

# Package ‘RcppAPT’

May 7, 2026

**Type** Package

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

**Version** 0.0.10

**Date** 2024-11-29

**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** simplermardown

**VignetteBuilder** simplermardown

**URL** <https://github.com/eddelbuettel/rcppapt>,  
<https://dirk.eddelbuettel.com/code/rcpp.apr.html>

**BugReports** <https://github.com/eddelbuettel/rcppapt/issues>

**RoxygenNote** 6.1.0

**NeedsCompilation** yes

**Author** Dirk Eddelbuettel [aut, cre] (ORCID:  
<<https://orcid.org/0000-0001-6419-907X>>)

**Maintainer** Dirk Eddelbuettel <edd@debian.org>

**Repository** CRAN

**Date/Publication** 2024-11-29 19:30:02 UTC

## Contents

RcppAPT-package . . . . .	2
buildDepends . . . . .	2

dumpPackages . . . . .	3
getDepends . . . . .	4
getPackages . . . . .	5
hasPackages . . . . .	5
reverseDepends . . . . .	6
showSrc . . . . .	7
suitable . . . . .	8

<b>Index</b>	<b>9</b>
--------------	----------

---

RcppAPT-package	<i>Rcpp Interface to the APT Package Manager</i>
-----------------	--

---

## 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.

---

buildDepends	<i>Return Build-Depends for given packages</i>
--------------	--

---

## 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

```
buildDepends(regex = ".")
```

**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 character vector containing package names is returned.

**Author(s)**

Dirk Eddelbuettel

**Examples**

```
buildDepends("r-cran-rcpp$")
```

---

dumpPackages

*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. 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. *Ie* `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)-")
```

---

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(regex = ".")
```

**Arguments**

regex            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 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(regex = ".")
```

**Arguments**

`regex` 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)
```

**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	<i>Return Reverse-Depends for given packages</i>
----------------	--

---

**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(regex = ".")
```

**Arguments**

regex                    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 two column listing packages and, where available, minimal version.

**Author(s)**

Dirk Eddelbuettel

**Examples**

```
reverseDepends("r-cran-rcpp$")
```

---

showSrc	<i>Display information for given packages</i>
---------	---

---

## 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(regex = ".")
```

## Arguments

`regex`            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 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 amongst 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](#)