to_file = TRUE,
  private_token = NULL,
  name = NA,
  proxy = NULL
)
```

Arguments

check_log	Path to the check log relative to path. Typically file.path("log", "check.Rout").
path	Path to the package directory (see devtools::as.package).
initial	Is this an initial submission?
write_to_file	Do write the comment to 'cran-comment.md'?
private_token	Provide a private token to access https://gitlab.com.
name	The name to sign with, if NA, the given name of the package maintainer as stated in file DESCRIPTION is used.
proxy	A proxy to use.

Value

Character vector containing the CRAN comments, which are written to 'cran-comments.md' (see Note).

Note

By default this function writes to disk as side effect.

Examples

```
## Not run:

if (Sys.info()[["nodename"]] == "fvafrdebianCU") {
    gitlab_token <- readLines(file.path("~", ".gitlab_private_token.txt"))
    proxy <- httr::use_proxy("10.127.255.17", 8080)
    comments <- provide_cran_comments(path = ".",
                                      write_to_file = TRUE,
                                      private_token = gitlab_token,
                                      proxy = proxy)

} else {
    gitlab_token <- readLines(file.path("~", ".gitlab_private_token.txt"))
    comments <- provide_cran_comments(path = ".",
                                      write_to_file = TRUE,
                                      private_token = gitlab_token)
}
cat(comments, sep = "")

## End(Not run)
```

`set_options` *Set Options For Packages*

Description

A convenience function for `options`.

Usage

```
set_options(package_name, ..., overwrite = TRUE)
```

Arguments

`package_name`	The package's name.
`...`	See `options`.
`overwrite`	[boolean(1)] Overwrite options already set?

Value

invisible(TRUE)

See Also

Other option functions: `get_options()`

Examples

```
options("cleanr" = NULL)
defaults <- list(max_file_width = 80, max_file_length = 300,
                 max_lines = 65, max_lines_of_code = 50,
                 max_num_arguments = 5, max_nesting_depth = 3,
                 max_line_width = 80, check_return = TRUE)

set_options("cleanr", defaults)
getOption("cleanr")
set_options("cleanr", list(max_line_width = 3,
            max_lines = "This is nonsense!"))
set_options("cleanr", check_return = NULL, max_lines = 4000)
get_options("cleanr")
```

submit *Release a Package to CRAN*

Description

This is a stripped version of **devtools**' `release function`, omitting most of the interactive checks.

Usage

```
submit(path = ".", stop_on_git = TRUE, force = FALSE, verbose = TRUE)

release(path = ".", stop_on_git = TRUE, force = FALSE, verbose = TRUE)
```

Arguments

`path`	The package's root directory.
`stop_on_git`	Stop if git has uncommitted changes or is not synced with the origin?
`force`	Skip user interaction?
`verbose`	Be verbose?

Value

`Invisibly NULL`

Note

`release` is just a link to `submit` as `release` is the original function from **devtools**.

use_build_ignore *Add files to '.Rbuildignore'*

Description

This is verbatim copy of git commit a5e5805ecd630ebc46e080bd78ebcf32322efe3c of **usethis**. '`.Rbuildignore`' has a regular expression on each line, but it's usually easier to work with specific file names. By default, will (crudely) turn filenames into regular expressions that will only match these paths. Repeated entries will be silently removed.

Usage

```
use_build_ignore(files, escape = TRUE, pkg = ".")
```

Arguments

files	Paths of files.
escape	If TRUE, the default, will escape . to \. and surround with ^ and $.
pkg	Path to the package directory (see devtools::as.package).

Value

Nothing, called for its side effect.

---

use_dev_version *Use a Development Version in DESCRIPTION and 'NEWS.md'*

Description

This is much like usethis::use_dev_version, but their conventions keep changing.

Usage

```
use_dev_version(path = ".", force = FALSE)
```

Arguments

path	Path to the package directory (see devtools::as.package).
force	Set to TRUE to force version bumping with uncommitted git changes.

---

use_directory *Use a Directory*

Description

Create a directory.
this is verbatim copy of git commit a5e5805ecd630ebc46e080bd78ebcf32322efe3c of **usethis**.

Usage

```
use_directory(path, ignore = FALSE, pkg = ".")
```

Arguments

path	Path of the directory to create, relative to the project.
ignore	Add the directory to '.Rbuildignore'?
pkg	Path to the package directory (see devtools::as.package).

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