Package ‘rockr’

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Type Package

Title 'Rock' R Server Client

Description Connector to the REST API of a 'Rock' R server, to perform operations on a remote R server session, or administration tasks. See 'Rock' documentation at <https://rockdoc.obiba.org/>.

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Author Yannick Marcon [aut, cre] (<https://orcid.org/0000-0003-0138-2023>), OBiBa group [cph]

Maintainer Yannick Marcon <yannick.marcon@obiba.org>

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**rokr.assign**

Assign an R expression or data to a symbol in the remote R session.

### Usage

rokr.assign(conn, symbol, value, async = FALSE)

### Arguments

- **conn**: A rokr connection object.
- **symbol**: Name of the R symbol.
- **value**: Value to assign to the symbol: can be a data value or a R script to execute.
- **async**: R script is executed asynchronously within the session (default is FALSE). If TRUE, the value returned is the ID of the command to look for.

### Value

The command object if async is TRUE
See Also

Other assignment functions: `rockr.assign.data()`, `rockr.assign.expr()`

Examples

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.assign(conn, "mtcars", mtcars)
rockr.assign(conn, "x", 123)
rockr.assign(conn, "y", "abc")
rockr.assign(conn, "z", quote(tibble::tribble(
    ~colA, ~colB,
    'a', 1,
    'b', 2,
    'c', 3
)))
rockr.close(conn)

## End(Not run)
```

---

rockr.assign.data | Assign an R object

Description

Assign an R object to a R symbol in the remote R session.

Usage

`rockr.assign.data(conn, symbol, value, async = FALSE)`

Arguments

- `conn`: A rockr connection object.
- `symbol`: Name of the R symbol.
- `value`: The R object to assign (data.frame, vector, etc.).
- `async`: R script is executed asynchronously within the session (default is FALSE). If TRUE, the value returned is the ID of the command to look for.

Value

The command object if async is TRUE

See Also

Other assignment functions: `rockr.assign.expr()`, `rockr.assign()`
Examples

```r
# Not run:
conn <- rockr.connect(username='user', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.open(conn)
# push a data frame to the R server
rockr.assign.data(o, "D", mtcars)
# push a vector to the R server
rockr.assign.data(o, "C", mtcars$cyl)
# push a string
rockr.assign.data(o, "S", "Hello!")
```

## End(Not run)

---

**rockr.assign.expr**  
Assign an R expression

### Description

Assign an R expression to a symbol in the remote R session.

### Usage

```r
rockr.assign.expr(conn, symbol, value, async = FALSE)
```

### Arguments

- **conn**  
  A rockr connection object.
- **symbol**  
  Name of the R symbol.
- **value**  
  Value to assign to the symbol: can be a primitive value or a R script to execute.
- **async**  
  R script is executed asynchronously within the session (default is FALSE). If TRUE, the value returned is the ID of the command to look for.

### Value

The command object if async is TRUE

### See Also

Other assignment functions:  
- `rockr.assign.data()`  
- `rockr.assign()`
Examples

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.assign.expr(conn, "x", 123)
rockr.assign.expr(conn, "y", "abc")
rockr.assign.expr(conn, "z", quote(tibble::tribble(
    ~colA, ~colB, 
    'a',  1, 
    'b',  2, 
    'c',  3
)))
rockr.close(conn)

## End(Not run)
```

**Description**

Close the R session, if there is any associated to the connection.

**Usage**

`rockr.close(conn)`

**Arguments**

- `conn` A rockr connection object.

**Value**

Void

**See Also**

Other connection functions: `rockr.connect`, `rockr.open`

**Examples**

```r
## Not run:
conn <- rockr.connect('administrator','password', url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.close(conn)

## End(Not run)
```
rockr.command | Get an asynchronous command

Description

Get an asynchronous R commands in the remote R session.

Usage

rockr.command(conn, id, wait = FALSE)

Arguments

conn A rockr connection object.

id R command ID.

wait Wait for the command to complete.

Value

The command object.

See Also

Other command functions: rockr.command_result(), rockr.command_rm(), rockr.commands_rm(), rockr.commands()

Examples

## Not run:
conn <- rockr.connect(username='user', password='password',
url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.command(conn, '1234')
rockr.close(conn)

## End(Not run)
**rockr.commands**

List the asynchronous commands

---

**Description**

Get the list of asynchronous R commands in the remote R session.

**Usage**

```r
rockr.commands(conn, df = TRUE)
```

**Arguments**

- `conn`: A rockr connection object.
- `df`: Return a data.frame (default is TRUE)

**Value**

The data.frame of command objects, one column per property.

**See Also**

Other command functions: `rockr.command_result()`, `rockr.command_rm()`, `rockr.commands_rm()`, `rockr.command()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.commands(conn)
rockr.close(conn)

## End(Not run)
```

---

**rockr.commands_rm**

Remove all asynchronous commands

---

**Description**

Remove all asynchronous R commands in the remote R session.

**Usage**

```r
rockr.commands_rm(conn)
```
Arguments

conn A rockr connection object.

Value

Void

See Also

Other command functions: `rockr.command_result()`, `rockr.command_rm()`, `rockr.commands()`, `rockr.command()`

Examples

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.commands_rm(conn)
rockr.close(conn)

## End(Not run)
```

---

**rockr.command_result** Get result of an asynchronous command

Description

Get the result of an asynchronous R commands in the remote R session. The command is removed from the remote R session after this call.

Usage

`rockr.command_result(conn, id, wait = FALSE, rm = TRUE)`

Arguments

- **conn** A rockr connection object.
- **id** R command ID.
- **wait** Wait for the command to complete (default is FALSE).
- **rm** Remove command from the list of asynchronous commands after retrieving the result (default is TRUE).

Value

The command result as an unserialized object.
rockr.command_rm

See Also

Other command functions: rockr.command_rm(), rockr.commands_rm(), rockr.commands(), rockr.command()

Examples

## Not run:
conn <- rockr.connect(username='user', password='password',
  url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.command_result(conn, '1234')
rockr.close(conn)

## End(Not run)

---

rockr.command_rm Remove an asynchronous command

Description

Remove an asynchronous R commands in the remote R session.

Usage

rockr.command_rm(conn, id)

Arguments

conn A rockr connection object.
id R command ID.

Value

Void

See Also

Other command functions: rockr.command_result(), rockr.commands_rm(), rockr.commands(), rockr.command()

Examples

## Not run:
conn <- rockr.connect('administrator','password',
  url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.command_rm(conn, '1234')
rockr.close(conn)

## End(Not run)
rockr.connect

Rocker connection

Description

Connect with Rocker.

Usage

```r
rockr.connect(
  username = getOption("rock.username"),
  password = getOption("rock.password"),
  url = getOption("rock.url"),
  opts = getOption("rock.opts", list())
)
```

Arguments

- `username`: User name in Rocker R server. Can be provided by "rock.username" option.
- `password`: User password in Rocker R server. Can be provided by "rock.password" option.
- `url`: Rocker R server url. Can be provided by "rock.url" option.
- `opts`: Curl options as described by httr (call httr::httr_options() for details). Can be provided by "rock.opts" option.

Value

A rockr connection object.

See Also

Other connection functions: `rockr.close()`, `rockr.open()`

Examples

```r
## Not run:
#### The below examples illustrate the different ways to connect to rockr ####

# explicit username/password connection
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')

# explicit access token connection
conn <- rockr.connect(token='HYG16L00VaX400UardNbiqmr2ByBpRke',
                       url='https://rocker-demo.obiba.org')

# connect using options and user credentials
options(rockr.username='administrator',
        rockr.password='password',
        rockr.opts=list())
```
rockr.eval

Evaluate a R script

Description

Execute a R script in the remote R session.

Usage

rockr.eval(conn, script, json = FALSE, async = FALSE)

Arguments

conn A rockr connection object.
script R script to execute.
json Response is in JSON format or an object serialized by R. Default is FALSE.
async R script is executed asynchronously within the session (default is FALSE). If TRUE, the value returned is the command object to look for.

Value

The unserialized result object.

See Also

Other evaluation functions: rockr.eval.source()
Examples

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.eval(conn, "x <- 'foo'")
rockr.eval(conn, "ls()")
rockr.close(conn)

## End(Not run)
```

---

**rockr.eval.source**

Evaluate a R file script

Description

Upload a R file script and execute it in the remote R session with source().

Usage

```r
rockr.eval.source(conn, path, json = FALSE, async = FALSE)
```

Arguments

- **conn**: A rockr connection object.
- **path**: Path to the R file script to execute.
- **json**: Response is in JSON format or an object serialized by R. Default is FALSE.
- **async**: R script is executed asynchronously within the session (default is FALSE). If TRUE, the value returned is the command object to look for.

Value

The unserialized result object.

See Also

Other evaluation functions: *rockr.eval()*

Examples

```r
## Not run:
conn <- rockr.connect(username='user', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.eval.source(conn, "myscript.R")
rockr.close(conn)

## End(Not run)
```
Description

Download a file or a folder from the Rocker R session working directory.

Usage

rockr.file_download(
  conn,
  source,
  destination = NULL,
  overwrite = FALSE,
  temp = FALSE
)

Arguments

conn A rockr connection object.
source Path to the file in the R server file system.
destination Path to the file to be written. If omitted, file with same name in the working directory will be written. Any non-existing parent directories will be created.
overwrite Overwrite the destination file if TRUE. Default is FALSE.
temp Logical to specify whether the root folder is the R session’s home or the temporary folder. Default is FALSE.

Value

Void

See Also

Other file functions: rockr.file_upload()

Examples

## Not run:
conn <- rockr.connect(user='user', password='password',
  url='https://rocker-demo.obiba.org')
rockr.open(conn)
# download a file
rockr.file_download(conn, 'data.csv')
# download, create destination folder and rename file
rockr.file_download(conn, 'DatabaseTest.sav', 'spss/test.sav')
rockr.close(conn)

## End(Not run)
rockr.file_upload  Upload a file

Description
Upload a file into the Rocker R session working directory.

Usage
rockr.file_upload(
  conn,
  source,
  destination = NULL,
  overwrite = FALSE,
  temp = FALSE
)

Arguments
conn  A rockr connection object.
source  Path to the file in the local file system.
destination  Path of the destination file in the Rocker R session. Root folder is the session’s home or temporary folder (see ‘temp’ parameter). If empty (default behavior), the destination file name will be the same as the source one.
overwrite  Overwrite the destination file if TRUE. Default is FALSE.
temp  Logical to specify whether the root folder is the R session’s home or the temporary folder. Default is FALSE.

Value
Void

See Also
Other file functions: rockr.file_download()

Examples
## Not run:
conn <- rockr.connect(username='user', password='password',
  url='https://rocker-demo.obiba.org')
rockr.open(conn)
# upload a file
rockr.file_upload(conn, 'data.csv')
# download, create destination folder and rename file
rockr.file_upload(conn, 'DatabaseTest.sav', '/spss/test.sav')
# upload a folder
rockr.log

rockr.file_upload(conn, 'input')
rockr.close(conn)

## End(Not run)

---

**Description**

Get the tail of the R server log.

**Usage**

```r
rockr.log(conn, limit = 100)
```

**Arguments**

- **conn**
  - A rockr connection object.
- **limit**
  - The number of lines in the tail.

**Value**

A vector of character strings, one per log file line.

**See Also**

Other administration functions: `rockr.package_install()`, `rockr.package_rm()`, `rockr.packages_datashield()`, `rockr.packages_rm()`, `rockr.packages()`, `rockr.package()`, `rockr.restart()`, `rockr.session_switch()`, `rockr.sessions()`, `rockr.session()`, `rockr.start()`, `rockr.status()`, `rockr.stop()`, `rockr.version()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.log(conn, 10)

## End(Not run)
```
rockr.open

Open an R session

Description
Open a R session, and store the session object within the connection object.

Usage
rockr.open(conn)

Arguments
conn
A rockr connection object.

Value
Void

See Also
Other connection functions: rockr.close(), rockr.connect()

Examples
## Not run:
conn <- rockr.connect('administrator','password', url='https://rocker-demo.obiba.org')
rockr.open(conn)
rockr.close(conn)
## End(Not run)

rockr.package

Package description from the R server

Description
Get the package description from the R server.

Usage
rockr.package(conn, name)

Arguments
conn
A rockr connection object.
name
The package name.
rockr.packages

Value
The R package description object.

See Also
Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()

Examples

## Not run:
conn <- rockr.connect(username='administrator', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.package(conn, 'tibble')
## End(Not run)

rockr.packages

List of the packages in the R server

Description
Get the list of packages from the R server.

Usage
rockr.packages(conn)

Arguments
conn A rockr connection object.

Value
The matrix of the R packages, same as the one from install.packages().

See Also
Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()
rockr.packages_datashield

Examples

```r
## Not run:
conn <- rockr.connect(username="administrator", password="password",
                      url='https://rocker-demo.obiba.org')
rockr.packages(conn)
## End(Not run)
```

---

**rockr.packages_datashield**

*List of the settings of the DataSHIELD packages*

**Description**

Discover the list of DataSHIELD packages and their settings from the R server.

**Usage**

```r
rockr.packages_datashield(conn)
```

**Arguments**

- `conn` A rockr connection object.

**Value**

The list of the DataSHIELD R packages properties (AggregateMethods, AssignMethods, Options)

**See Also**

Other administration functions: `rockr.log()`, `rockr.package_install()`, `rockr.package_rm()`, `rockr.packages_rm()`, `rockr.packages()`, `rockr.package()`, `rockr.restart()`, `rockr.session_switch()`, `rockr.sessions()`, `rockr.session()`, `rockr.start()`, `rockr.status()`, `rockr.stop()`, `rockr.version()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.packages_datashield(conn)
## End(Not run)
```


**rockr.packages_rm**  
*Remove some packages from the R server*

**Description**

Remove some packages from the R server.

**Usage**

```r
rockr.packages_rm(conn, names)
```

**Arguments**

- `conn`: A rockr connection object.
- `names`: The package names.

**Value**

Void

**See Also**

Other administration functions: `rockr.log()`, `rockr.package_install()`, `rockr.package_rm()`, `rockr.packages_datashield()`, `rockr.packages()`, `rockr.package()`, `rockr.restart()`, `rockr.session_switch()`, `rockr.sessions()`, `rockr.session()`, `rockr.start()`, `rockr.status()`, `rockr.stop()`, `rockr.version()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.packages_rm(conn, c('rlang', 'tibble'))

## End(Not run)
```

---

**rockr.package_install**  
*Install a package in the R server*

**Description**

Install a package in the R server. Package can be in different kind of repositories: CRAN, GitHub or Bioconductor.

**Usage**

```r
rockr.package_install(conn, name, ref = NULL, manager = "cran")
```
rockr.package_rm

Arguments

    conn    A rockr connection object.
    name    The package name or identifier in the source code repository.
    ref     The branch/commit number of the source code repositories.
    manager The package manager: cran, github (gh), bioconductor (bioc).

Value

Void

See Also

Other administration functions: rockr.log(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()

Examples

## Not run:
    conn <- rockr.connect(username='administrator', password='password',
                          url='https://rocker-demo.obiba.org')
    rockr.package_install(conn, 'tibble')

## End(Not run)

---

rockr.package_rm     Remove a package from the R server

Description

Remove a package from the R server.

Usage

    rockr.package_rm(conn, name)

Arguments

    conn    A rockr connection object.
    name    The package name.

Value

Void
**rockr.restart**

**See Also**

Other administration functions: `rockr.log()`, `rockr.package_install()`, `rockr.packages_datashield()`, `rockr.packages_rm()`, `rockr.packages()`, `rockr.package()`, `rockr.restart()`, `rockr.session_switch()`, `rockr.sessions()`, `rockr.session()`, `rockr.start()`, `rockr.status()`, `rockr.stop()`, `rockr.version()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.package_rm(conn, 'tibble')

## End(Not run)
```

---

**rockr.restart**  
*Restart the R server*

**Description**

Stop and start the R server. Any R sessions will be closed.

**Usage**

```r
rockr.restart(conn)
```

**Arguments**

- `conn` A rockr connection object.

**Value**

Logical indicating whether the R server is running (invisible).

**See Also**

Other administration functions: `rockr.log()`, `rockr.package_install()`, `rockr.package_rm()`, `rockr.packages_datashield()`, `rockr.packages_rm()`, `rockr.packages()`, `rockr.package()`, `rockr.restart()`, `rockr.session_switch()`, `rockr.sessions()`, `rockr.session()`, `rockr.start()`, `rockr.status()`, `rockr.stop()`, `rockr.version()`

**Examples**

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.stop(conn)

## End(Not run)
```
rockr.session  Get a R session

Description
Get a specific R session. Users with administrator or manager role can get any R sessions. Regular users can only get their own.

Usage
rockr.session(conn, id)

Arguments
conn  A rockr connection object.
id    The R session id to look for.

Value
The R session object.

See Also
Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()

Examples
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')
rockr.session(conn, '1234')

## End(Not run)

rockr.sessions  List of the R sessions

Description
Get the list of the R sessions. Users with administrator or manager role can list the R sessions. Regular users can only list their own.
Usage

rockr.sessions(conn, subject = NULL)

Arguments

conn A rockr connection object.
subject Filter by subject name owning the sessions (requires administrator or manager role to be effective).

Value

The list of the R session objects.

See Also

Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.session(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()

Examples

## Not run:
conn <- rockr.connect(username='administrator', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.sessions(conn)

## End(Not run)
Value

Void

See Also

Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.stop(), rockr.version()

Examples

```r
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                       url='https://rocker-demo.obiba.org')
# open several R sessions
rockr.open(conn)
rockr.open(conn)
sessions <- rockr.sessions(conn)
# switch to first one
rockr.session_switch(conn, sessions[[1]])
conn$session
rockr.close(conn)
# switch to 2nd one
rockr.session_switch(conn, sessions[[2]])
conn$session
rockr.close(conn)

## End(Not run)
```

<table>
<thead>
<tr>
<th>rockr.start</th>
<th>Start the R server</th>
</tr>
</thead>
</table>

Description

Start the R server, if not already running.

Usage

rockr.start(conn)

Arguments

conn

A rockr connection object.

Value

Logical indicating whether the R server is running (invisible).
rockr.status

Description
Get the status of the R server, including information about the server node.

Usage
rockr.status(conn)

Arguments
conn A rockr connection object.

Value
The R server status object.

See Also
Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages Datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.status(), rockr.stop(), rockr.version()

Examples
## Not run:
conn <- rockr.connect(username='administrator', password='password',
                      url='https://rocker-demo.obiba.org')
rockr.start(conn)
## End(Not run)
rockr.stop

Stop the R server

Description
Stop the R server, if running. Any R sessions will be closed.

Usage
rockr.stop(conn)

Arguments
conn A rockr connection object.

Value
Logical indicating whether the R server is running (invisible).

See Also
Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_datashield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.version()

Examples
## Not run:
conn <- rockr.connect(username='administrator', password='password',
url='https://rocker-demo.obiba.org')
rockr.stop(conn)
## End(Not run)

rockr.version

Version of the R server

Description
Get the version object of the R server.

Usage
rockr.version(conn)
rockr.version

Arguments

conn  A rockr connection object.

Value

A simple.list, same as R.version.

See Also

Other administration functions: rockr.log(), rockr.package_install(), rockr.package_rm(), rockr.packages_dataShield(), rockr.packages_rm(), rockr.packages(), rockr.package(), rockr.restart(), rockr.session_switch(), rockr.sessions(), rockr.session(), rockr.start(), rockr.status(), rockr.stop()

Examples

## Not run:

conn <- rockr.connect(username="administrator", password="password",
                      url="https://rocker-demo.obiba.org")

rockr.version(conn, 10)

## End(Not run)
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