

Package ‘miniCRAN’

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Title Create a Mini Version of CRAN Containing Only Selected Packages

Description Makes it possible to create an internally consistent repository consisting of selected packages from CRAN-like repositories. The user specifies a set of desired packages, and 'miniCRAN' recursively reads the dependency tree for these packages, then downloads only this subset. The user can then install packages from this repository directly, rather than from CRAN. This is useful in production settings, e.g. server behind a firewall, or remote locations with slow (or zero) Internet access.

URL <https://github.com/andrie/miniCRAN>

BugReports <https://github.com/andrie/miniCRAN/issues>

SystemRequirements Imports the `curl` and `XML` packages. These have system requirements on `libxml2-devel`, `libcurl-devel` and `openssl-devel`.

Imports graphics, httr, methods, stats, tools, utils, XML, igraph,

Suggests devtools, knitr, rmarkdown, testthat(>= 0.9), covr, withr, mockery, testthis

LazyData true

LazyLoad true

VignetteBuilder knitr

RoxygenNote 6.0.1

NeedsCompilation no

Author Microsoft Corporation [cph],
Andrie de Vries [aut, cre, cph],
Alex Chubaty [ctb]

Maintainer Andrie de
Vries <apdevries@gmail.com>

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miniCRAN-package	<i>Create a Private Version of CRAN Containing Only Selected Packages</i>
------------------	---

Description

At the end of 2014, CRAN consisted of more than 6,000 packages. Many organisations need to maintain a private mirror of CRAN, but with only a subset of packages that are relevant to them.

miniCRAN makes it possible to create an internally consistent repository consisting of selected packages from CRAN-like repositories. The user specifies a set of desired packages, and miniCRAN recursively reads the dependency tree for these packages, then downloads only this subset.

There are many reasons for not creating a complete mirror CRAN using rsync:

- You may wish to mirror only a subset of CRAN, for security, legal compliance or any other in-house reason
- You may wish to restrict internal package use to a subset of public packages, to minimize package duplication, or other reasons of coding standards
- You may wish to make packages available from public repositories other than CRAN, e.g. BioConductor, r-forge, OmegaHat, etc.

- You may wish to add custom in-house packages to your repository

The ambition of miniCRAN is to eventually satisfy all of these considerations.

Making a private repo

- `pkgAvail()`: Read from a local (or remote) CRAN-like repository and determine available packages.
- `pkgDep()`: Find (recursive) package dependencies.
- `makeRepo()` : Make a mini CRAN repository, by downloading packages (and their dependencies) and creating the appropriate file structure for a repository. This allows you to use functions like `utils::available.packages()` and `utils::install.packages()` on your local repository.

This subset will be internally consistent, i.e. the following functions will work as expected:

- `utils::available.packages()`
- `utils::install.packages()`

The main function is `makeRepo()` - this will download all the required packages, with their dependencies, into the appropriate repository file structure, and then create the repository index (PACKAGES) file.

Updating packages in a repo

- `oldPackages()`: Indicates packages which have a (suitable) later version on the repositories
- `updatePackages()`: Offers to download and install such packages

Creating dependencies

To get a recursive list of dependencies as well as a plot, use `pkgDep()` followed by `makeDepGraph()`.

- `pkgDep()`: Find (recursive) package dependencies.
- `makeDepGraph()`: Create graph of selected package dependencies.
- `plot.pkgDepGraph()`: Create a visualization of the dependency graph

Package options

`minicran.mran` preferred MRAN URL. Defaults to <https://mran.microsoft.com> for R versions 3.2.2 and greater. Versions earlier than 3.2.2 use HTTP instead of HTTPS.

Author(s)

Andrie de Vries <apdevries@gmail.com> with contributions from Alex Chubaty <alex.chubaty@gmail.com>

<code>.listFiles</code>	<i>List pre-built packages in a directory based on file extension</i>
-------------------------	---

Description

List pre-built packages in a directory based on file extension

Usage

```
.listFiles(pkgs, path, type)
```

Arguments

<code>pkgs</code>	Character vector of package names
<code>path</code>	Character string specifying the directory containing packages to be added.
<code>type</code>	Character indicating the package type (e.g., "source", "win.binary", etc.).

Value

Installs the packages and returns the new package index.

Examples

```
## Not run:
.listFiles('path/to/my/packages', type = "source")

## End(Not run)
```

<code>addLocalPackage</code>	<i>Add local packages to a miniCRAN repository.</i>
------------------------------	---

Description

Examine the contents of a directory specified by `pkgPath` for pre-built packages matching the names specified by `pkgs`, and add these to the miniCRAN repository.

Usage

```
addLocalPackage(pkgs = NULL, pkgPath = NULL, path = NULL,
  type = "source", Rversion = R.version, writePACKAGES = TRUE,
  deps = FALSE, quiet = FALSE, build = FALSE)
```

Arguments

pkgs	Character vector of packages to download
pkgPath	Character vector of directory location containing packages to be added. Note that pkgPath should be the parent directory of the package (i.e., the package directory path is constructed from <code>file.path(pkgPath, pkgs)</code>).
path	Destination download path. This path is the root folder of your new repository.
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to <code>download.packages()</code> .
Rversion	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to <code>R.version</code>
writePACKAGES	If TRUE, calls <code>write_PACKAGES()</code> to update the repository PACKAGES file.
deps	logical indicating whether the package dependencies should be added (default TRUE).
quiet	If TRUE, suppress status messages (if any), and the progress bar during download.
build	Logical indicating whether packages should be build prior to adding.

Details

To build a package from source and then add it, use `build = TRUE`. Note that package development libraries and the `devtools` package must be installed on your system in order to build packages.

Value

Installs the packages and returns the new package index.

Note

Currently, adding local packages does not check nor download their dependencies.

Author(s)

Alex Chubaty

Examples

```
## Not run:
addLocalPackage("myPackage", "path/to/my/prebuilt/package",
               "path/to/my/miniCRAN/repo")

addLocalPackage("myPackage", "path/to/my/package/sourcecode",
               "path/to/my/miniCRAN/repo", build = TRUE)

## End(Not run)
```

addOldPackage *Add old package versions to a miniCRAN repository.*

Description

Will download and add older source package versions. Older binary versions are not normally available on CRAN and should be build from source on the platform for which they are required. As such, specifying `type!="source"` will likely fail as the download will not be successful.

Usage

```
addOldPackage(pkgs = NULL, path = NULL, vers = NULL,
              repos = getOption("repos"), type = "source", Rversion = R.version,
              writePACKAGES = TRUE, deps = FALSE, quiet = TRUE)
```

Arguments

<code>pkgs</code>	Character vector of packages to download
<code>path</code>	Destination download path. This path is the root folder of your new repository.
<code>vers</code>	The package version to install.
<code>repos</code>	URL(s) of the 'contrib' sections of the repositories, e.g. " http://cran.us.r-project.org ". Passed to available.packages()
<code>type</code>	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
<code>Rversion</code>	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to R.version
<code>writePACKAGES</code>	If TRUE, calls write_PACKAGES() to update the repository PACKAGES file.
<code>deps</code>	logical indicating whether the package dependencies should be added (default TRUE).
<code>quiet</code>	If TRUE, suppress status messages (if any), and the progress bar during download.

Value

Adds the packages, rebuilds the package index, and invisibly returns the number of packages written to the index files.

Note

Dependencies for old package versions cannot be determined automatically and must be specified by the user in `pkgs` and `vers`. Thus, `deps=FALSE` is the default for this function.

See Also

Other update repo functions: [addPackage](#), [checkVersions](#), [makeRepo](#), [updatePackages](#)

Examples

```

### `checkVersions` and `add.packages.miniCRAN` require an existing miniCRAN repo

# Specify list of packages to download
revolution <- c(CRAN = getOption("miniCRAN.mran"))
pkgs <- c("foreach")
pkgTypes <- c("source", "win.binary")

pdb <- cranJuly2014

## Not run:
  pdb <- pkgAvail(repos = revolution, type = "source")

## End(Not run)

pkgList <- pkgDep(pkgs, availPkgs = pdb, repos = revolution, type = "source", suggests = FALSE)
pkgList

## Not run:
  # Create temporary folder for miniCRAN
  dir.create(pth <- file.path(tempdir(), "miniCRAN"))

  # Make repo for source and win.binary
  makeRepo(pkgList, path = pth, repos = revolution, type = pkgTypes)

  # Add other versions of a package (and assume these were added previously)
  oldVers <- data.frame(package = c("foreach", "codetools", "iterators"),
                        version = c("1.4.0", "0.2-7", "1.0.5"),
                        stringsAsFactors = FALSE)

  pkgs <- oldVers$package
  addOldPackage(pkgs, path = pth, vers = oldVers$version, repos = revolution, type = "source")
  # NOTE: older binary versions would need to be build from source

  # List package versions in the miniCRAN repo (produces warning about duplicates)
  pkgVersionsSrc <- checkVersions(pkgs, path = pth, type = "source")
  pkgVersionsBin <- checkVersions(pkgs, path = pth, type = "win.binary")

  # After inspecting package versions, remove old versions
  basename(pkgVersionsSrc) # "foreach_1.4.0.tar.gz" "foreach_1.4.2.tar.gz"
  basename(pkgVersionsBin) # "foreach_1.4.0.zip" "foreach_1.4.2.zip"
  file.remove(c(pkgVersionsSrc[1], pkgVersionsBin[1]))

  # Rebuild package index after adding/removing files
  updateRepoIndex(pth, type = pkgTypes, Rversion = R.version)

  pkgAvail(pth, type = "source")

  # Add new packages (from CRAN) to the miniCRAN repo
  addPackage("Matrix", path = pth, repos = revolution, type = pkgTypes)

  # Delete temporary folder
  unlink(pth, recursive = TRUE)

```

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

addPackage	<i>Add packages to a miniCRAN repository.</i>
------------	---

Description

Add packages to a miniCRAN repository.

Usage

```
addPackage(pkgs = NULL, path = NULL, repos = getOption("repos"),
  type = "source", Rversion = R.version, writePACKAGES = TRUE,
  deps = TRUE, quiet = FALSE)
```

Arguments

pkgs	Character vector of packages to download
path	Destination download path. This path is the root folder of your new repository.
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to available.packages()
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
Rversion	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to R.version
writePACKAGES	If TRUE, calls write_PACKAGES() to update the repository PACKAGES file.
deps	logical indicating whether the package dependencies should be added (default TRUE).
quiet	If TRUE, suppress status messages (if any), and the progress bar during download.

Value

Installs the packages, rebuilds the package index, and invisibly returns the number of packages written to the index files.

See Also

Other update repo functions: [addOldPackage](#), [checkVersions](#), [makeRepo](#), [updatePackages](#)

Examples

```

### `checkVersions` and `add.packages.miniCRAN` require an existing miniCRAN repo

# Specify list of packages to download
revolution <- c(CRAN = getOption("miniCRAN.mran"))
pkgs <- c("foreach")
pkgTypes <- c("source", "win.binary")

pdb <- cranJuly2014

## Not run:
  pdb <- pkgAvail(repos = revolution, type = "source")

## End(Not run)

pkgList <- pkgDep(pkgs, availPkgs = pdb, repos = revolution, type = "source", suggests = FALSE)
pkgList

## Not run:
  # Create temporary folder for miniCRAN
  dir.create(pth <- file.path(tempdir(), "miniCRAN"))

  # Make repo for source and win.binary
  makeRepo(pkgList, path = pth, repos = revolution, type = pkgTypes)

  # Add other versions of a package (and assume these were added previously)
  oldVers <- data.frame(package = c("foreach", "codetools", "iterators"),
                        version = c("1.4.0", "0.2-7", "1.0.5"),
                        stringsAsFactors = FALSE)

  pkgs <- oldVers$package
  addOldPackage(pkgs, path = pth, vers = oldVers$version, repos = revolution, type = "source")
  # NOTE: older binary versions would need to be build from source

  # List package versions in the miniCRAN repo (produces warning about duplicates)
  pkgVersionsSrc <- checkVersions(pkgs, path = pth, type = "source")
  pkgVersionsBin <- checkVersions(pkgs, path = pth, type = "win.binary")

  # After inspecting package versions, remove old versions
  basename(pkgVersionsSrc) # "foreach_1.4.0.tar.gz" "foreach_1.4.2.tar.gz"
  basename(pkgVersionsBin) # "foreach_1.4.0.zip" "foreach_1.4.2.zip"
  file.remove(c(pkgVersionsSrc[1], pkgVersionsBin[1]))

  # Rebuild package index after adding/removing files
  updateRepoIndex(pth, type = pkgTypes, Rversion = R.version)

  pkgAvail(pth, type = "source")

  # Add new packages (from CRAN) to the miniCRAN repo
  addPackage("Matrix", path = pth, repos = revolution, type = pkgTypes)

  # Delete temporary folder
  unlink(pth, recursive = TRUE)

```

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

```
addPackageListingGithub
```

Add DESCRIPTION information from package on github.

Description

Downloads the DESCRIPTION file from a package on github, parses the fields and adds (or replaces) a row in the available package database.

Usage

```
addPackageListingGithub(pdb = pkgAvail(), repo, username = NULL,
  branch = "master")
```

Arguments

pdb	Package database, usually the result of <code>pkgAvail()</code> or <code>available.packages()</code>
repo	Character vector. Name of repository on github, e.g. "RevolutionAnalytics/checkpoint"
username	Optional character vector. Name of repository on github, e.g. "RevolutionAnalytics/checkpoint"
branch	name of branch, defaults to "master"

Examples

```
# Create package database
pdb <- cranJuly2014

## Not run:
pdb <- pkgAvail(repos = c(CRAN = getOption("minicran.mran")))

# Overwrite pdb with development version of miniCRAN at github
newpdb <- addPackageListingGithub(pdb = pdb, "andrie/miniCRAN")
newpdb["miniCRAN", ]

# Add package from github that's not currently on CRAN
newpdb <- addPackageListingGithub(pdb = pdb, repo = "RevolutionAnalytics/checkpoint")
newpdb["checkpoint", ]

set.seed(1)
plot(makeDepGraph("checkpoint", availPkgs = newpdb, suggests = TRUE))

## End(Not run)
```

basePkgs	<i>Returns names of base packages.</i>
----------	--

Description

Retrieves names of installed packages by calling `utils::installed.packages()` and returning only those packages where `Priority == "base"`.

Usage

```
basePkgs()
```

See Also

[pkgDep\(\)](#)

Other dependency functions: [makeDepGraph](#), [pkgDep](#), [plot.pkgDepGraph](#)

checkVersions	<i>Check for previous versions of packages in a miniCRAN repository.</i>
---------------	--

Description

Checks for previous versions, and returns the file paths for packages with multiple versions. You can subsequently decide which version to keep.

Usage

```
checkVersions(pkgs = NULL, path = NULL, type = "source",
              Rversion = R.version)
```

Arguments

pkgs	Character vector of packages to be installed. If not provided, checks all files for multiple package versions.
path	The local path to the directory where the miniCRAN repo resides.
type	character, indicating the type of package to download and install. See install.packages() .
Rversion	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to R.version

Value

Returns invisibly the filepaths to packages with multiple versions for removal.

See Also

Other update repo functions: [addOldPackage](#), [addPackage](#), [makeRepo](#), [updatePackages](#)

Examples

```
### `checkVersions` and `add.packages.miniCRAN` require an existing miniCRAN repo

# Specify list of packages to download
revolution <- c(CRAN = getOption("miniCRAN.mran"))
pkgs <- c("foreach")
pkgTypes <- c("source", "win.binary")

pdb <- cranJuly2014

## Not run:
pdb <- pkgAvail(repos = revolution, type = "source")

## End(Not run)

pkgList <- pkgDep(pkgs, availPkgs = pdb, repos = revolution, type = "source", suggests = FALSE)
pkgList

## Not run:
# Create temporary folder for miniCRAN
dir.create(pth <- file.path(tempdir(), "miniCRAN"))

# Make repo for source and win.binary
makeRepo(pkgList, path = pth, repos = revolution, type = pkgTypes)

# Add other versions of a package (and assume these were added previously)
oldVers <- data.frame(package = c("foreach", "codetools", "iterators"),
                      version = c("1.4.0", "0.2-7", "1.0.5"),
                      stringsAsFactors = FALSE)
pkgs <- oldVers$package
addOldPackage(pkgs, path = pth, vers = oldVers$version, repos = revolution, type = "source")
# NOTE: older binary versions would need to be build from source

# List package versions in the miniCRAN repo (produces warning about duplicates)
pkgVersionsSrc <- checkVersions(pkgs, path = pth, type = "source")
pkgVersionsBin <- checkVersions(pkgs, path = pth, type = "win.binary")

# After inspecting package versions, remove old versions
basename(pkgVersionsSrc) # "foreach_1.4.0.tar.gz" "foreach_1.4.2.tar.gz"
basename(pkgVersionsBin) # "foreach_1.4.0.zip" "foreach_1.4.2.zip"
file.remove(c(pkgVersionsSrc[1], pkgVersionsBin[1]))

# Rebuild package index after adding/removing files
updateRepoIndex(pth, type = pkgTypes, Rversion = R.version)

pkgAvail(pth, type = "source")

# Add new packages (from CRAN) to the miniCRAN repo
```

```

addPackage("Matrix", path = pth, repos = revolution, type = pkgTypes)

# Delete temporary folder
unlink(pth, recursive = TRUE)

## End(Not run)

```

cranJuly2014 *Stored version of available.packages()*

Description

Copy of the result of `utils::available.packages()` on July 1, 2014.

Usage

```
cranJuly2014
```

Format

```
matrix
```

getCranDescription *Scrape DESCRIPTION from CRAN for each pkg.*

Description

Scrape DESCRIPTION from CRAN for each pkg.

Usage

```

getCranDescription(pkg, repos = getOption("repos"), type = "source",
  pkgs = pkgDep(pkg, repos = repos, type = type))

```

Arguments

pkg	Character vector of packages.
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to <code>available.packages()</code>
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to <code>download.packages()</code> .
pkgs	Character vector of packages to download

Examples

```
## Not run:
getCranDescription(c("igraph", "ggplot2", "XML"),
  repos = c(CRAN = getOption("minicran.mran"))
)

## End(Not run)
```

makeDepGraph

Create dependency graph from available packages.

Description

Each package is a node, and a dependency is an edge

Usage

```
makeDepGraph(pkg, availPkgs, repos = getOption("repos"), type = "source",
  suggests = TRUE, enhances = FALSE, includeBasePkgs = FALSE, ...)
```

Arguments

pkg	Character vector of packages.
availPkgs	Vector of available packages. Defaults to reading this list from CRAN, using available.packages()
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to available.packages()
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
suggests	If TRUE, retrieves Suggests dependencies (non-recursively)
enhances	If TRUE, retrieves Enhances dependencies (non-recursively)
includeBasePkgs	If TRUE, include base R packages in results
...	Other arguments passed to available.packages()

See Also

[pkgDep\(\)](#) to extract package dependencies

Other dependency functions: [basePkgs](#), [pkgDep](#), [plot.pkgDepGraph](#)

Examples

```
availPkgs <- cranJuly2014

## Not run:
availPkgs <- pkgAvail(
  repos = c(CRAN = getOption("minicran.mran")),
  type = "source"
)

## End(Not run)

# Create dependency graph using stored database of available packages
p <- makeDepGraph(
  c("ggplot2", "forecast"),
  availPkgs = availPkgs
)

if(require(igraph)) plot(p)

## Not run:
# Create dependency graph using newly retrieved database from CRAN

p <- makeDepGraph(
  c("ggplot2", "forecast"),
  repos = c(CRAN = getOption("minicran.mran")),
  type = "source"
)
if(require(igraph)) plot(p)

## End(Not run)
```

makeLibrary

Deprecated function to download packages to local folder.

Description

Deprecated function to download packages to local folder.

Usage

```
makeLibrary(pkgs, path, type = "source")
```

Arguments

pkgs	Character vector of packages to download
path	Destination download path. This path is the root folder of your new repository.
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .

makeRepo	<i>Downloads packages from CRAN to specified path and creates a local repository.</i>
----------	---

Description

Given a list of packages, downloads these packages to a specified destination folder using the required CRAN folder structure, and finally creates the PACKAGES index file. Since the folder structure mimics the required structure and files of a CRAN repository, it supports functions like [utils::install.packages\(\)](#).

Usage

```
makeRepo(pkgs, path, repos = getOption("repos"), type = "source",
         Rversion = R.version, download = TRUE, writePACKAGES = TRUE,
         quiet = FALSE)
```

```
updateRepoIndex(path, type = "source", Rversion = R.version)
```

Arguments

pkgs	Character vector of packages to download
path	Destination download path. This path is the root folder of your new repository.
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to available.packages()
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
Rversion	List with two named elements: major and minor. If not supplied, defaults to system version of R, using R.version . Only used if type is not "source"
download	If TRUE downloads packages.
writePACKAGES	If TRUE, calls write_PACKAGES() to update the repository PACKAGES file.
quiet	If TRUE, suppress status messages (if any), and the progress bar during download.

Repo folder structure

The folder structure of a repository

- Root
 - src/contrib
 - * PACKAGES
 - bin
 - * windows/contrib/version
 - PACKAGES
 - * macosx/contrib/version
 - PACKAGES
 - * macosx/mavericks/contrib/version
 - PACKAGES
 - * macosx/leopard/contrib/version
 - PACKAGES

Note

Internally makes use of `utils::download.packages()` and `write_PACKAGES()`

See Also

Other update repo functions: `addOldPackage`, `addPackage`, `checkVersions`, `updatePackages`

Examples

```
# Specify list of packages to download
revolution <- c(CRAN = getOption("minicran.mran"))
pkgs <- c("foreach")

pdb <- cranJuly2014

## Not run:
pdb <- pkgAvail(
  repos = c(CRAN = getOption("minicran.mran")),
  type = "source"
)

## End(Not run)

pkgList <- pkgDep(pkgs, availPkgs = pdb, repos = revolution, type = "source", suggests = FALSE)
pkgList

## Not run:
# Create temporary folder for miniCRAN
dir.create(pth <- file.path(tempdir(), "miniCRAN"))
```

```

# Make repo for source and win.binary
makeRepo(pkgList, path = pth, repos = revolution, type = "source")

# List all files in miniCRAN
list.files(pth, recursive = TRUE)

# Check for available packages
pkgAvail(repos = pth, type = "source")

# Repeat process for windows binaries
makeRepo(pkgList, path = pth, repos = revolution, type = "win.binary")
pkgAvail(repos = pth, type = "win.binary")

# Delete temporary folder
unlink(pth, recursive = TRUE)

## End(Not run)

```

pkgAvail

Reads available packages from CRAN repository.

Description

This is a thin wrapper around `utils::available.packages()`. If the argument `path` is supplied, then the function attempts to read from a local repository, otherwise attempts to read from a CRAN mirror at the `repos` url.

Usage

```

pkgAvail(repos = getOption("repos"), type = "source",
         Rversion = R.version, quiet = FALSE)

```

Arguments

<code>repos</code>	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to <code>available.packages()</code>
<code>type</code>	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to <code>download.packages()</code> .
<code>Rversion</code>	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to <code>R.version</code>
<code>quiet</code>	If TRUE, suppresses warnings

See Also

`pkgDep()`

pkgDep *Retrieves package dependencies.*

Description

Performs recursive retrieve for Depends, Imports and LinkLibrary. Performs non-recursive retrieve for Suggests.

Usage

```
pkgDep(pkg, availPkgs, repos = getOption("repos"), type = "source",
       depends = TRUE, suggests = TRUE, enhances = FALSE,
       includeBasePkgs = FALSE, Rversion = R.version, quiet = FALSE, ...)
```

Arguments

pkg	Character vector of packages.
availPkgs	Vector of available packages. Defaults to reading this list from CRAN, using available.packages()
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to available.packages()
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
depends	If TRUE, retrieves Depends, Imports and LinkingTo dependencies (non-recursive)
suggests	If TRUE, retrieves Suggests dependencies (non-recursive)
enhances	If TRUE, retrieves Enhances dependencies (non-recursive)
includeBasePkgs	If TRUE, include base R packages in results
Rversion	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to R.version
quiet	If TRUE, suppresses warnings
...	Other arguments passed to available.packages()

See Also

Other dependency functions: [basePkgs](#), [makeDepGraph](#), [plot.pkgDepGraph](#)

Examples

```
## Not run:
pkgDep(pkg = c("ggplot2", "plyr", "reshape2"),
       repos = c(CRAN = getOption("minicran.mran")))
)
```

```
## End(Not run)

pdb <- cranJuly2014
## Not run:
pdb <- pkgAvail(repos = c(CRAN = getOption("minicran.mran")))

## End(Not run)

pkgDep(pkg = c("ggplot2", "plyr", "reshape2"), pdb)
```

plot.pkgDepGraph *Plots a package dependency graph.*

Description

Plots a package dependency graph.

Usage

```
## S3 method for class 'pkgDepGraph'
plot(x, pkgsToHighlight, main = paste(attr(x, "pkgs"),
  collapse = ", "), legendPosition = c(-1.2, -1), shape = "circle",
  vertex.size = 8, cex = 1, ...)
```

Arguments

x	pkgDepGraph object
pkgsToHighlight	Optional character vector with names of package to highlight. If missing, defaults to packages used in original call to makeDepGraph()
main	Title of plot
legendPosition	Numeric vector of length 2, indicating (x, y) position of edge legend. Both values should be in the range [-1; 1]. If NULL, the edge legend is not displayed.
shape	Shape of edge. See igraph::igraph.plotting() . Could be "none", "circle", "square", ...
vertex.size	Size of vertex shape. igraph::igraph.plotting()
cex	Vertex label size.
...	Ignored

See Also

Other dependency functions: [basePkgs](#), [makeDepGraph](#), [pkgDep](#)

Examples

```
tags <- "chron"

# Plot using defaults
pdb <- cranJuly2014

## Not run:
pdb <- pkgAvail(
  repos = c(CRAN = getOption("minicran.mran")),
  type = "source"
)

## End(Not run)

dg <- makeDepGraph(tags, availPkgs = pdb , includeBasePkgs = FALSE,
  suggests = TRUE, enhances = TRUE)

set.seed(42);
plot(dg)

# Move edge legend to top left
set.seed(42);
plot(dg, legendPosition = c(-1, 1))

# Change font size and shape size
set.seed(42);
plot(dg, legendPosition = c(-1, 1), vertex.size = 20, cex = 0.5)

# Move vertex legend to top right
set.seed(42);
plot(dg, legendPosition = c(1, 1), vertex.size = 20, cex = 0.5)
```

repoBinPath

Construct path to full binary location

Description

Construct path to full binary location

Usage

```
repoBinPath(path, type, Rversion)
```

Arguments

path Destination download path. This path is the root folder of your new repository.

type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to <code>download.packages()</code> .
Rversion	List with two named elements: major and minor. If not supplied, defaults to system version of R, using <code>R.version</code> . Only used if type is not "source"

repoPrefix	<i>Get the path to the repo directory containing the package files.</i>
------------	---

Description

Get the path to the repo directory containing the package files.

Usage

```
repoPrefix(type, Rversion)
```

Arguments

type	character, indicating the type of package to download and install. See <code>install.packages()</code> .
Rversion	Version of R. Can be specified as a character string with the two digit R version, e.g. "3.1". Defaults to <code>R.version</code>

Value

The filepath to the package files directory.

Repo folder structure

The folder structure of a repository

- Root
 - src/contrib
 - * PACKAGES
 - bin
 - * windows/contrib/version
 - PACKAGES
 - * macosx/contrib/version
 - PACKAGES
 - * macosx/el-capitan/contrib/version
 - PACKAGES
 - * macosx/leopard/contrib/version
 - PACKAGES
 - * macosx/mavericks/contrib/version
 - PACKAGES

Note

Not all versions of R are compatible with with all package types (e.g., `mac.binary.el-capitan` is only valid for `R > 3.4.0`).

twodigitRversion	<i>Get a two-digit version of the R version</i>
------------------	---

Description

Get a two-digit version of the R version

Usage

```
twodigitRversion(R = R.version)
```

Arguments

R Either a list of the format `R.version`, a character string (e.g., "3.1.2"), or a numeric version of the type `R_system_version()`.

Value

A character string representing the two-digit R version.

updatePackages	<i>Check for available package updates in a miniCRAN repo.</i>
----------------	--

Description

`oldPackages()` indicates packages which have a (suitable) later version on the repositories whereas `updatePackages()` offers to download and install such packages.

Usage

```
oldPackages(path = NULL, repos = getOption("repos"),
  availPkgs = pkgAvail(repos = repos, type = type, Rversion = Rversion),
  method, availableLocal = pkgAvail(repos = path, type = type, Rversion =
  Rversion, quiet = quiet), type = "source", Rversion = R.version,
  quiet = FALSE)
```

```
updatePackages(path = NULL, repos = getOption("repos"), method = NULL,
  ask = TRUE, availPkgs = pkgAvail(repos = repos, type = type, Rversion =
  Rversion), oldPkgs = NULL, type = "source", Rversion = R.version,
  quiet = FALSE)
```

Arguments

path	Destination download path. This path is the root folder of your new repository.
repos	URL(s) of the 'contrib' sections of the repositories, e.g. "http://cran.us.r-project.org". Passed to available.packages()
availPkgs	Vector of available packages. Defaults to reading this list from CRAN, using available.packages()
method	Download method, see download.file() .
availableLocal	all packages hosted in the miniCRAN repo, as returned by pkgAvail() . A subset can be specified; currently this must be in the same (character matrix) format as returned by pkgAvail() .
type	Possible values are (currently) "source", "mac.binary" and "win.binary": the binary types can be listed and downloaded but not installed on other platforms. Passed to download.packages() .
Rversion	List with two named elements: major and minor. If not supplied, defaults to system version of R, using R.version . Only used if type is not "source"
quiet	If TRUE, suppress status messages (if any), and the progress bar during download.
ask	logical indicating whether to ask user before packages are actually downloaded and installed, or the character string "graphics"`, which brings up a widget to allow the user = TRUE`.
oldPkgs	if specified as non-NULL, updatePackages() only considers these packages for updating. This may be a character vector of package names or a matrix as returned by oldPackages() .

Details

These functions are based on [update.packages\(\)](#). However, rather than looking for locally installed packages they look for the package source and binaries in the miniCRAN repository.

Value

[oldPackages\(\)](#) returns a matrix with one row per package and columns for "Package", "LocalVer", "ReposVer" and "Repository". The matrix row names the package names.

[updatePackages](#) returns NULL invisibly.

See Also

[updatePackages\(\)](#), [pkgAvail\(\)](#).

Other update repo functions: [addOldPackage](#), [addPackage](#), [checkVersions](#), [makeRepo](#)

Examples

```
### `oldPackages` and `updatePackages` require an existing miniCRAN repo

# Specify list of packages to download
revolution <- c(CRAN = getOption("minicran.mran"))
```

```
pkgs <- c("foreach")

pdb <- cranJuly2014

## Not run:
  pdb <- pkgAvail(repos = revolution, type = "source")

## End(Not run)

pkgList <- pkgDep(pkgs, availPkgs = pdb, repos = revolution, type = "source", suggests = FALSE)
pkgList

## Not run:
  # Create temporary folder for miniCRAN
  dir.create(pth <- file.path(tempdir(), "miniCRAN"))

  # create the miniCRAN directory structure but only add bin files
  makeRepo(pkgList, path = pth, repos = revolution, type = "source", download = FALSE)
  makeRepo(pkgList, path = pth, repos = revolution, type = "win.binary", download = TRUE)

  # download old source package version and create repo index
  oldVers <- data.frame(package = c("foreach", "codetools", "iterators"),
                        version = c("1.4.0", "0.2-7", "1.0.5"),
                        stringsAsFactors = FALSE)
  addOldPackage(pkgList, path = pth, repos = revolution, vers = oldVers$version, type = "source")
  # NOTE: older binary versions would need to be build from source

  # Check if updated packages are available
  oldPackages(path = pth, repos = revolution, type = "source") # should need update
  oldPackages(path = pth, repos = revolution, type = "win.binary") # should be current

  # Update available packages
  updatePackages(path = pth, repos = revolution, type = "source", ask = FALSE) # should need update
  updatePackages(path = pth, repos = revolution, type = "win.binary") # should be current

  # Delete temporary folder
  unlink(pth, recursive = TRUE)

## End(Not run)
```

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