Package ‘RcppAPT’

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Type Package
Title 'Rcpp' Interface to the APT Package Manager
Version 0.0.7
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Description The 'APT Package Management System' provides Debian and
Debian-derived Linux systems with a powerful system to resolve package
dependencies. This package offers access directly from R. This can
only work on a system with a suitable 'libapt-pkg-dev' installation
so functionality is curtailed if such a library is not found.
License GPL (>= 2)
Imports Rcpp (>= 0.11.0)
LinkingTo Rcpp
Suggests knitr, rmarkdown, minidown
URL https://github.com/eddelbuettel/rcppapt,
https://dirk.eddelbuettel.com/code/rcpp.apt.html
BugReports https://github.com/eddelbuettel/rcppapt/issues
VignetteBuilder knitr
RoxygenNote 6.1.0
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R topics documented:

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### Description

Debian-based systems such as Debian, Ubuntu, or their derivatives use the APT Package Manager, commonly via programs such as `apt-get`, `apt-cache` or other frontends written against the APT libraries.

This package offers a simple interface from R, mostly so that the package management system can be queried.

### Details

The APT library API is described in the package `libapt-pkg-doc`.

### Author(s)

Dirk Eddelbuettel

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### References

See the `libapt-pkg-doc` package on a Debian-based system.

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### buildDepends

Return Build-Depends for given packages

### Description

The APT Package Management system uses a data-rich caching structure. This accessor function returns the Build-Depends for a set of packages matching the given regular expression.

### Usage

```r
buildDepends(regexp = ".")
```
dumpPackages

Arguments

regexp A regular expression for the package name(s) with a default of all (".")

Details

Note that the package lookup uses regular expressions. If only a single package is desired, append a
single $ to terminate the expression. *e.g.* `r-cran-rcpp$` will *not* return results for `r-cran-rcpparmadillo`
and `r-cran-rcppeigen`.

Value

A character vector containing package names is returned.

Author(s)

Dirk Eddelbuettel

Examples

buildDepends("r-cran-rcpp$")

Description

The APT Package Management system uses a data-rich caching structure. This accessor function
displays the information for a set of packages matching the given regular expression. It corresponds
somewhat to `apt-cache showpkg pkgname` but displays more information.

Usage

dumpPackages(regexp = ".")

Arguments

regexp A regular expression for the package name(s) with a default of all (".")

Details

Note that the package lookup uses regular expressions. If only a single package is desired, append a
single $ to terminate the expression. *e.g.* `r-cran-rcpp$` will *not* return results for `r-cran-rcpparmadillo`
and `r-cran-rcppeigen`.

Value

A boolean is returned indicating whether or not the given regular expression could be matched to
source packages – but the function is invoked ’ for the side effect of displaying information.
Author(s)
Dirk Eddelbuettel

Examples
dumpPackages("^r-(base|doc)-(\s+)*")

getDepends

Return Depends for given packages

Description
The APT Package Management system uses a data-rich caching structure. This accessor function returns the Depends for a set of packages matching the given regular expression.

Usage
getDepends(regexp = ".")

Arguments
regexp A regular expression for the package name(s) with a default of all (".")

Details
Note that the package lookup uses regular expressions. If only a single package is desired, append a single $ to terminate the expression. *e r-cran-rcpp$ will not return results for *r-cran-rcpparmadillo and r-cran-rcppEigen*.

Value
A data frame with four columns listing (source) package, dependend packages, comparison operator, and, where available, minimal version.

Author(s)
Dirk Eddelbuettel

Examples
reverseDepends("r-cran-rcpp$")
getPackages

Retrieve Names of All Installable Packages

Description

The APT Package Management system uses a data-rich caching structure. This accessor function
returns the names of installable packages for a given regular expression.

Usage

getPackages(regexp = ".")

Arguments

regexp A regular expression for the package name(s) with a default of all (".").

Details

Note that the package lookup uses regular expressions. If only a single package is desired, append a
single $ to terminate the expression. Ie r-cran-rcpp$ will not return results for r-cran-rcpparmadillo
and r-cran-rcppEigen.

Value

A data frame with columns containing the package name and version (or NA if unavailable).

Author(s)

Dirk Eddelbuettel

Examples

getPackages("^r-(base|doc)-")

hasPackages

Test for Existence of Given Package

Description

The APT Package Management system uses a data-rich caching structure. This accessor function
tests whether a given package exists.

Usage

hasPackages(pkg)
reverseDepends

Arguments
   pkg  A character vector with name of the package

Value
   A boolean result vector is returned indicating if the package at the given position is available.

Author(s)
   Dirk Eddelbuettel

Examples
   hasPackages(c("r-base-core", "somethingThatDoesNotExist"))

reverseDepends  Return Reverse-Depends for given packages

Description
   The APT Package Management system uses a data-rich caching structure. This accessor function
   returns the Reverse-Depends for a set of packages matching the given regular expression.

Usage
   reverseDepends(regexp = ".")

Arguments
   regexp  A regular expression for the package name(s) with a default of all (".")

Details
   Note that the package lookup uses regular expressions. If only a single package is desired, append a
   single $ to terminate the expression. *le r-cran-rcpp$ will not return results for r-cran-rcpparmadillo
   and r-cran-rcppeigen.*

Value
   A data frame with two column listing packages and, where available, minimal version.

Author(s)
   Dirk Eddelbuettel

Examples
   reverseDepends("r-cran-rcpp$")
showSrc

Display information for given packages

Description

The APT Package Management system uses a data-rich caching structure. This accessor function
displays the information for a set of packages matching the given regular expression. The output
corresponds to apt-cache showsrc pkgname.

Usage

showSrc(regexp = ".")

Arguments

regexp A regular expression for the package name(s) with a default of all (".")

Details

Note that the package lookup uses regular expressions. If only a single package is desired, append a
single $ to terminate the expression. I.e r-cran-rcpp$ will not return results for r-cran-rcpparmadillo
and r-cran-rcppeigen.

Value

A boolean is returned indicating whether or not the given regular expression could be matched to
source packages – but the function is invoked ’ for the side effect of displaying information.

Author(s)

Dirk Eddelbuettel

Examples

showSrc("^r-(base|doc)-")
showSrc("r-cran-rcpp") # also finds RcppEigen and RcppArmadillo
showSrc("r-cran-rcpp$") # just Rcpp
suitable

Test for Suitability of System

Description
The APT Package Management system uses a data-rich caching structure. This accessor function tests whether a given package exists.

Usage
suitable()

Details
CRAN does not manage to blacklist this package for builds where it has little to no chance of building (macOS among them). So we now build everywhere whether it makes sense or not.

Value
A boolean result vector is returned indicating if the system is making any sense at all.

Author(s)
Dirk Eddelbuettel

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