

Package ‘devtools’

April 8, 2019

Title Tools to Make Developing R Packages Easier

Version 2.0.2

Description Collection of package development tools.

License GPL (>= 2)

URL <https://github.com/r-lib/devtools>

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

Depends R (>= 3.0.2)

Imports callr, cli, digest, git2r (>= 0.23.0), httr (>= 0.4),
jsonlite, memoise (>= 1.0.0), pkgbuild (>= 1.0.2), pkgload (>=
1.0.1), rcmdcheck (>= 1.3.2), remotes (>= 2.0.2), rstudioapi
(>= 0.6.0.9000), sessioninfo, stats, tools, usethis (>= 1.4.0),
utils, withr

Suggests BiocManager, bitops, covr (>= 3.2.0), crayon, curl (>= 0.9),
evaluate, foghorn (>= 1.1.0), gmailr (> 0.7.0), knitr, lintr
(>= 0.2.1), mockery, pingr, MASS, pkgdown, Rcpp (>= 0.10.0),
rhub (>= 1.0.2), rmarkdown, roxygen2 (>= 6.1.0), rversions,
spelling (>= 1.1), testthat (>= 1.0.2), whisker

VignetteBuilder knitr

Encoding UTF-8

RoxygenNote 6.1.1

NeedsCompilation no

Author Hadley Wickham [aut],
Jim Hester [aut, cre],
Winston Chang [aut],
RStudio [cph],
R Core team [ctb] (Some namespace and vignette code extracted from base
R)

Maintainer Jim Hester <james.hester@rstudio.com>

Repository CRAN

Date/Publication 2019-04-08 20:03:38 UTC

R topics documented:

bash	2
build	3
build_manual	4
build_readme	4
build_site	5
build_vignettes	5
check	6
check_failures	8
check_man	9
check_rhub	9
check_win	10
clean_vignettes	11
devtools	12
dev_mode	13
document	13
dr_devtools	14
dr_github	14
install	15
install_deps	16
lint	17
load_all	18
missing_s3	20
package_file	20
release	21
reload	22
revdep	22
run_examples	23
save_all	24
show_news	25
source_gist	25
source_url	26
spell_check	27
test	27
uninstall	28
wd	29
Index	30

 bash

Open bash shell in package directory.

Description

Open bash shell in package directory.

Usage

```
bash(pkg = ".")
```

Arguments

pkg package description, can be path or package name. See [as.package\(\)](#) for more information

build	<i>Build package</i>
-------	----------------------

Description

Building converts a package source directory into a single bundled file. If `binary = FALSE` this creates a `tar.gz` package that can be installed on any platform, provided they have a full development environment (although packages without source code can typically be installed out of the box). If `binary = TRUE`, the package will have a platform specific extension (e.g. `.zip` for windows), and will only be installable on the current platform, but no development environment is needed.

Usage

```
build(pkg = ".", path = NULL, binary = FALSE, vignettes = TRUE,
      manual = FALSE, args = NULL, quiet = FALSE, ...)
```

Arguments

pkg	Path to a package, or within a package.
path	Path in which to produce package. If <code>NULL</code> , defaults to the parent directory of the package.
binary	Produce a binary (<code>--binary</code>) or source (<code>--no-manual --no-resave-data</code>) version of the package.
vignettes	For source packages: if <code>FALSE</code> , don't build PDF vignettes (<code>--no-build-vignettes</code>) or manual (<code>--no-manual</code>).
manual	For source packages: if <code>FALSE</code> , don't build PDF vignettes (<code>--no-build-vignettes</code>) or manual (<code>--no-manual</code>).
args	An optional character vector of additional command line arguments to be passed to R CMD <code>build</code> if <code>binary = FALSE</code> , or R CMD <code>install</code> if <code>binary = TRUE</code> .
quiet	if <code>TRUE</code> suppresses output from this function.
...	Additional arguments passed to pkgbuild::build .

Value

a string giving the location (including file name) of the built package

build_manual *Create package pdf manual*

Description

Create package pdf manual

Usage

```
build_manual(pkg = ".", path = NULL)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information.
path	path in which to produce package manual. If NULL, defaults to the parent directory of the package.

See Also

[Rd2pdf\(\)](#)

build_readme *Build a Rmarkdown README for a package*

Description

build_readme() is a wrapper around [rmarkdown::render\(\)](#), it generates the README.md from a README.Rmd file.

Usage

```
build_readme(path = ".", quiet = TRUE, ...)
```

Arguments

path	path to the package to build the readme.
quiet	If TRUE, suppress output.
...	additional arguments passed to rmarkdown::render()

build_site	<i>Execute pkgdown build_site in a package</i>
------------	---

Description

build_site() is a shortcut for `pkgdown::build_site()`, it generates the static HTML documentation.

Usage

```
build_site(path = ".", quiet = TRUE, ...)
```

Arguments

path	path to the package to build the static HTML.
quiet	If TRUE, suppress output.
...	additional arguments passed to <code>pkgdown::build_site()</code>

build_vignettes	<i>Build package vignettes.</i>
-----------------	---------------------------------

Description

Builds package vignettes using the same algorithm that R CMD build does. This means including non-Sweave vignettes, using makefiles (if present), and copying over extra files. The files are copied in the 'doc' directory and an vignette index is created in 'Meta/vignette.rds', as they would be in a built package. 'doc' and 'Meta' are added to .Rbuildignore, so will not be included in the built package. These files can be checked into version control, so they can be viewed with `browseVignettes()` and `vignette()` if the package has been loaded with `load_all()` without needing to re-build them locally.

Usage

```
build_vignettes(pkg = ".", dependencies = "VignetteBuilder",  
  clean = TRUE, upgrade = "never", quiet = TRUE, install = TRUE,  
  keep_md = TRUE)
```

Arguments

pkg	package description, can be path or package name. See <code>as.package()</code> for more information
-----	--

dependencies	Which dependencies do you want to check? Can be a character vector (selecting from "Depends", "Imports", "LinkingTo", "Suggests", or "Enhances"), or a logical vector. TRUE is shorthand for "Depends", "Imports", "LinkingTo" and "Suggests". NA is shorthand for "Depends", "Imports" and "LinkingTo" and is the default. FALSE is shorthand for no dependencies (i.e. just check this package, not its dependencies).
clean	Remove all files generated by the build, even if there were copies there before.
upgrade	One of "default", "ask", "always", or "never". "default" respects the value of the R_REMOTES_UPGRADE environment variable if set, and falls back to "ask" if unset. "ask" prompts the user for which out of date packages to upgrade. For non-interactive sessions "ask" is equivalent to "always". TRUE and FALSE are also accepted and correspond to "always" and "never" respectively.
quiet	If TRUE, suppresses most output. Set to FALSE if you need to debug.
install	If TRUE, install the package before building vignettes.
keep_md	If TRUE, move md intermediates as well as rendered outputs. Most useful when using the keep_md YAML option for Rmarkdown outputs. See https://bookdown.org/yihui/rmarkdown/html-document.html#keeping-markdown .

See Also

`clean_vignettes()` to remove the pdfs in 'doc' created from vignettes

`clean_vignettes()` to remove build tex/pdf files.

check

Build and check a package, cleaning up automatically on success.

Description

check automatically builds and checks a source package, using all known best practices. `check_built` checks an already built package.

Usage

```
check(pkg = ".", document = NA, build_args = NULL, ...,
      manual = FALSE, cran = TRUE, remote = FALSE, incoming = remote,
      force_suggests = FALSE, run_dont_test = FALSE, args = "--timings",
      env_vars = NULL, quiet = FALSE, check_dir = tempdir(),
      cleanup = TRUE, error_on = c("never", "error", "warning", "note"))
```

```
check_built(path = NULL, cran = TRUE, remote = FALSE,
            incoming = remote, force_suggests = FALSE, run_dont_test = FALSE,
            manual = FALSE, args = "--timings", env_vars = NULL,
            check_dir = tempdir(), quiet = FALSE, error_on = c("never",
            "error", "warning", "note"))
```

Arguments

<code>pkg</code>	package description, can be path or package name. See <code>as.package()</code> for more information
<code>document</code>	If NA and the package uses roxygen2, will rerun <code>document()</code> prior to checking. Use TRUE and FALSE to override this default.
<code>build_args</code>	Additional arguments passed to R CMD build
<code>...</code>	Additional arguments passed on to <code>pkgbuild::build()</code> .
<code>manual</code>	If FALSE, don't build and check manual (<code>--no-manual</code>).
<code>cran</code>	if TRUE (the default), check using the same settings as CRAN uses.
<code>remote</code>	Sets <code>_R_CHECK_CRAN_INCOMING_REMOTE_</code> env var. If TRUE, performs a number of CRAN incoming checks that require remote access.
<code>incoming</code>	Sets <code>_R_CHECK_CRAN_INCOMING_</code> env var. If TRUE, performs a number of CRAN incoming checks.
<code>force_suggests</code>	Sets <code>_R_CHECK_FORCE_SUGGESTS_</code> . If FALSE (the default), check will proceed even if all suggested packages aren't found.
<code>run_dont_test</code>	Sets <code>--run-donttest</code> so that tests surrounded in <code>\donttest{}</code> are also tested. This is important for CRAN submission.
<code>args</code>	Additional arguments passed to R CMD check
<code>env_vars</code>	Environment variables set during R CMD check
<code>quiet</code>	if TRUE suppresses output from this function.
<code>check_dir</code>	the directory in which the package is checked compatibility. <code>args = "--output=/foo/bar"</code> can be used to change the check directory.
<code>cleanup</code>	Deprecated.
<code>error_on</code>	Whether to throw an error on R CMD check failures. Note that the check is always completed (unless a timeout happens), and the error is only thrown after completion. If "never", then no errors are thrown. If "error", then only ERROR failures generate errors. If "warning", then WARNING failures generate errors as well. If "note", then any check failure generated an error.
<code>path</code>	Path to built package.

Details

Passing R CMD check is essential if you want to submit your package to CRAN: you must not have any ERRORS or WARNINGS, and you want to ensure that there are as few NOTES as possible. If you are not submitting to CRAN, at least ensure that there are no ERRORS or WARNINGS: these typically represent serious problems.

`check` automatically builds a package before calling `check_built` as this is the recommended way to check packages. Note that this process runs in an independent realisation of R, so nothing in your current workspace will affect the process.

Value

An object containing errors, warnings, and notes.

Environment variables

Devtools does its best to set up an environment that combines best practices with how check works on CRAN. This includes:

- The standard environment variables set by devtools: `r_env_vars()`. Of particular note for package tests is the `NOT_CRAN` env var which lets you know that your tests are not running on CRAN, and hence can take a reasonable amount of time.
- Debugging flags for the compiler, set by `compiler_flags(FALSE)`.
- If `aspell` is found `_R_CHECK_CRAN_INCOMING_USE_ASPELL_` is set to `TRUE`. If no spell checker is installed, a warning is issued.)
- env vars set by arguments `incoming`, `remote` and `force_suggests`

See Also

`release()` if you want to send the checked package to CRAN.

check_failures	<i>Parses R CMD check log file for ERRORS, WARNINGs and NOTEs</i>
----------------	---

Description

Extracts check messages from the `00check.log` file generated by R CMD check.

Usage

```
check_failures(path, error = TRUE, warning = TRUE, note = TRUE)
```

Arguments

path	check path, e.g., value of the <code>check_dir</code> argument in a call to <code>check()</code>
error, warning, note	logical, indicates if errors, warnings and/or notes should be returned

Value

a character vector with the relevant messages, can have length zero if no messages are found

See Also

`check()`, `revdep_check()`

check_man	<i>Check documentation, as R CMD check does.</i>
-----------	--

Description

This function attempts to run the documentation related checks in the same way that R CMD check does. Unfortunately it can't run them all because some tests require the package to be loaded, and the way they attempt to load the code conflicts with how devtools does it.

Usage

```
check_man(pkg = ".")
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
-----	---

Value

Nothing. This function is called purely for its side effects: if

Examples

```
## Not run:  
check_man("mypkg")  
  
## End(Not run)
```

check_rhub	<i>Run CRAN checks for package on R-hub</i>
------------	---

Description

It runs [build\(\)](#) on the package, with the arguments specified in args, and then submits it to the R-hub builder at <https://builder.r-hub.io>. The interactive option controls whether the function waits for the check output. Regardless, after the check is complete, R-hub sends an email with the results to the package maintainer.

Usage

```
check_rhub(pkg = ".", platforms = NULL, email = NULL,  
           interactive = TRUE, ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
platforms	R-hub platforms to run the check on. If NULL uses default list of CRAN checkers (one for each major platform, and one with extra checks if you have compiled code). You can also specify your own, see rhub::platforms() for a complete list.
email	email address to notify, defaults to the maintainer address in the package.
interactive	whether to show the status of the build interactively. R-hub will send an email to the package maintainer's email address, regardless of whether the check is interactive or not.
...	extra arguments, passed to pkgbuild::build() .

Value

a `rhub_check` object.

About email validation on r-hub

To build and check R packages on R-hub, you need to validate your email address. This is because R-hub sends out emails about build results. See more at [rhub::validate_email\(\)](#).

check_win	<i>Build windows binary package.</i>
-----------	--------------------------------------

Description

This function works by bundling source package, and then uploading to <http://win-builder.r-project.org/>. Once building is complete you'll receive a link to the built package in the email address listed in the maintainer field. It usually takes around 30 minutes. As a side effect, win-build also runs R CMD check on the package, so `check_win` is also useful to check that your package is ok on windows.

Usage

```
check_win_devel(pkg = ".", args = NULL, manual = TRUE,
  quiet = FALSE, ...)

check_win_release(pkg = ".", args = NULL, manual = TRUE,
  quiet = FALSE, ...)

check_win_oldrelease(pkg = ".", args = NULL, manual = TRUE,
  quiet = FALSE, ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
args	An optional character vector of additional command line arguments to be passed to R CMD build if binary = FALSE, or R CMD install if binary = TRUE.
manual	For source packages: if FALSE, don't build PDF vignettes (<code>--no-build-vignettes</code>) or manual (<code>--no-manual</code>).
quiet	If TRUE, suppresses output.
...	Additional arguments passed to <code>pkgbuild::build()</code> .

Functions

- `check_win_devel`: Check package on the development version of R.
- `check_win_release`: Check package on the release version of R.
- `check_win_oldrelease`: Check package on the previous major release version of R.

clean_vignettes	<i>Clean built vignettes.</i>
-----------------	-------------------------------

Description

This uses a fairly rudimentary algorithm where any files in 'doc' with a name that exists in 'vignettes' are removed.

Usage

```
clean_vignettes(pkg = ".")
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
-----	---

devtools

Package development tools for R.

Description

Collection of package development tools.

Package options

Devtools uses the following `options()` to configure behaviour:

- `devtools.path`: path to use for `dev_mode()`
- `devtools.name`: your name, used when signing draft emails.
- `devtools.install.args`: a string giving extra arguments passed to R CMD `install` by `install()`.
- `devtools.desc.author`: a string providing a default Authors@R string to be used in new 'DESCRIPTION's. Should be a R code, and look like "Hadley Wickham <h.wickham@gmail.com> [aut, cre]". See `utils::as.person()` for more details.
- `devtools.desc.license`: a default license string to use for new packages.
- `devtools.desc.suggests`: a character vector listing packages to to add to suggests by defaults for new packages.
- `devtools.desc`: a named list listing any other extra options to add to 'DESCRIPTION'

Author(s)

Maintainer: Jim Hester <james.hester@rstudio.com>

Authors:

- Hadley Wickham
- Winston Chang

Other contributors:

- RStudio [copyright holder]
- R Core team (Some namespace and vignette code extracted from base R) [contributor]

See Also

Useful links:

- <https://github.com/r-lib/devtools>
- Report bugs at <https://github.com/r-lib/devtools/issues>

dev_mode	<i>Activate and deactivate development mode.</i>
----------	--

Description

When activated, `dev_mode` creates a new library for storing installed packages. This new library is automatically created when `dev_mode` is activated if it does not already exist. This allows you to test development packages in a sandbox, without interfering with the other packages you have installed.

Usage

```
dev_mode(on = NULL, path = getOption("devtools.path"))
```

Arguments

<code>on</code>	turn dev mode on (TRUE) or off (FALSE). If omitted will guess based on whether or not path is in <code>.libPaths()</code>
<code>path</code>	directory to library.

Examples

```
## Not run:
dev_mode()
dev_mode()

## End(Not run)
```

document	<i>Use roxygen to document a package.</i>
----------	---

Description

This function is a wrapper for the `roxygen2::roxygenize()` function from the `roxygen2` package. See the documentation and vignettes of that package to learn how to use `roxygen`.

Usage

```
document(pkg = ".", roclets = NULL)
```

Arguments

<code>pkg</code>	package description, can be path or package name. See <code>as.package()</code> for more information
<code>roclets</code>	Character vector of roclet names to use with package. This defaults to <code>NULL</code> , which will use the <code>roclets</code> fields in the list provided in the <code>Roxygen DESCRIPTION</code> field. If none are specified, defaults to <code>c("collate", "namespace", "rd")</code> .

See Also

[roxygen2::roxygenize\(\)](#), [browseVignettes\("roxygen2"\)](#)

dr_devtools

Diagnose potential devtools issues

Description

This checks to make sure you're using the latest release of R, the released version of RStudio (if you're using it as your gui), and the latest version of devtools and its dependencies.

Usage

```
dr_devtools()
```

See Also

Other doctors: [dr_github](#)

Examples

```
## Not run:  
dr_devtools()  
  
## End(Not run)
```

dr_github

Diagnose potential GitHub issues

Description

Diagnose potential GitHub issues

Usage

```
dr_github(path = ".")
```

Arguments

path Path to repository to check. Defaults to current working directory

See Also

Other doctors: [dr_devtools](#)

Examples

```
dr_github()
```

install	<i>Install a local development package.</i>
---------	---

Description

Uses R CMD INSTALL to install the package. Will also try to install dependencies of the package from CRAN, if they're not already installed.

Usage

```
install(pkg = ".", reload = TRUE, quick = FALSE, build = !quick,
  args = getOption("devtools.install.args"), quiet = FALSE,
  dependencies = NA, upgrade = "ask", build_vignettes = FALSE,
  keep_source = getOption("keep.source.pkgs"), force = FALSE, ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
reload	if TRUE (the default), will automatically reload the package after installing.
quick	if TRUE skips docs, multiple-architectures, demos, and vignettes, to make installation as fast as possible.
build	if TRUE <code>pkgbuild::build()</code> s the package first: this ensures that the installation is completely clean, and prevents any binary artefacts (like <code>.'o'</code> , <code>.so</code>) from appearing in your local package directory, but is considerably slower, because every compile has to start from scratch.
args	An optional character vector of additional command line arguments to be passed to R CMD INSTALL. This defaults to the value of the option <code>"devtools.install.args"</code> .
quiet	If TRUE, suppress output.
dependencies	Which dependencies do you want to check? Can be a character vector (selecting from "Depends", "Imports", "LinkingTo", "Suggests", or "Enhances"), or a logical vector. TRUE is shorthand for "Depends", "Imports", "LinkingTo" and "Suggests". NA is shorthand for "Depends", "Imports" and "LinkingTo" and is the default. FALSE is shorthand for no dependencies (i.e. just check this package, not its dependencies).
upgrade	One of "default", "ask", "always", or "never". "default" respects the value of the <code>R_REMOTES_UPGRADE</code> environment variable if set, and falls back to "ask" if unset. "ask" prompts the user for which out of date packages to upgrade. For non-interactive sessions "ask" is equivalent to "always". TRUE and FALSE are also accepted and correspond to "always" and "never" respectively.

<code>build_vignettes</code>	if TRUE, will build vignettes. Normally it is build that's responsible for creating vignettes; this argument makes sure vignettes are built even if a build never happens (i.e. because <code>local = TRUE</code>).
<code>keep_source</code>	If TRUE will keep the srcrefs from an installed package. This is useful for debugging (especially inside of RStudio). It defaults to the option " <code>keep.source.pkgs</code> ".
<code>force</code>	Force installation, even if the remote state has not changed since the previous install.
<code>...</code>	additional arguments passed to <code>remotes::install_deps()</code> when installing dependencies.

Details

By default, installation takes place using the current package directory. If you have compiled code, this means that artefacts of compilation will be created in the `src/` directory. If you want to avoid this, you can use `build = TRUE` to first build a package bundle and then install it from a temporary directory. This is slower, but keeps the source directory pristine.

If the package is loaded, it will be reloaded after installation. This is not always completely possible, see `reload()` for caveats.

To install a package in a non-default library, use `withr::with_libpaths()`.

See Also

`update_packages()` to update installed packages from the source location and `with_debug()` to install packages with debugging flags set.

Other package installation: [uninstall](#)

<code>install_deps</code>	<i>Install package dependencies if needed.</i>
---------------------------	--

Description

`install_deps()` will install the user dependencies needed to run the package, `install_dev_deps()` will also install the development dependencies needed to test and build the package.

Usage

```
install_deps(pkg = ".", dependencies = NA,
  repos = getOption("repos"), type = getOption("pkgType"),
  upgrade = c("default", "ask", "always", "never"), quiet = FALSE,
  build = TRUE, build_opts = c("--no-resave-data", "--no-manual",
  " --no-build-vignettes"), ...)
```

```
install_dev_deps(pkg = ".", dependencies = TRUE,
  repos = getOption("repos"), type = getOption("pkgType"),
  upgrade = c("default", "ask", "always", "never"), quiet = FALSE,
  build = TRUE, build_opts = c("--no-resave-data", "--no-manual",
  " --no-build-vignettes"), ...)
```


Arguments

pkg	package description, can be path or package name. See <code>as.package()</code> for more information
dependencies	Which dependencies do you want to check? Can be a character vector (selecting from "Depends", "Imports", "LinkingTo", "Suggests", or "Enhances"), or a logical vector. TRUE is shorthand for "Depends", "Imports", "LinkingTo" and "Suggests". NA is shorthand for "Depends", "Imports" and "LinkingTo" and is the default. FALSE is shorthand for no dependencies (i.e. just check this package, not its dependencies).
repos	A character vector giving repositories to use.
type	Type of package to update.
upgrade	One of "default", "ask", "always", or "never". "default" respects the value of the R_REMOTES_UPGRADE environment variable if set, and falls back to "ask" if unset. "ask" prompts the user for which out of date packages to upgrade. For non-interactive sessions "ask" is equivalent to "always". TRUE and FALSE are also accepted and correspond to "always" and "never" respectively.
quiet	If TRUE, suppress output.
build	If TRUE build the package before installing.
build_opts	Options to pass to R CMD build, only used when build is TRUE.
...	additional arguments passed to <code>utils::install.packages()</code> .

Examples

```
## Not run: install_deps(".")
```

lint	<i>Lint all source files in a package.</i>
------	--

Description

The default linters correspond to the style guide at <http://r-pkgs.had.co.nz/r.html#style>, however it is possible to override any or all of them using the `linters` parameter.

Usage

```
lint(pkg = ".", cache = TRUE, ...)
```

Arguments

pkg	package description, can be path or package name. See <code>as.package()</code> for more information
cache	store the lint results so repeated lints of the same content use the previous results.
...	additional arguments passed to <code>lintr::lint_package()</code>

Details

The lintr cache is by default stored in `~/.R/lintr_cache/` (this can be configured by setting `options(lintr.cache_directory)`). It can be cleared by calling `lintr::clear_cache()`.

See Also

`lintr::lint_package()`, `lintr::lint()`

load_all	<i>Load complete package.</i>
----------	-------------------------------

Description

`load_all` loads a package. It roughly simulates what happens when a package is installed and loaded with `library()`.

Usage

```
load_all(path = ".", reset = TRUE, recompile = FALSE,
         export_all = TRUE, helpers = TRUE, quiet = FALSE, ...)
```

Arguments

<code>path</code>	Path to a package, or within a package.
<code>reset</code>	clear package environment and reset file cache before loading any pieces of the package. This is equivalent to running <code>unload()</code> and is the default. Use <code>reset = FALSE</code> may be faster for large code bases, but is a significantly less accurate approximation.
<code>recompile</code>	DEPRECATED. force a recompile of DLL from source code, if present. This is equivalent to running <code>pkgbuild::clean_dll()</code> before <code>load_all</code>
<code>export_all</code>	If TRUE (the default), export all objects. If FALSE, export only the objects that are listed as exports in the NAMESPACE file.
<code>helpers</code>	if TRUE loads testthat test helpers.
<code>quiet</code>	if TRUE suppresses output from this function.
<code>...</code>	Additional arguments passed to <code>pkgload::load_all()</code> .

Details

Currently `load_all`:

- Loads all data files in `data/`. See `load_data()` for more details.
- Sources all R files in the R directory, storing results in environment that behaves like a regular package namespace. See below and `load_code()` for more details.
- Compiles any C, C++, or Fortran code in the `src/` directory and connects the generated DLL into R. See `compile_dll()` for more details.

- Runs `.onAttach()`, `.onLoad()` and `.onUnload()` functions at the correct times.
- If you use **testthat**, will load all test helpers so you can access them interactively. `devtools` sets the `DEVTOOLS_LOAD` environment variable to `"true"` to let you check whether the helpers are run during package loading.

Namespaces

The namespace environment `<namespace:pkgname>`, is a child of the imports environment, which has the name attribute `imports:pkgname`. It is in turn is a child of `<namespace:base>`, which is a child of the global environment. (There is also a copy of the base namespace that is a child of the empty environment.)

The package environment `<package:pkgname>` is an ancestor of the global environment. Normally when loading a package, the objects listed as exports in the `NAMESPACE` file are copied from the namespace to the package environment. However, `load_all` by default will copy all objects (not just the ones listed as exports) to the package environment. This is useful during development because it makes all objects easy to access.

To export only the objects listed as exports, use `export_all=FALSE`. This more closely simulates behavior when loading an installed package with `library()`, and can be useful for checking for missing exports.

Shim files

`load_all` also inserts shim functions into the imports environment of the loaded package. It presently adds a replacement version of `system.file` which returns different paths from `base::system.file`. This is needed because installed and uninstalled package sources have different directory structures. Note that this is not a perfect replacement for `base::system.file`.

Examples

```
## Not run:
# Load the package in the current directory
load_all(".")

# Running again loads changed files
load_all(".")

# With reset=TRUE, unload and reload the package for a clean start
load_all(".", TRUE)

# With export_all=FALSE, only objects listed as exports in NAMESPACE
# are exported
load_all(".", export_all = FALSE)

## End(Not run)
```

missing_s3	<i>Find missing s3 exports.</i>
------------	---------------------------------

Description

The method is heuristic - looking for objs with a period in their name.

Usage

```
missing_s3(pkg = ".")
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
-----	---

package_file	<i>Find file in a package.</i>
--------------	--------------------------------

Description

It always starts by walking up the path until it finds the root directory, i.e. a directory containing DESCRIPTION. If it cannot find the root directory, or it can't find the specified path, it will throw an error.

Usage

```
package_file(..., path = ".")
```

Arguments

...	Components of the path.
path	Place to start search for package directory.

Examples

```
## Not run:  
package_file("figures", "figure_1")  
  
## End(Not run)
```

release	<i>Release package to CRAN.</i>
---------	---------------------------------

Description

Run automated and manual tests, then post package to CRAN.

Usage

```
release(pkg = ".", check = FALSE, args = NULL)
```

Arguments

pkg	package description, can be path or package name. See <code>as.package()</code> for more information
check	if TRUE, run checking, otherwise omit it. This is useful if you've just checked your package and you're ready to release it.
args	An optional character vector of additional command line arguments to be passed to R CMD build.

Details

The package release process will:

- Confirm that the package passes R CMD check on relevant platforms
- Confirm that important files are up-to-date
- Build the package
- Submit the package to CRAN, using comments in "cran-comments.md"

You can add arbitrary extra questions by defining an (un-exported) function called `release_questions()` that returns a character vector of additional questions to ask.

You also need to read the CRAN repository policy at <https://cran.r-project.org/web/packages/policies.html> and make sure you're in line with the policies. `release` tries to automate as many of polices as possible, but it's impossible to be completely comprehensive, and they do change in between releases of devtools.

Guarantee

If a devtools bug causes one of the CRAN maintainers to treat you impolitely, I will personally send you a handwritten apology note. Please forward me the email and your address, and I'll get a card in the mail.

reload	<i>Unload and reload package.</i>
--------	-----------------------------------

Description

This attempts to unload and reload an *installed* package. If the package is not loaded already, it does nothing. It's not always possible to cleanly unload a package: see the caveats in [unload\(\)](#) for some of the potential failure points. If in doubt, restart R and reload the package with [library\(\)](#).

Usage

```
reload(pkg = ".", quiet = FALSE)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
quiet	if TRUE suppresses output from this function.

See Also

[load_all\(\)](#) to load a package for interactive development.

Examples

```
## Not run:  
# Reload package that is in current directory  
reload(".")  
  
# Reload package that is in ./ggplot2/  
reload("ggplot2/")  
  
# Can use inst() to find the package path  
# This will reload the installed ggplot2 package  
reload(pkgload::inst("ggplot2"))  
  
## End(Not run)
```

revdep	<i>Reverse dependency tools.</i>
--------	----------------------------------

Description

Tools to check and notify maintainers of all CRAN and Bioconductor packages that depend on the specified package.

Usage

```
revdep(pkg, dependencies = c("Depends", "Imports", "Suggests",
  "LinkingTo"), recursive = FALSE, ignore = NULL,
  bioconductor = FALSE)

revdep_maintainers(pkg = ".")
```

Arguments

pkg	Package name. This is unlike most devtools packages which take a path because you might want to determine dependencies for a package that you don't have installed. If omitted, defaults to the name of the current package.
dependencies	A character vector listing the types of dependencies to follow.
recursive	If TRUE look for full set of recursive dependencies.
ignore	A character vector of package names to ignore. These packages will not appear in returned vector. This is used in revdep_check() to avoid packages with installation problems or extremely long check times.
bioconductor	If TRUE also look for dependencies amongst Bioconductor packages.

Details

The first run in a session will be time-consuming because it must download all package metadata from CRAN and Bioconductor. Subsequent runs will be faster.

See Also

[revdep_check\(\)](#) to run R CMD check on all reverse dependencies.

Examples

```
## Not run:
revdep("ggplot2")

revdep("ggplot2", ignore = c("xkcd", "zoo"))

## End(Not run)
```

run_examples

Run all examples in a package.

Description

One of the most frustrating parts of R CMD check is getting all of your examples to pass - whenever one fails you need to fix the problem and then restart the whole process. This function makes it a little easier by making it possible to run all examples from an R function.

Usage

```
run_examples(pkg = ".", start = NULL, show = TRUE, test = FALSE,
             run = TRUE, fresh = FALSE, document = TRUE)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
start	Where to start running the examples: this can either be the name of Rd file to start with (with or without extensions), or a topic name. If omitted, will start with the (lexicographically) first file. This is useful if you have a lot of examples and don't want to rerun them every time you fix a problem.
show	DEPRECATED.
test	if TRUE, code in <code>\donttest{}</code> will be commented out. If FALSE, code in <code>\testonly{}</code> will be commented out.
run	if TRUE, code in <code>\dontrun{}</code> will be commented out.
fresh	if TRUE, will be run in a fresh R session. This has the advantage that there's no way the examples can depend on anything in the current session, but interactive code (like browser()) won't work.
document	if TRUE, document() will be run to ensure examples are updated before running them.

 save_all

Save all documents in an active IDE session.

Description

Helper function wrapping IDE-specific calls to save all documents in the active session. In this form, callers of `save_all()` don't need to execute any IDE-specific code. This function can be extended to include other IDE implementations of their equivalent `rstudioapi::documentSaveAll()` methods.

Usage

```
save_all()
```

show_news	<i>Show package news</i>
-----------	--------------------------

Description

Show package news

Usage

```
show_news(pkg = ".", latest = TRUE, ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
latest	if TRUE, only show the news for the most recent version.
...	other arguments passed on to news

source_gist	<i>Run a script on gist</i>
-------------	-----------------------------

Description

“Gist is a simple way to share snippets and pastes with others. All gists are git repositories, so they are automatically versioned, forkable and usable as a git repository.” <https://gist.github.com/>

Usage

```
source_gist(id, ..., filename = NULL, sha1 = NULL, quiet = FALSE)
```

Arguments

id	either full url (character), gist ID (numeric or character of numeric).
...	other options passed to source()
filename	if there is more than one R file in the gist, which one to source (filename ending in '.R')? Default NULL will source the first file.
sha1	The SHA-1 hash of the file at the remote URL. This is highly recommend as it prevents you from accidentally running code that's not what you expect. See source_url() for more information on using a SHA-1 hash.
quiet	if FALSE, the default, prints informative messages.

See Also

[source_url\(\)](#)

Examples

```
## Not run:
# You can run gists given their id
source_gist(6872663)
source_gist("6872663")

# Or their html url
source_gist("https://gist.github.com/hadley/6872663")
source_gist("gist.github.com/hadley/6872663")

# It's highly recommend that you run source_gist with the optional
# sha1 argument - this will throw an error if the file has changed since
# you first ran it
source_gist(6872663, sha1 = "54f1db27e60")
# Wrong hash will result in error
source_gist(6872663, sha1 = "54f1db27e61")

#' # You can specify a particular R file in the gist
source_gist(6872663, filename = "hi.r")
source_gist(6872663, filename = "hi.r", sha1 = "54f1db27e60")

## End(Not run)
```

source_url

Run a script through some protocols such as http, https, ftp, etc.

Description

If a SHA-1 hash is specified with the `sha1` argument, then this function will check the SHA-1 hash of the downloaded file to make sure it matches the expected value, and throw an error if it does not match. If the SHA-1 hash is not specified, it will print a message displaying the hash of the downloaded file. The purpose of this is to improve security when running remotely-hosted code; if you have a hash of the file, you can be sure that it has not changed. For convenience, it is possible to use a truncated SHA1 hash, down to 6 characters, but keep in mind that a truncated hash won't be as secure as the full hash.

Usage

```
source_url(url, ..., sha1 = NULL)
```

Arguments

url	url
...	other options passed to <code>source()</code>
sha1	The (prefix of the) SHA-1 hash of the file at the remote URL.

See Also

[source_gist\(\)](#)

Examples

```
## Not run:

source_url("https://gist.github.com/hadley/6872663/raw/hi.r")

# With a hash, to make sure the remote file hasn't changed
source_url("https://gist.github.com/hadley/6872663/raw/hi.r",
  sha1 = "54f1db27e60bb7e0486d785604909b49e8fef9f9")

# With a truncated hash
source_url("https://gist.github.com/hadley/6872663/raw/hi.r",
  sha1 = "54f1db27e60")

## End(Not run)
```

spell_check

Spell checking

Description

Runs a spell check on text fields in the package description file, manual pages, and optionally vignettes. Wraps the [spelling](#) package.

Usage

```
spell_check(pkg = ".", vignettes = TRUE, use_wordlist = TRUE)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
vignettes	also check all rmd and rnw files in the pkg vignettes folder
use_wordlist	ignore words in the package WORDLIST file

test

*Execute **test_that** tests in a package.*

Description

`test()` is a shortcut for `testthat::test_dir()`, it runs all of a package's tests. `test_file` runs `test()` on the active file. `test_coverage()` computes test coverage for your package. It is a shortcut for `covr::package_coverage()` and `covr::report()`. `test_coverage_file()` computes test coverage for the active file. Is a shortcut for `covr::file_coverage()` and `covr::report()`.

Usage

```
test(pkg = ".", filter = NULL, ...)

test_coverage(pkg = ".", show_report = interactive(), ...)

uses_testthat(pkg = ".")

test_file(file = find_active_file(), ...)

test_coverage_file(file = find_active_file(), filter = TRUE,
  show_report = interactive(), ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
filter	If not NULL, only tests with file names matching this regular expression will be executed. Matching will take on the file name after it has been stripped of "test-" and ".R".
...	additional arguments passed to testthat::test_dir() and covr::package_coverage()
show_report	Show the test coverage report.
file	One or more source or test files. If a source file the corresponding test file will be run. The default is to use the active file in RStudio (if available).

uninstall

Uninstall a local development package.

Description

Uses `remove.package` to uninstall the package. To uninstall a package from a non-default library, use [withr::with_libpaths\(\)](#).

Usage

```
uninstall(pkg = ".", unload = TRUE, quiet = FALSE, ...)
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
unload	if TRUE (the default), will automatically unload the package prior to uninstalling.
quiet	If TRUE, suppress output.
...	additional arguments passed to remove.packages() .

See Also

[with_debug\(\)](#) to install packages with debugging flags set.

Other package installation: [install](#)

wd	<i>Set working directory.</i>
----	-------------------------------

Description

Set working directory.

Usage

```
wd(pkg = ".", path = "")
```

Arguments

pkg	package description, can be path or package name. See as.package() for more information
path	path within package. Leave empty to change working directory to package directory.

Index

*Topic **programming**

- build_vignettes, 5
- run_examples, 23
- .libPaths(), 13
- as.package(), 3–5, 7, 9–11, 13, 15, 17, 20–22, 24, 25, 27–29
- bash, 2
- browser(), 24
- build, 3
- build(), 9
- build_manual, 4
- build_readme, 4
- build_site, 5
- build_vignettes, 5
- check, 6
- check(), 8
- check_built (check), 6
- check_failures, 8
- check_man, 9
- check_rhub, 9
- check_win, 10
- check_win_devel (check_win), 10
- check_win_oldrelease (check_win), 10
- check_win_release (check_win), 10
- clean_vignettes, 11
- clean_vignettes(), 6
- compile_dll(), 18
- compiler_flags, 8
- covr::file_coverage(), 27
- covr::package_coverage(), 27, 28
- covr::report(), 27
- dev_mode, 13
- dev_mode(), 12
- devtools, 12
- devtools-package (devtools), 12
- document, 13
- document(), 7, 24
- dr_devtools, 14, 14
- dr_github, 14, 14
- install, 15, 29
- install(), 12
- install_deps, 16
- install_dev_deps (install_deps), 16
- library(), 18, 19, 22
- lint, 17
- lintr::clear_cache(), 18
- lintr::lint(), 18
- lintr::lint_package(), 17, 18
- load_all, 18
- load_all(), 22
- load_code(), 18
- load_data(), 18
- missing_s3, 20
- options(), 12
- package_file, 20
- pkgbuild::build, 3
- pkgbuild::build(), 7, 10, 11, 15
- pkgbuild::clean_dll(), 18
- pkgdown::build_site(), 5
- pkgload::load_all(), 18
- r_env_vars(), 8
- Rd2pdf(), 4
- release, 21
- release(), 8
- reload, 22
- reload(), 16
- remotes::install_deps(), 16
- remove.packages(), 28
- revdep, 22
- revdep_check(), 8, 23
- revdep_maintainers (revdep), 22

`rhub::platforms()`, 10
`rhub::validate_email()`, 10
`rmarkdown::render()`, 4
`roxygen2::roxygenize()`, 13, 14
`run_examples`, 23

`save_all`, 24
`show_news`, 25
`source()`, 25, 26
`source_gist`, 25
`source_gist()`, 26
`source_url`, 26
`source_url()`, 25
`spell_check`, 27
`spelling`, 27

`test`, 27
`test_coverage(test)`, 27
`test_coverage_file(test)`, 27
`test_file(test)`, 27
`testthat::test_dir()`, 27, 28

`uninstall`, 16, 28
`unload()`, 18, 22
`update_packages()`, 16
`uses_testthat(test)`, 27
`utils::as.person()`, 12
`utils::install.packages()`, 17

`wd`, 29
`with_debug()`, 16, 29
`withr::with_libpaths()`, 16, 28
`WORDLIST`, 27