Package ‘RcppAPT’

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**Type**  Package

**Title**  'Rcpp' Interface to the APT Package Manager

**Version**  0.0.9

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**Author**  Dirk Eddelbuettel

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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**  simplermarkdown

**VignetteBuilder**  simplermarkdown

**URL**  [https://github.com/eddelbuettel/rcppapt](https://github.com/eddelbuettel/rcppapt),
          [https://dirk.eddelbuettel.com/code/rcpp.apt.html](https://dirk.eddelbuettel.com/code/rcpp.apt.html)

**BugReports**  [https://github.com/eddelbuettel/rcppapt/issues](https://github.com/eddelbuettel/rcppapt/issues)

**RoxygenNote**  6.1.0

**NeedsCompilation**  yes

**Repository**  CRAN

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### R topics documented:

- RcppAPT-package .......................................................... 2
- buildDepends .............................................................. 2
- dumpPackages ............................................................ 3
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
Maintainer: Dirk Eddelbuettel <edd@debian.org>

References

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

Usage

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. \texttt{r-cran-rcpp$} will \textit{not} return results for \texttt{r-cran-rcpparmadillo}
and \texttt{r-cran-rcpeigen}.

Value

A character vector containing package names is returned.

Author(s)

Dirk Eddelbuettel

Examples

buildDepends("r-cran-rcpp$")

\begin{verbatim}
dumpPackages(regexp = ".")
\end{verbatim}

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 \texttt{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. \texttt{r-cran-rcpp$} will \textit{not} return results for \texttt{r-cran-rcpparmadillo}
and \texttt{r-cran-rcpeigen}.

Value

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

Author(s)
Dirk Eddelbuettel

Examples

```
dumpPackages("^r-(base|doc)-")
```

---

### 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.g. 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. i.e 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. *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

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

Examples
suitable()
Index

* package
  RcppAPT-package, 2
  buildDepends, 2
  dumpPackages, 3
  getDepends, 4
  getPackages, 5
  hasPackages, 5
  RcppAPT (RcppAPT-package), 2
  RcppAPT-package, 2
  reverseDepends, 6
  showSrc, 7
  suitable, 8