

Package ‘devtools’

January 23, 2016

Title Tools to Make Developing R Packages Easier

Version 1.10.0

Description Collection of package development tools.

URL <https://github.com/hadley/devtools>

BugReports <https://github.com/hadley/devtools/issues>

Depends R (>= 3.0.2)

Imports httr (>= 0.4), utils, tools, methods, memoise, whisker,
digest, rstudioapi (>= 0.2.0), jsonlite, stats, git2r (>=
0.11.0), withr

Suggests curl (>= 0.9), testthat (>= 0.7), BiocInstaller, Repp (>=
0.10.0), MASS, rmarkdown, knitr, lintr (>= 0.2.1), bitops,
roxygen2 (>= 5.0.0), evaluate, rversions

License GPL (>= 2)

VignetteBuilder knitr

RoxygenNote 5.0.1

NeedsCompilation yes

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

Maintainer Hadley Wickham <hadley@rstudio.com>

Repository CRAN

Date/Publication 2016-01-23 14:39:06

R topics documented:

bash	3
build	4
build_github_devtools	5

build_vignettes	6
build_win	6
check	7
check_failures	8
check_man	9
clean_dll	10
clean_source	10
clean_vignettes	11
compiler_flags	11
compile_dll	12
create	12
create_description	13
devtools	14
dev_example	14
dev_help	15
dev_mode	16
document	16
dr_devtools	17
dr_github	17
eval_clean	18
github_pull	18
has_devel	19
help	19
infrastructure	21
inst	23
install	24
install_bitbucket	25
install_deps	26
install_git	27
install_github	28
install_local	29
install_svn	30
install_url	31
install_version	31
lint	32
load_all	33
load_code	34
load_data	35
load_dll	35
missing_s3	36
package_deps	36
package_file	37
path	38
RCMD	39
release	39
reload	40
revdep	41
revdep_check_save_logs	42

run_examples	44
session_info	44
show_news	45
source_gist	45
source_url	46
system.file	47
system_check	48
test	49
uninstall	49
unload	50
update_packages	51
use_data	52
use_data_raw	53
use_git	53
use_news_md	54
use_package	54
wd	55
with_debug	55

Index**57**

bash	<i>Open bash shell in package directory.</i>
------	----------------------------------------------

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 install 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

<code>pkg</code>	package description, can be path or package name. See as.package for more information
<code>path</code>	path in which to produce package. If <code>NULL</code> , defaults to the parent directory of the package.
<code>binary</code>	Produce a binary (<code>--binary</code>) or source (<code>--no-manual --no-resave-data</code>) version of the package.
<code>vignettes, manual</code>	For source packages: if <code>FALSE</code> , don't build PDF vignettes (<code>--no-vignettes</code>) or manual (<code>--no-manual</code>).
<code>args</code>	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> .
<code>quiet</code>	if <code>TRUE</code> suppresses output from this function.

Value

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

See Also

Other build functions: [build_win](#)

build_github_devtools *Build the development version of devtools from GitHub.*

Description

This function is especially useful for Windows users who want to upgrade their version of devtools to the development version hosted on GitHub. In Windows, it's not possible to upgrade devtools while the package is loaded because there is an open DLL, which in Windows can't be overwritten. This function allows you to build a binary package of the development version of devtools; then you can restart R (so that devtools isn't loaded) and install the package.

Usage

```
build_github_devtools(outfile = NULL)
```

Arguments

outfile The name of the output file. If NULL (the default), it uses `./devtools.tgz` (Mac and Linux), or `./devtools.zip` (Windows).

Details

Mac and Linux users don't need this function; they can use `install_github` to install devtools directly, without going through the separate build-restart-install steps.

This function requires a working development environment. On Windows, it needs <http://cran.r-project.org/bin/windows/Rtools/>.

Value

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

Examples

```
## Not run:
library(devtools)
build_github_devtools()

#### Restart R before continuing ####
install.packages("./devtools.zip", repos = NULL)

# Remove the package after installation
unlink("./devtools.zip")

## End(Not run)
```

build_vignettes *Build package vignettes.*

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. You need to ensure that these files are not included in the built package - ideally they should not be checked into source, or at least excluded with .Rbuildignore

Usage

```
build_vignettes(pkg = ".", dependencies = "VignetteBuilder")
```

Arguments

pkg	package description, can be path or package name. See as.package for more information
dependencies	logical indicating to also install uninstalled packages which this pkg depends on/links to/suggests. See argument dependencies of install.packages .

See Also

[clean_vignettes](#) to remove the pdfs in 'inst/doc' created from vignettes

[clean_vignettes](#) to remove build tex/pdf files.

build_win *Build windows binary package.*

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 build_win is also useful to check that your package is ok on windows.

Usage

```
build_win(pkg = ".", version = c("R-release", "R-devel"), args = NULL,
  quiet = FALSE)
```

Arguments

pkg	package description, can be path or package name. See as.package for more information
version	directory to upload to on the win-builder, controlling which version of R is used to build the package. Possible options are listed on http://win-builder.r-project.org/ . Defaults to the released version of R.
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.
quiet	if TRUE suppresses output from this function.

See Also

Other build functions: [build](#)

check	<i>Build and check a package, cleaning up automatically on success.</i>
-------	-------------------------------------------------------------------------

Description

check automatically builds and checks a source package, using all known best practices. 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`: these typically represent serious problems.

Usage

```
check(pkg = ".", document = TRUE, cleanup = TRUE, cran = TRUE,
      check_version = FALSE, force_suggests = FALSE, args = NULL,
      build_args = NULL, quiet = FALSE, check_dir = tempdir(), ...)
```

Arguments

pkg	package description, can be path or package name. See as.package for more information
document	if TRUE (the default), will update and check documentation before running formal check.
cleanup	if TRUE the check directory is removed if the check is successful - this allows you to inspect the results to figure out what went wrong. If FALSE the check directory is never removed.
cran	if TRUE (the default), check using the same settings as CRAN uses.
check_version	Sets <code>_R_CHECK_CRAN_INCOMING_</code> env var. If TRUE, performs a number of checks related to version numbers of packages on CRAN.
force_suggests	Sets <code>_R_CHECK_FORCE_SUGGESTS_</code> . If FALSE (the default), check will proceed even if all suggested packages aren't found.

args, build_args An optional character vector of additional command line arguments to be passed to R CMD check/R CMD build/R CMD INSTALL.

quiet if TRUE suppresses output from this function.

check_dir the directory in which the package is checked

... Additional arguments passed to [build](#)

Details

check automatically builds a package before using R CMD check 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.

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 `check_version` 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 `check_dir` argument in a call to [check](#)

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

Check documentation, as R CMD check does.

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)
```

clean_dll	<i>Remove compiled objects from /src/ directory</i>
-----------	-----------------------------------------------------

Description

Invisibly returns the names of the deleted files.

Usage

```
clean_dll(pkg = ".")
```

Arguments

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

See Also

[compile_dll](#)

clean_source	<i>Sources an R file in a clean environment.</i>
--------------	--------------------------------------------------

Description

Opens up a fresh R environment and sources file, ensuring that it works independently of the current working environment.

Usage

```
clean_source(path, quiet = FALSE)
```

Arguments

path	path to R script
quiet	If FALSE, the default, all input and output will be displayed, as if you'd copied and paste the code. If TRUE only the final result and the any explicitly printed output will be displayed.

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

Description

This uses a fairly rudimentary algorithm where any files in 'inst/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
-----	-------------------------------------------------------------------------------------------------------

compiler_flags	<i>Default compiler flags used by devtools.</i>
----------------	-------------------------------------------------

Description

These default flags enforce good coding practice by ensuring that CFLAGS and CXXFLAGS are set to -Wall -pedantic. These tests are run by cran and are generally considered to be good practice.

Usage

```
compiler_flags(debug = FALSE)
```

Arguments

debug	If TRUE adds -g -O0 to all flags (Adding FFLAGS and FCFLAGS)
-------	--------------------------------------------------------------

Details

By default [compile_dll](#) is run with `compiler_flags(TRUE)`, and check with `compiler_flags(FALSE)`. If you want to avoid the possible performance penalty from the debug flags, install the package.

See Also

Other debugging flags: [with_debug](#)

Examples

```
compiler_flags()  
compiler_flags(TRUE)
```

compile_dll	<i>Compile a .dll/.so from source.</i>
-------------	----------------------------------------

Description

compile_dll performs a fake R CMD install so code that works here should work with a regular install (and vice versa).

Usage

```
compile_dll(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.

Details

During compilation, debug flags are set with `compiler_flags(TRUE)`.

Invisibly returns the names of the DLL.

Note

If this is used to compile code that uses Rcpp, you will need to add the following line to your Makevars file so that it knows where to find the Rcpp headers: `PKG_CPPFLAGS=`$(R_HOME)/bin/Rscript -e 'Rcpp:::Cxx'`

See Also

[clean_dll](#) to delete the compiled files.

create	<i>Creates a new package, following all devtools package conventions.</i>
--------	---------------------------------------------------------------------------

Description

Similar to [package.skeleton](#), except that it only creates the standard devtools directory structures; it doesn't try and create source code and data files by inspecting the global environment.

Usage

```
create(path, description = getOption("devtools.desc"), check = FALSE,
       rstudio = TRUE)
```

```
setup(path = ".", description = getOption("devtools.desc"), check = FALSE,
      rstudio = TRUE)
```

Arguments

path	location to create new package. The last component of the path will be used as the package name.
description	list of description values to override default values or add additional values.
check	if TRUE, will automatically run check
rstudio	Create an Rstudio project file? (with use_rstudio)

Details

create requires that the directory doesn't exist yet; it will be created but deleted upon failure. setup assumes an existing directory from which it will infer the package name.

See Also

Text with [package.skeleton](#)

Examples

```
## Not run:
# Create a package using all defaults:
path <- file.path(tempdir(), "myDefaultPackage")
create(path)

# Override a description attribute.
path <- file.path(tempdir(), "myCustomPackage")
my_description <- list("Maintainer" =
  "'Yoni Ben-Meshulam' <yoni@opower.com>")
create(path, my_description)

## End(Not run)
```

create_description *Create a default DESCRIPTION file for a package.*

Description

Create a default DESCRIPTION file for a package.

Usage

```
create_description(path = ".", extra = getOption("devtools.desc"),
  quiet = FALSE)
```

Arguments

path	path to package root directory
extra	a named list of extra options to add to 'DESCRIPTION'. Arguments that take a list
quiet	if TRUE, suppresses output from this function.

Details

To set the default author and licenses, set options `devtools.desc.author` and `devtools.desc.license`. I use `options(devtools.desc.author = '"Hadley Wickham <h.wickham@gmail.com> [aut,cre]"', devtools.desc.license = '"MIT"')`

devtools	<i>Package development tools for R.</i>
----------	-----------------------------------------

Description

Package development tools for R.

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 [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'

dev_example	<i>Run a examples for an in-development function.</i>
-------------	-------------------------------------------------------

Description

Run a examples for an in-development function.

Usage

```
dev_example(topic)
```

Arguments

topic	Name or topic (or name of Rd) file to run examples for
-------	--------------------------------------------------------

See Also

Other example functions: [run_examples](#)

Examples

```
## Not run:
# Runs installed example:
library("ggplot2")
example("ggplot")

# Runs development example:
load_all("ggplot2")
dev_example("ggplot")

## End(Not run)
```

dev_help

Read the in-development help for a package loaded with devtools.

Description

Note that this only renders a single documentation file, so that links to other files within the package won't work.

Usage

```
dev_help(topic, stage = "render", type = getOption("help_type"))
```

Arguments

topic	name of help to search for.
stage	at which stage ("build", "install", or "render") should <code>\Sexpr</code> macros be executed? This is only important if you're using <code>\Sexpr</code> macro's in your Rd files.
type	of html to produce: "html" or "text". Defaults to your default documentation type.

Examples

```
## Not run:
library("ggplot2")
help("ggplot") # loads installed documentation for ggplot

load_all("ggplot2")
dev_help("ggplot") # loads development documentation for ggplot

## End(Not run)
```

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 `roxygenize()` function from the `roxygen2` package. See the documentation and vignettes of that package to learn how to use `roxygen`.

Usage

```
document(pkg = ".", clean = NULL, roclets = NULL, reload = TRUE)
```

Arguments

<code>pkg</code>	package description, can be path or package name. See <code>as.package</code> for more information
<code>clean, reload</code>	Deprecated.
<code>roclets</code>	Character vector of roclet names to use with package. This defaults to NULL, 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

[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

```
dr_devtools()
```

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()
```

eval_clean	<i>Evaluate code in a clean R session.</i>
------------	--------------------------------------------

Description

Evaluate code in a clean R session.

Usage

```
eval_clean(expr, quiet = TRUE)

evalq_clean(expr, quiet = TRUE)
```

Arguments

expr	an R expression to evaluate. For <code>eval_clean</code> this should already be quoted. For <code>evalq_clean</code> it will be quoted for you.
quiet	if TRUE, the default, only the final result and the any explicitly printed output will be displayed. If FALSE, all input and output will be displayed, as if you'd copied and paste the code.

Value

An invisible TRUE on success.

Examples

```
x <- 1
y <- 2
ls()
evalq_clean(ls())
evalq_clean(ls(), FALSE)
eval_clean(quote({
  z <- 1
  ls()
}))
```

github_pull	<i>GitHub references</i>
-------------	--------------------------

Description

Use as ref parameter to [install_github](#). Allows installing a specific pull request or the latest release.

Usage

```
github_pull(pull)
```

```
github_release()
```

Arguments

pull The pull request to install

See Also

[install_github](#)

has_devel *Check if you have a development environment installed.*

Description

Thanks to the suggestion of Simon Urbanek.

Usage

```
has_devel()
```

Value

TRUE if your development environment is correctly set up, otherwise returns an error.

Examples

```
has_devel()
```

help *Drop-in replacements for help and ? functions*

Description

The ? and help functions are replacements for functions of the same name in the utils package. They are made available when a package is loaded with [load_all](#).

Usage

```
# help(topic, package = NULL, ...)
```

```
# ?e2
```

```
# e1?e2
```

Arguments

topic	A name or character string specifying the help topic.
package	A name or character string specifying the package in which to search for the help topic. If NULL, search all packages.
...	Additional arguments to pass to help .
e1	First argument to pass along to <code>utils::`?`</code> .
e2	Second argument to pass along to <code>utils::`?`</code> .

Details

The `?` function is a replacement for `?` from the `utils` package. It will search for help in devtools-loaded packages first, then in regular packages.

The `help` function is a replacement for `help` from the `utils` package. If `package` is not specified, it will search for help in devtools-loaded packages first, then in regular packages. If `package` is specified, then it will search for help in devtools-loaded packages or regular packages, as appropriate.

Examples

```
## Not run:
# This would load devtools and look at the help for load_all, if currently
# in the devtools source directory.
load_all()
?load_all
help("load_all")

## End(Not run)

# To see the help pages for utils::help and utils::`?`:
help("help", "utils")
help("?", "utils")

## Not run:
# Examples demonstrating the multiple ways of supplying arguments
# NB: you can't do pkg <- "ggplot2"; help("ggplot2", pkg)
help(lm)
help(lm, stats)
help(lm, 'stats')
help('lm')
help('lm', stats)
help('lm', 'stats')
help(package = stats)
help(package = 'stats')
topic <- "lm"
help(topic)
help(topic, stats)
help(topic, 'stats')

## End(Not run)
```

infrastructure *Add useful infrastructure to a package.*

Description

Add useful infrastructure to a package.

Usage

```
use_testthat(pkg = ".")
use_test(name, pkg = ".")
use_rstudio(pkg = ".")
use_vignette(name, pkg = ".")
use_rcpp(pkg = ".")
use_travis(pkg = ".")
use_coverage(pkg = ".", type = c("codecov", "coveralls"))
use_appveyor(pkg = ".")
use_package_doc(pkg = ".")
use_revdep(pkg = ".")
use_cran_comments(pkg = ".")
use_code_of_conduct(pkg = ".")
use_cran_badge(pkg = ".")
use_mit_license(pkg = ".", copyright_holder = getOption("devtools.name",
  "<Author>"))
```

Arguments

pkg	package description, can be path or package name. See as.package for more information.
name	File name to use for new vignette. Should consist only of numbers, letters, _ and -. I recommend using lower case.
type	CI tool to use. Currently supports codecov and coverall.
copyright_holder	The copyright holder for this package. Defaults to <code>getOption("devtools.name")</code> .

use_testthat

Add testing infrastructure to a package that does not already have it. This will create 'tests/testthat.R', 'tests/testthat/' and add **testthat** to the suggested packages. This is called automatically from [test](#) if needed.

use_test

Add a test file, also add testing infrastructure if necessary. This will create 'tests/testthat/test-<name>.R' with a user-specified name for the test. Will fail if the file exists.

use_rstudio

Does not modify .Rbuildignore as RStudio will do that when opened for the first time.

use_vignette

Adds needed packages to DESCRIPTION, and creates draft vignette in vignettes/. It adds inst/doc to .gitignore so you don't accidentally check in the built vignettes.

use_rcpp

Creates src/ and adds needed packages to DESCRIPTION.

use_travis

Add basic travis template to a package. Also adds .travis.yml to .Rbuildignore so it isn't included in the built package.

use_coverage

Add test code coverage to basic travis template to a package.

use_appveyor

Add basic AppVeyor template to a package. Also adds appveyor.yml to .Rbuildignore so it isn't included in the built package.

use_package_doc

Adds a roxygen template for package documentation

use_revdep

Add revdep directory and basic check template.

use_cran_comments

Add cran-comments.md template.

use_code_of_conduct

Add a code of conduct to from <http://contributor-covenant.org>.

use_cran_badge

Add a badge to show CRAN status and version number on the README

use_mit_license

Adds the necessary infrastructure to declare your package as distributed under the MIT license.

See Also

Other infrastructure: [use_build_ignore](#), [use_data_raw](#), [use_data](#), [use_news_md](#), [use_package](#), [use_readme_rmd](#)

inst

Get the installation path of a package

Description

Given the name of a package, this returns a path to the installed copy of the package, which can be passed to other devtools functions.

Usage

```
inst(name)
```

Arguments

name the name of a package.

Details

It searches for the package in `.libPaths()`. If multiple dirs are found, it will return the first one.

Examples

```
inst("devtools")
inst("grid")
## Not run:
# Can be passed to other devtools functions
unload(inst("ggplot2"))

## End(Not run)
```

install *Install a local development package.*

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, local = TRUE,
        args = getOption("devtools.install.args"), quiet = FALSE,
        dependencies = NA, upgrade_dependencies = TRUE, build_vignettes = FALSE,
        keep_source = getOption("keep.source.pkgs"), threads = getOption("Ncpus",
        1), force_deps = FALSE, metadata = remote_metadata(as.package(pkg)), ...)
```

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.
local	if FALSE builds the package first: this ensures that the installation is completely clean, and prevents any binary artefacts (like <code>‘.o’, .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 suppresses output from this function.
dependencies	logical indicating to also install uninstalled packages which this pkg depends on/links to/suggests. See argument dependencies of install.packages .
upgrade_dependencies	If TRUE, the default, will also update any out of date dependencies.
build_vignettes	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>).
keep_source	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> .
threads	number of concurrent threads to use for installing dependencies. It defaults to the option <code>"Ncpus"</code> or 1 if unset.
force_deps	whether to force installation of dependencies even if their SHA1 reference hasn't changed from the currently installed version.

metadata	Named list of metadata entries to be added to the DESCRIPTION after installation.
...	additional arguments passed to <code>install.packages</code> when installing dependencies. pkg is installed with R CMD INSTALL.

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 `local = FALSE` 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 [with_libpaths](#).

See Also

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

Other package installation: [install_bitbucket](#), [install_github](#), [install_git](#), [install_svn](#), [install_url](#), [install_version](#), [uninstall](#)

install_bitbucket	<i>Install a package directly from bitbucket</i>
-------------------	--------------------------------------------------

Description

This function is vectorised so you can install multiple packages in a single command.

Usage

```
install_bitbucket(repo, username, ref = "master", subdir = NULL,
  auth_user = NULL, password = NULL, force = FALSE, quiet = FALSE, ...)
```

Arguments

repo	Repository address in the format <code>username/repo[/subdir][@ref #pull]</code> . Alternatively, you can specify <code>subdir</code> and/or <code>ref</code> using the respective parameters (see below); if both are specified, the values in <code>repo</code> take precedence.
username	User name. Deprecated: please include username in the repo
ref	Desired git reference; could be a commit, tag, or branch name. Defaults to master.
subdir	subdirectory within repo that contains the R package.
auth_user	your account username if you're attempting to install a package hosted in a private repository (and your username is different to username)
password	your password
force	Force installation even if the git SHA1 has not changed since the previous install.
quiet	if TRUE suppresses output from this function.
...	Other arguments passed on to install .

See Also

Bitbucket API docs: <https://confluence.atlassian.com/bitbucket/use-the-bitbucket-cloud-rest-apis-22272.html>

Other package installation: [install_github](#), [install_git](#), [install_svn](#), [install_url](#), [install_version](#), [install](#), [uninstall](#)

Examples

```
## Not run:
install_bitbucket("sulab/mygene.r@default")
install_bitbucket("dannavarro/lsr-package")

## End(Not run)
```

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

Description

Install package dependencies if needed.

Usage

```
install_deps(pkg = ".", dependencies = NA, threads = getOption("Ncpus",
  1), repos = getOption("repos"), type = getOption("pkgType"), ...,
  upgrade = TRUE, quiet = FALSE, force_deps = FALSE)
```

Arguments

pkg	package description, can be path or package name. See as.package for more information
dependencies	logical indicating to also install uninstalled packages which this pkg depends on/links to/suggests. See argument dependencies of install.packages .
threads	number of concurrent threads to use for installing dependencies. It defaults to the option "Ncpus" or 1 if unset.
repos	A character vector giving repositories to use.
type	Type of package to update. If "both", will switch automatically to "binary" to avoid interactive prompts during package installation.
...	additional arguments passed to install.packages .
upgrade	If TRUE, also upgrade any of out date dependencies.
quiet	if TRUE suppresses output from this function.
force_deps	whether to force installation of dependencies even if their SHA1 reference hasn't changed from the currently installed version.

Examples

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

install_git	<i>Install a package from a git repository</i>
-------------	------------------------------------------------

Description

It is vectorised so you can install multiple packages with a single command. You do not need to have git installed.

Usage

```
install_git(url, subdir = NULL, branch = NULL, args = character(0),  
            force = FALSE, quiet = FALSE, ...)
```

Arguments

url	Location of package. The url should point to a public or private repository.
subdir	A sub-directory within a git repository that may contain the package we are interested in installing.
branch	Name of branch or tag to use, if not master.
args	DEPRECATED. A character vector providing extra arguments to pass on to git.
force	Force installation even if the git SHA1 has not changed since the previous install.
quiet	if TRUE suppresses output from this function.
...	passed on to install

See Also

Other package installation: [install_bitbucket](#), [install_github](#), [install_svn](#), [install_url](#), [install_version](#), [install](#), [uninstall](#)

Examples

```
## Not run:  
install_git("git://github.com/hadley/stringr.git")  
install_git("git://github.com/hadley/stringr.git", branch = "stringr-0.2")  
  
## End(Not run)
```

install_github	<i>Attempts to install a package directly from GitHub.</i>
----------------	------------------------------------------------------------

Description

This function is vectorised on `repo` so you can install multiple packages in a single command.

Usage

```
install_github(repo, username = NULL, ref = "master", subdir = NULL,
  auth_token = github_pat(quiet), host = "api.github.com", force = FALSE,
  quiet = FALSE, ...)
```

Arguments

<code>repo</code>	Repository address in the format <code>username/repo[/subdir][@ref #pull]</code> . Alternatively, you can specify <code>subdir</code> and/or <code>ref</code> using the respective parameters (see below); if both are specified, the values in <code>repo</code> take precedence.
<code>username</code>	User name. Deprecated: please include username in the <code>repo</code>
<code>ref</code>	Desired git reference. Could be a commit, tag, or branch name, or a call to github_pull . Defaults to "master".
<code>subdir</code>	subdirectory within <code>repo</code> that contains the R package.
<code>auth_token</code>	To install from a private repo, generate a personal access token (PAT) in https://github.com/settings/tokens and supply to this argument. This is safer than using a password because you can easily delete a PAT without affecting any others. Defaults to the <code>GITHUB_PAT</code> environment variable.
<code>host</code>	GitHub API host to use. Override with your GitHub enterprise hostname, for example, "github.hostname.com/api/v3".
<code>force</code>	Force installation even if the git SHA1 has not changed since the previous install.
<code>quiet</code>	if TRUE suppresses output from this function.
<code>...</code>	Other arguments passed on to install .

Details

Attempting to install from a source repository that uses submodules raises a warning. Because the zipped sources provided by GitHub do not include submodules, this may lead to unexpected behaviour or compilation failure in source packages. In this case, cloning the repository manually using [install_git](#) with `args="--recursive"` may yield better results.

See Also

[github_pull](#)

Other package installation: [install_bitbucket](#), [install_git](#), [install_svn](#), [install_url](#), [install_version](#), [install](#), [uninstall](#)

Examples

```
## Not run:
install_github("klutometis/roxygen")
install_github("wch/ggplot2")
install_github(c("rstudio/httpuv", "rstudio/shiny"))
install_github(c("hadley/httr@v0.4", "klutometis/roxygen#142",
  "mfrasca/r-logging/pkg"))

# Update devtools to the latest version, on Linux and Mac
# On Windows, this won't work - see ?build_github_devtools
install_github("hadley/devtools")

# To install from a private repo, use auth_token with a token
# from https://github.com/settings/tokens. You only need the
# repo scope. Best practice is to save your PAT in env var called
# GITHUB_PAT.
install_github("hadley/private", auth_token = "abc")

## End(Not run)
```

<code>install_local</code>	<i>Install a package from a local file</i>
----------------------------	--------------------------------------------

Description

This function is vectorised so you can install multiple packages in a single command.

Usage

```
install_local(path, subdir = NULL, ...)
```

Arguments

<code>path</code>	path to local directory, or compressed file (tar, zip, tar.gz tar.bz2, tgz2 or tbz)
<code>subdir</code>	subdirectory within url bundle that contains the R package.
<code>...</code>	Other arguments passed on to install .

Examples

```
## Not run:
dir <- tempfile()
dir.create(dir)
pkg <- download.packages("testthat", dir, type = "source")
install_local(pkg[, 2])

## End(Not run)
```

`install_svn`*Install a package from a SVN repository*

Description

This function requires `svn` to be installed on your system in order to be used.

Usage

```
install_svn(url, subdir = NULL, branch = NULL, args = character(0), ...,  
            revision = NULL)
```

Arguments

<code>url</code>	Location of package. The url should point to a public or private repository.
<code>subdir</code>	A sub-directory within a svn repository that may contain the package we are interested in installing. By default, this points to the 'trunk' directory.
<code>branch</code>	Name of branch or tag to use, if not trunk.
<code>args</code>	A character vector providing extra arguments to pass on to
<code>...</code>	Other arguments passed on to install
<code>revision</code>	svn revision, if omitted updates to latest

Details

It is vectorised so you can install multiple packages with a single command.

See Also

Other package installation: [install_bitbucket](#), [install_github](#), [install_git](#), [install_url](#), [install_version](#), [install](#), [uninstall](#)

Examples

```
## Not run:  
install_svn("https://github.com/hadley/stringr")  
install_svn("https://github.com/hadley/htr", branch = "oauth")  
  
## End(Not run)
```

install_url	<i>Install a package from a url</i>
-------------	-------------------------------------

Description

This function is vectorised so you can install multiple packages in a single command.

Usage

```
install_url(url, subdir = NULL, config = list(), ...)
```

Arguments

url	location of package on internet. The url should point to a zip file, a tar file or a bziped/gzipped tar file.
subdir	subdirectory within url bundle that contains the R package.
config	additional configuration argument (e.g. proxy, authentication) passed on to GET .
...	Other arguments passed on to install .

See Also

Other package installation: [install_bitbucket](#), [install_github](#), [install_git](#), [install_svn](#), [install_version](#), [install](#), [uninstall](#)

Examples

```
## Not run:  
install_url("https://github.com/hadley/stringr/archive/master.zip")  
  
## End(Not run)
```

install_version	<i>Install specified version of a CRAN package.</i>
-----------------	-----------------------------------------------------

Description

If you are installing an package that contains compiled code, you will need to have an R development environment installed. You can check if you do by running [has_devel](#).

Usage

```
install_version(package, version = NULL, repos = getOption("repos"),  
                type = getOption("pkgType"), ...)
```

Arguments

package	package name
version	If the specified version is NULL or the same as the most recent version of the package, this function simply calls install . Otherwise, it looks at the list of archived source tarballs and tries to install an older version instead.
repos	character vector, the base URL(s) of the repositories to use, e.g., the URL of a CRAN mirror such as " http://cran.us.r-project.org ". For more details on supported URL schemes see url . Can be NULL to install from local files, directories or URLs: this will be inferred by extension from pkgs if of length one.
type	character, indicating the type of package to download and install. Will be "source" except on Windows and some OS X builds: see the section on 'Binary packages' for those.
...	Other arguments passed on to install .

Author(s)

Jeremy Stephens

See Also

Other package installation: [install_bitbucket](#), [install_github](#), [install_git](#), [install_svn](#), [install_url](#), [install](#), [uninstall](#)

lint

Lint all source files in a package.

Description

The default lintings 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 as.package for more information
cache	store the lint results so repeated lints of the same content use the previous results.
...	additional arguments passed to lint_package

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 [clear_cache](#).

See Also

[lint_package](#), [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(pkg = ".", reset = TRUE, recompile = FALSE, export_all = TRUE,
         quiet = FALSE, create = NA)
```

Arguments

<code>pkg</code>	package description, can be path or package name. See as.package for more information.
<code>reset</code>	clear package environment and reset file cache before loading any pieces of the package. This is equivalent to running unload 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>	force a recompile of DLL from source code, if present. This is equivalent to running clean_dll 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>quiet</code>	if TRUE suppresses output from this function.
<code>create</code>	only relevant if a package structure does not exist yet: if TRUE, create a package structure; if NA, ask the user (in interactive mode only)

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.

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 laded 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)
```

load_code

Load R code.

Description

Load all R code in the R directory. The first time the code is loaded, `.onLoad` will be run if it exists.

Usage

```
load_code(pkg = ".")
```

Arguments

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

load_data	<i>Load data.</i>
-----------	-------------------

Description

Loads all .RData files in the data subdirectory.

Usage

```
load_data(pkg = ".")
```

Arguments

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

load_dll	<i>Load a compiled DLL</i>
----------	----------------------------

Description

Load a compiled DLL

Usage

```
load_dll(pkg = ".")
```

Arguments

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

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_deps	<i>Find all dependencies of a CRAN or dev package.</i>
--------------	--------------------------------------------------------

Description

Find all the dependencies of a package and determine whether they are ahead or behind CRAN. A `print()` method identifies mismatches (if any) between local and CRAN versions of each dependent package; an `update()` method installs outdated or missing packages from CRAN.

Usage

```
package_deps(pkg, dependencies = NA, repos = getOption("repos"),
  type = getOption("pkgType"))
```

```
dev_package_deps(pkg = ".", dependencies = NA, repos = getOption("repos"),
  type = getOption("pkgType"), force_deps = FALSE)
```

```
## S3 method for class 'package_deps'
update(object, ..., quiet = FALSE, upgrade = TRUE)
```

Arguments

pkg	A character vector of package names. If missing, defaults to the name of the package in the current directory.
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. If "both", will switch automatically to "binary" to avoid interactive prompts during package installation.
force_deps	whether to force installation of dependencies even if their SHA1 reference hasn't changed from the currently installed version.
object	A package_deps object.
...	Additional arguments passed to install_packages.
quiet	If TRUE, suppress output.
upgrade	If TRUE, also upgrade any of out date dependencies.

Value

A data.frame with columns:

package	The dependent package's name,
installed	The currently installed version,
available	The version available on CRAN,
diff	An integer denoting whether the locally installed version of the package is newer (1), the same (0) or older (-1) t

Examples

```
## Not run:
package_deps("devtools")
# Use update to update any out-of-date dependencies
update(package_deps("devtools"))

## End(Not run)
```

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

Description

It always starts by finding 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)
```

path	<i>Get/set the PATH variable.</i>
------	-----------------------------------

Description

Get/set the PATH variable.

Usage

```
get_path()  
  
set_path(path)  
  
add_path(path, after = Inf)
```

Arguments

path	character vector of paths
after	for <code>add_path</code> , the place on the PATH where the new paths should be added

Value

`set_path` invisibly returns the old path.

See Also

[with_path](#) to temporarily set the path for a block of code

Other path: [on_path](#)

Examples

```
path <- get_path()  
length(path)  
old <- add_path(".")  
length(get_path())  
set_path(old)  
length(get_path())
```

RCMD	<i>Run R CMD xxx from within R</i>
------	------------------------------------

Description

Run R CMD xxx from within R

Usage

```
RCMD(cmd, options, path = tempdir(), env_vars = NULL, ...)
```

Arguments

cmd	one of the R tools available from the R CMD interface.
options	a character vector of options to pass to the command
path	the directory to run the command in.
env_vars	environment variables to set before running the command.
...	additional arguments passed to system_check

Value

TRUE if the command succeeds, throws an error if the command fails.

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

Description

Run automated and manual tests, then ftp to CRAN.

Usage

```
release(pkg = ".", check = TRUE)
```

Arguments

pkg	package description, can be path or package name. See as.package 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.

Details

The package release process will:

- Confirm that the package passes R CMD check
- Ask if you've checked your code on win-builder
- Confirm that news is up-to-date
- Confirm that DESCRIPTION is ok
- Ask if you've checked packages that depend on your package
- Build the package
- Submit the package to CRAN, using comments in "cran-comments.md"

You can also 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 a 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.

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(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)
```

```
revdep_check_save_logs
```

Run R CMD check on all downstream dependencies.

Description

Use `revdep_check()` to run [check_cran\(\)](#) on all downstream dependencies. Summarises the results with `revdep_check_summary` and save logs with `revdep_check_save_logs`.

Usage

```
revdep_check_save_logs(res, log_dir = "revdep")

revdep_check_save_summary(res, log_dir = "revdep")

revdep_check_summary(res)

revdep_check(pkg = ".", recursive = FALSE, ignore = NULL,
  dependencies = c("Depends", "Imports", "Suggests", "LinkingTo"),
  libpath = getOption("devtools.revdep.libpath"), srcpath = libpath,
  bioconductor = FALSE, type = getOption("pkgType"),
  threads = getOption("Ncpus", 1), check_dir = tempfile("check_cran"))
```

Arguments

<code>res</code>	Result of <code>revdep_check</code>
<code>log_dir</code>	Directory in which to save logs
<code>pkg</code>	Path to package. Defaults to current directory.
<code>recursive</code>	If TRUE look for full set of recursive dependencies.
<code>ignore</code>	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.
<code>dependencies</code>	A character vector listing the types of dependencies to follow.

libpath	Path to library to store dependencies packages - if you you're doing this a lot it's a good idea to pick a directory and stick with it so you don't have to download all the packages every time.
srcpath	Path to directory to store source versions of dependent packages - again, this saves a lot of time because you don't need to redownload the packages every time you run the package.
bioconductor	If TRUE also look for dependencies amongst bioconductor packages.
type	binary Package type to test (source, mac.binary etc). Defaults to the same type as install.packages() .
threads	Number of concurrent threads to use for checking. It defaults to the option "Ncpus" or 1 if unset.
check_dir	Directory to store results.

Value

An invisible list of results. But you'll probably want to look at the check results on disk, which are saved in check_dir. Summaries of all ERRORS and WARNINGS will be stored in check_dir/00check-summary.txt.

Check process

1. Install pkg (in special library, see below).
2. Find all CRAN packages that depend on pkg.
3. Install those packages, along with their dependencies.
4. Run R CMD check on each package.
5. Uninstall pkg (so other reverse dependency checks don't use the development version instead of the CRAN version)

Package library

By default revdep_check uses a temporary library to store any packages that are required by the packages being tested. This ensures that they don't interfere with your default library, but means that if you restart R between checks, you'll need to reinstall all the packages. If you're doing reverse dependency checks frequently, I recommend that you create a directory for these packages and set `options(devtools.revdep.libpath)`.

See Also

[revdep_maintainers\(\)](#) to get a list of all revdep maintainers.

Examples

```
## Not run:
# Run R CMD check on all downstream dependencies of ggplot2
res <- revdep_check("ggplot2")
revdep_check_summary(res)
revdep_check_save_logs(res)

## End(Not run)
```

run_examples	<i>Run all examples in a package.</i>
--------------	---------------------------------------

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)
```

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	if TRUE, code in <code>\dontshow{}</code> will be commented out
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.

See Also

Other example functions: [dev_example](#)

session_info	<i>Print session information</i>
--------------	----------------------------------

Description

This is `sessionInfo()` re-written from scratch to both exclude data that’s rarely useful (e.g., the full collate string or base packages loaded) and include stuff you’d like to know (e.g., where a package was installed from).

Usage

```
session_info(pkgs = NULL, include_base = FALSE)
```

Arguments

pkgs Either a vector of package names or NULL. If NULL, displays all loaded packages. If a character vector, also, includes all dependencies of the package.

include_base Include base packages in summary? By default this is false since base packages should always match the R version.

Examples

```
session_info()
session_info("devtools")
```

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, ..., sha1 = NULL, quiet = FALSE)
```

Arguments

id	either full url (character), gist ID (numeric or character of numeric). If a gist ID is specified and the entry has multiple files, only the first R file in the gist is sourced.
...	other options passed to <code>source</code>
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.

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")

## 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 source
sha1	The (prefix of the) SHA-1 hash of the file at the remote URL.

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)
```

system.file

Replacement version of system.file

Description

This function is meant to intercept calls to [system.file](#), so that it behaves well with packages loaded by devtools. It is made available when a package is loaded with [load_all](#).

Usage

```
# system.file(..., package = "base", lib.loc = NULL, mustWork = FALSE)
```

Arguments

...	character vectors, specifying subdirectory and file(s) within some package. The default, none, returns the root of the package. Wildcards are not supported.
package	a character string with the name of a single package. An error occurs if more than one package name is given.
lib.loc	a character vector with path names of R libraries. See ‘Details’ for the meaning of the default value of NULL.
mustWork	logical. If TRUE, an error is given if there are no matching files.

Details

When `system.file` is called from the R console (the global environment), this function detects if the target package was loaded with `load_all`, and if so, it uses a customized method of searching for the file. This is necessary because the directory structure of a source package is different from the directory structure of an installed package.

When a package is loaded with `load_all`, this function is also inserted into the package's imports environment, so that calls to `system.file` from within the package namespace will use this modified version. If this function were not inserted into the imports environment, then the package would end up calling `base::system.file` instead.

system_check	<i>Run a system command and check if it succeeds.</i>
--------------	-------------------------------------------------------

Description

Run a system command and check if it succeeds.

Usage

```
system_check(cmd, args = character(), env = character(), quiet = FALSE,  
...)
```

Arguments

cmd	the command to run.
args	a vector of command arguments.
env	a named character vector of environment variables. Will be quoted
quiet	if FALSE, the command to be run will be echoed.
...	additional arguments passed to <code>system</code>

Value

TRUE if the command succeeds, an error will be thrown if the command fails.

test	<i>Execute all test_that tests in a package.</i>
------	---------------------------------------------------------

Description

Tests are assumed to be located in either the `inst/tests/` or `tests/testthat` directory (the latter is recommended). See [test_dir](#) for the naming convention of test scripts within one of those directories and [test_check](#) for the folder structure conventions.

Usage

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

```
uses_testthat(pkg = ".")
```

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 test_dir

Details

If no testing infrastructure is present (detected by the `uses_testthat` function), you'll be asked if you want devtools to create it for you (in interactive sessions only). See [add_test_infrastructure](#) for more details.

uninstall	<i>Uninstall a local development package.</i>
-----------	-----------------------------------------------

Description

Uses `remove.package` to uninstall the package. To uninstall a package from a non-default library, use [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 suppresses output from this function.
...	additional arguments passed to remove.packages .

See Also

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

Other package installation: [install_bitbucket](#), [install_github](#), [install_git](#), [install_svn](#), [install_url](#), [install_version](#), [install](#)

unload	<i>Unload a package</i>
--------	-------------------------

Description

This function attempts to cleanly unload a package, including unloading its namespace, deleting S4 class definitions and unloading any loaded DLLs. Unfortunately S4 classes are not really designed to be cleanly unloaded, and so we have to manually modify the class dependency graph in order for it to work - this works on the cases for which we have tested but there may be others. Similarly, automated DLL unloading is best tested for simple scenarios (particularly with `useDynLib(pkgname)`) and may fail in other cases. If you do encounter a failure, please file a bug report at <http://github.com/hadley/devtools/issues>.

Usage

```
unload(pkg = ".")
```

Arguments

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

Examples

```
## Not run:
# Unload package that is in current directory
unload(".")

# Unload package that is in ./ggplot2/
unload("ggplot2/")

# Can use inst() to find the path of an installed package
# This will load and unload the installed ggplot2 package
library(ggplot2)
```

```
unload(inst("ggplot2"))
## End(Not run)
```

update_packages	<i>Update packages that are missing or out-of-date.</i>
-----------------	---------------------------------------------------------

Description

Works similarly to `install.packages()` but doesn't install packages that are already installed, and also upgrades out dated dependencies.

Usage

```
update_packages(pkgs, dependencies = NA, repos = getOption("repos"),
  type = getOption("pkgType"))
```

Arguments

pkgs	Character vector of packages to update.
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. If "both", will switch automatically to "binary" to avoid interactive prompts during package installation.

See Also

[package_deps](#) to see which packages are out of date/ missing.

Examples

```
## Not run:
update_packages("ggplot2")
update_packages(c("plyr", "ggplot2"))
## End(Not run)
```

use_data	<i>Use data in a package.</i>
----------	-------------------------------

Description

This function makes it easy to save package data in the correct format.

Usage

```
use_data(..., pkg = ".", internal = FALSE, overwrite = FALSE,  
         compress = "bzip2")
```

Arguments

...	Unquoted names of existing objects to save.
pkg	Package where to store data. Defaults to package in working directory.
internal	If FALSE, saves each object in individual .rda files in the data/ directory. These are available whenever the package is loaded. If TRUE, stores all objects in a single R/sysdata.rda file. These objects are only available within the package.
overwrite	By default, use_data will not overwrite existing files. If you really want to do so, set this to TRUE.
compress	Choose the type of compression used by save . Should be one of "gzip", "bzip2" or "xz".

See Also

Other infrastructure: [infrastructure](#), [use_build_ignore](#), [use_data_raw](#), [use_news_md](#), [use_package](#), [use_readme_rmd](#)

Examples

```
## Not run:  
x <- 1:10  
y <- 1:100  
  
use_data(x, y) # For external use  
use_data(x, y, internal = TRUE) # For internal use  
  
## End(Not run)
```

use_data_raw	<i>Use data-raw to compute package datasets.</i>
--------------	--------------------------------------------------

Description

Use data-raw to compute package datasets.

Usage

```
use_data_raw(pkg = ".")
```

Arguments

pkg Package where to create data-raw. Defaults to package in working directory.

See Also

Other infrastructure: [infrastructure](#), [use_build_ignore](#), [use_data](#), [use_news_md](#), [use_package](#), [use_readme_rmd](#)

use_git	<i>Initialise a git repository.</i>
---------	-------------------------------------

Description

Initialise a git repository.

Usage

```
use_git(message = "Initial commit", pkg = ".")
```

Arguments

message Message to use for first commit.
pkg Path to package. See [as.package](#) for more information.

See Also

Other git infrastructure: [use_git_hook](#), [use_github_links](#), [use_github](#)

Examples

```
## Not run: use_git()
```

use_news_md	<i>Use NEWS.md</i>
-------------	--------------------

Description

This creates NEWS.md from a template.

Usage

```
use_news_md(pkg = ".")
```

Arguments

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

See Also

Other infrastructure: [infrastructure](#), [use_build_ignore](#), [use_data_raw](#), [use_data](#), [use_package](#), [use_readme_rmd](#)

use_package	<i>Use specified package.</i>
-------------	-------------------------------

Description

This adds a dependency to DESCRIPTION and offers a little advice about how to best use it.

Usage

```
use_package(package, type = "Imports", pkg = ".")
```

Arguments

package	Name of package to depend on.
type	Type of dependency: must be one of "Imports", "Suggests", "Depends", "Suggests", "Enhances", or "LinkingTo" (or unique abbreviation)
pkg	package description, can be path or package name. See as.package for more information.

See Also

Other infrastructure: [infrastructure](#), [use_build_ignore](#), [use_data_raw](#), [use_data](#), [use_news_md](#), [use_readme_rmd](#)

Examples

```
## Not run:
use_package("ggplot2")
use_package("dplyr", "suggests")

## End(Not run)
```

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.

with_debug	<i>Temporarily set debugging compilation flags.</i>
------------	-----------------------------------------------------

Description

Temporarily set debugging compilation flags.

Usage

```
with_debug(code, CFLAGS = NULL, CXXFLAGS = NULL, FFLAGS = NULL,
           FCFLAGS = NULL, debug = TRUE)
```

Arguments

code	to execute.
CFLAGS	flags for compiling C code
CXXFLAGS	flags for compiling C++ code
FFLAGS	flags for compiling Fortran code.
FCFLAGS	flags for Fortran 9x code.
debug	If TRUE adds <code>-g -O0</code> to all flags (Adding FFLAGS and FCFLAGS)

See Also

Other debugging flags: [compiler_flags](#)

Examples

```
flags <- names(compiler_flags(TRUE))
with_debug(Sys.getenv(flags))
```

```
## Not run:
install("mypkg")
with_debug(install("mypkg"))
```

```
## End(Not run)
```


Index

*Topic **programming**

- build_vignettes, 6
- load_all, 33
- load_code, 34
- load_data, 35
- load_dll, 35
- run_examples, 44
- .libPaths, 16, 23
- ?, 20
- ? (help), 19

- add_path (path), 38
- add_rstudio_project (infrastructure), 21
- add_test_infrastructure, 49
- add_test_infrastructure (infrastructure), 21
- add_travis (infrastructure), 21
- as.package, 3, 4, 6, 7, 9–12, 16, 21, 24, 26, 32, 33, 35, 36, 39, 40, 44, 45, 49, 50, 53–55
- as.person, 14

- bash, 3
- browser, 44
- build, 4, 7, 8, 24
- build_github_devtools, 5
- build_vignettes, 6
- build_win, 4, 6

- check, 7, 8, 9, 13
- check_cran, 42
- check_doc (check_man), 9
- check_failures, 8
- check_man, 9
- clean_dll, 10, 12, 33
- clean_source, 10
- clean_vignettes, 6, 11
- clear_cache, 33
- compile_dll, 10, 11, 12, 33
- compiler_flags, 8, 11, 12, 56

- create, 12
- create_description, 13

- dev_example, 14, 44
- dev_help, 15
- dev_mode, 14, 16
- dev_package_deps (package_deps), 36
- devtools, 14
- devtools-package (devtools), 14
- document, 16
- dr_devtools, 17, 17
- dr_github, 17, 17

- eval_clean, 18
- evalq_clean (eval_clean), 18

- GET, 31
- get_path (path), 38
- github_pull, 18, 28
- github_release (github_pull), 18

- has_devel, 19, 31
- help, 19, 20

- infrastructure, 21, 52–54
- inst, 23
- install, 14, 24, 25–32, 50
- install.packages, 6, 24–26, 43
- install_bitbucket, 25, 25, 27, 28, 30–32, 50
- install_deps, 26
- install_git, 25, 26, 27, 28, 30–32, 50
- install_github, 5, 18, 19, 25–27, 28, 30–32, 50
- install_local, 29
- install_svn, 25–28, 30, 31, 32, 50
- install_url, 25–28, 30, 31, 32, 50
- install_version, 25–28, 30, 31, 31, 50

- library, 33, 34, 40
- lint, 32, 33
- lint_package, 32, 33

- load_all, [19](#), [33](#), [47](#), [48](#)
- load_code, [33](#), [34](#)
- load_data, [33](#), [35](#)
- load_dll, [35](#)
- missing_s3, [36](#)
- on_path, [38](#)
- options, [14](#)
- package.skeleton, [12](#), [13](#)
- package_deps, [36](#), [51](#)
- package_file, [37](#)
- path, [38](#)
- r_env_vars, [8](#)
- RCMD, [39](#)
- release, [8](#), [39](#)
- reload, [25](#), [40](#)
- remove.packages, [50](#)
- revdep, [41](#)
- revdep_check, [9](#), [41](#), [42](#)
- revdep_check (revdep_check_save_logs), [42](#)
- revdep_check_save_logs, [42](#)
- revdep_check_save_summary (revdep_check_save_logs), [42](#)
- revdep_check_summary (revdep_check_save_logs), [42](#)
- revdep_maintainers, [43](#)
- revdep_maintainers (revdep), [41](#)
- roxygenize, [16](#), [17](#)
- run_examples, [15](#), [44](#)
- save, [52](#)
- session_info, [44](#)
- sessionInfo, [44](#)
- set_path (path), [38](#)
- setup (create), [12](#)
- shim_help (help), [19](#)
- shim_question (help), [19](#)
- shim_system.file (system.file), [47](#)
- show_news, [45](#)
- source, [46](#), [47](#)
- source_gist, [45](#)
- source_url, [46](#), [46](#)
- system, [48](#)
- system.file, [47](#), [47](#)
- system_check, [39](#), [48](#)
- test, [22](#), [49](#)
- test_check, [49](#)
- test_dir, [49](#)
- uninstall, [25–28](#), [30–32](#), [49](#)
- unload, [33](#), [40](#), [50](#)
- update.package_deps (package_deps), [36](#)
- update_packages, [51](#)
- url, [32](#)
- use_appveyor (infrastructure), [21](#)
- use_build_ignore, [23](#), [52–54](#)
- use_code_of_conduct (infrastructure), [21](#)
- use_coverage (infrastructure), [21](#)
- use_cran_badge (infrastructure), [21](#)
- use_cran_comments (infrastructure), [21](#)
- use_data, [23](#), [52](#), [53](#), [54](#)
- use_data_raw, [23](#), [52](#), [53](#), [54](#)
- use_git, [53](#)
- use_git_hook, [53](#)
- use_github, [53](#)
- use_github_links, [53](#)
- use_mit_license (infrastructure), [21](#)
- use_news_md, [23](#), [52–54](#), [54](#)
- use_package, [23](#), [52–54](#), [54](#)
- use_package_doc (infrastructure), [21](#)
- use_rcpp (infrastructure), [21](#)
- use_readme_rmd, [23](#), [52–54](#)
- use_revdep (infrastructure), [21](#)
- use_rstudio, [13](#)
- use_rstudio (infrastructure), [21](#)
- use_test (infrastructure), [21](#)
- use_testthat (infrastructure), [21](#)
- use_travis (infrastructure), [21](#)
- use_vignette (infrastructure), [21](#)
- uses_testthat (test), [49](#)
- wd, [55](#)
- with_debug, [11](#), [25](#), [50](#), [55](#)
- with_libpaths, [25](#), [49](#)
- with_path, [38](#)