

Package ‘rstudioapi’

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Title Safely Access the RStudio API

Description Access the RStudio API (if available) and provide informative error messages when it's not.

Version 0.9.0

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BugReports <https://github.com/rstudio/rstudioapi/issues>

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R topics documented:

addTheme	3
applyTheme	4
askForPassword	4
askForSecret	5
build-tools	5
callFun	6
convertTheme	7

createProjectTemplate	8
dictionaries	8
document_position	9
document_range	10
file-dialogs	10
getActiveProject	11
getThemeInfo	12
getThemes	12
getVersion	13
hasColorConsole	13
hasFun	14
isAvailable	14
jobAdd	15
jobAddOutput	16
jobAddProgress	17
jobRemove	17
jobRunScript	18
jobSetProgress	18
jobSetState	19
jobSetStatus	20
navigateToFile	20
persistent-values	21
previewRd	22
previewSql	22
primary_selection	23
projects	23
readPreference	24
removeTheme	24
restartSession	25
rstudio-documents	25
rstudio-editors	27
savePlotAsImage	28
sendToConsole	28
showDialog	29
showPrompt	29
showQuestion	30
sourceMarkers	30
terminalActivate	31
terminalBuffer	32
terminalBusy	33
terminalClear	34
terminalContext	34
terminalCreate	35
terminalExecute	36
terminalExitCode	37
terminalKill	38
terminalList	38
terminalRunning	39

<i>addTheme</i>	3
terminalSend	40
terminalVisible	40
translateLocalUrl	41
updateDialog	41
versionInfo	42
viewer	43
writePreference	45
Index	46

addTheme	<i>Add a Custom Editor Theme</i>
----------	----------------------------------

Description

Adds a custom editor theme to RStudio and returns the name of the newly added theme.

Usage

```
addTheme(themePath, apply = FALSE, force = FALSE, globally = FALSE)
```

Arguments

themePath	A full or relative path or URL to an rstheme or tmtheme to be added.
apply	Whether to immediately apply the newly added theme. Setting this to TRUE has the same impact as running <code>{ rstudioapi::addTheme(<themePath>); rstudioapi::applyTheme(<themeName>)</code> . Default: FALSE.
force	Whether to force the operation and overwrite an existing file with the same name. Default: FALSE.
globally	Whether to install this theme for the current user or all users. If set to TRUE this will attempt to install the theme for all users, which may require administrator privileges. Default: FALSE.

Note

The addTheme function was introduced in RStudio 1.2.879.

applyTheme	<i>Apply an Editor Theme to RStudio</i>
------------	---

Description

Applies the specified editor theme to RStudio.

Usage

```
applyTheme(name)
```

Arguments

name	The unique name of the theme to apply.
------	--

Note

The applyTheme function was introduced in RStudio 1.2.879.

askForPassword	<i>Ask the user for a password interactively</i>
----------------	--

Description

Ask the user for a password interactively.

Usage

```
askForPassword(prompt)
```

Arguments

prompt	Single element character vector containing the prompt to be displayed
--------	---

Details

RStudio also sets the global askpass option to the rstudioapi::askForPassword function so that it can be invoked in a front-end independent manner.

Note

The askForPassword function was added in version 0.99.853 of RStudio.

Examples

```
## Not run:  
rstudioapi::askForPassword("Please enter your password")  
  
## End(Not run)
```

askForSecret	<i>Show Prompt for Secret Dialog</i>
--------------	--------------------------------------

Description

Shows a dialog box asking for a secret with support to remember such secret using the 'keyring' package.

Usage

```
askForSecret(name, message = paste(name, ":", sep = ""),  
             title = paste(name, "Secret"))
```

Arguments

name	The name of the secret.
message	A character vector with the contents to display in the main dialog area.
title	The title to display in the dialog box.

Note

The askForSecret function was added in version 1.1.419 of RStudio.

build-tools	<i>Build Tools</i>
-------------	--------------------

Description

Check, install, and use build tools as required.

Usage

```
buildToolsCheck()  
  
buildToolsInstall(action)  
  
buildToolsExec(expr)
```

Arguments

action	The action (as a string) being taken that will require installation of build tools.
expr	An R expression (unquoted) to be executed with build tools available and on the PATH.

Details

These functions are intended to be used together – one should first check whether build tools are available, and when not, prompt for installation. For example:

```
compile_model <- function(...) {
  if (rstudioapi::isAvailable()) {
    if (!rstudioapi::buildToolsCheck())
      rstudioapi::buildToolsInstall("Model compilation")

    rstudioapi::buildToolsExec({
      # code requiring build tools here
    })
  }
}
```

The action parameter is used to communicate (with a prompt) the operation being performed that requires build tool installation. Setting it to NULL or the empty string will suppress that prompt.

Note

The `buildToolsCheck()`, `buildToolsInstall()`, and `buildToolsExec()` functions were added with version 1.2.962 of RStudio.

<code>callFun</code>	<i>Call an RStudio API function</i>
----------------------	-------------------------------------

Description

This function will return an error if RStudio is not running, or the function is not available. If you want to fall back to different behavior, use [hasFun](#).

Usage

```
callFun(fname, ...)
```

Arguments

<code>fname</code>	name of the RStudio function to call.
<code>...</code>	Other arguments passed on to the function

Examples

```
if (rstudioapi::isAvailable()) {
  rstudioapi::callFun("versionInfo")
}
```

convertTheme	<i>Convert a tmTheme to an RStudio Theme</i>
--------------	--

Description

Converts a `tmTheme` to an `rstheme` and optionally adds and applies it to RStudio and returns the name of the theme.

Usage

```
convertTheme(themePath, add = TRUE, outputLocation = NULL,  
             apply = FALSE, force = FALSE, globally = FALSE)
```

Arguments

<code>themePath</code>	A full or relative path to the <code>tmTheme</code> file to be converted.
<code>add</code>	Whether to add the newly converted theme to RStudio. Setting this to true will have the same impact as running <code>{ rstudioapi::convertTheme(<themePath>, outputLocation = <outputLocation>, apply = TRUE, force = FALSE, globally = FALSE)}</code> . Default: TRUE.
<code>outputLocation</code>	A full or relative path where a copy of the converted theme will be saved. If this value is NULL, no copy will be saved. Default: NULL.
<code>apply</code>	Whether to immediately apply the newly added theme. This parameter cannot be set to TRUE if <code>add</code> is set to FALSE. Setting this and <code>add</code> to TRUE has the same impact as running <code>{ rstudioapi::convertTheme(<themePath>, outputLocation = <outputLocation>, apply = TRUE, force = FALSE, globally = FALSE)}</code> . Default: FALSE.
<code>force</code>	Whether to force the operation and overwrite an existing file with the same name. Default: FALSE.
<code>globally</code>	Whether to install this theme for the current user or all users. If set to TRUE this will attempt to install the theme for all users, which may require administrator privileges. Only applies when <code>add</code> is TRUE. Default: FALSE.

Note

The `convertTheme` function was introduced in RStudio 1.2.879.

`createProjectTemplate` *Create a Project Template*

Description

Create a project template. See https://rstudio.github.io/rstudio-extensions/rstudio_project_templates.html for more information.

Usage

```
createProjectTemplate(package = ".", binding, title,
  subtitle = paste("Create a new", title), caption = paste("Create",
  title), icon = NULL, open_files = NULL, overwrite = FALSE,
  edit = TRUE)
```

Arguments

<code>package</code>	The path to an R package sources.
<code>binding</code>	The R skeleton function to associate with this project template. This is the name of the function that will be used to initialize the project.
<code>title</code>	The title to be shown within the New Project... wizard.
<code>subtitle</code>	(optional) The subtitle to be shown within the New Project... wizard.
<code>caption</code>	(optional) The caption to be shown on the landing page for this template.
<code>icon</code>	(optional) The path to an icon, on disk, to be used in the dialog. Must be an .png of size less than 64KB.
<code>open_files</code>	(optional) Files that should be opened by RStudio when the project is generated. Shell-style globs can be used to indicate when multiple files matching some pattern should be opened – for example, <code>OpenFiles: R/*.R</code> would indicate that RStudio should open all .R files within the R folder of the generated project.
<code>overwrite</code>	Boolean; overwrite a pre-existing template file if one exists?
<code>edit</code>	Boolean; open the file for editing after creation?

`dictionaries` *Interact with RStudio's Dictionaries*

Description

Interact with the **hunspell** dictionaries used by RStudio for spell checking.

Usage

```
dictionariesPath()

userDictionariesPath()
```


Details

dictionariesPath() gives a path to the dictionaries installed and distributed with RStudio.

userDictionariesPath() gives the path where users can provide their own custom hunspell dictionaries. See:

<https://support.rstudio.com/hc/en-us/articles/200551916-Spelling-Dictionaries>
for more information.

Note

The dictionariesPath() and userDictionariesPath() functions were introduced with RStudio 1.2.1202.

document_position	<i>Create a Document Position</i>
-------------------	-----------------------------------

Description

Creates a document_position, which can be used to indicate e.g. the row + column location of the cursor in a document.

Usage

```
document_position(row, column)
```

```
is.document_position(x)
```

```
as.document_position(x)
```

Arguments

row	The row (using 1-based indexing).
column	The column (using 1-based indexing).
x	An object coercable to document_position.

document_range *Create a Range*

Description

A `document_range` is a pair of `document_position` objects, with each position indicating the start and end of the range, respectively.

Usage

```
document_range(start, end = NULL)
```

```
is.document_range(x)
```

```
as.document_range(x)
```

Arguments

`start` A `document_position` indicating the start of the range.

`end` A `document_position` indicating the end of the range.

`x` An object coercable to `document_range`.

Value

An R list with class `document_range` and fields:

`start`: The start position.

`end`: The end position.

file-dialogs *Select a File / Folder*

Description

Prompt the user for the path to a file or folder, using the system file dialogs with RStudio Desktop, and RStudio's own web dialogs with RStudio Server.

Usage

```
selectFile(caption = "Select File", label = "Select",
  path = getActiveProject(), filter = "All Files (*)",
  existing = TRUE)
```

```
selectDirectory(caption = "Select Directory", label = "Select",  
path = getActiveProject())
```

Arguments

caption	The window title.
label	The label to use for the 'Accept' / 'OK' button.
path	The initial working directory, from which the file dialog should begin browsing. Defaults to the current RStudio project directory.
filter	A glob filter, to be used when attempting to open a file with a particular extension. For example, to scope the dialog to R files, one could use R Files (*.R) here.
existing	Boolean; should the file dialog limit itself to existing files on the filesystem, or allow the user to select the path to a new file?

Details

When the selected file resolves within the user's home directory, RStudio will return an aliased path – that is, prefixed with ~/.

Note

The selectFile and selectDirectory functions were added in version 1.1.287 of RStudio.

getActiveProject	<i>Path to Active RStudio Project</i>
------------------	---------------------------------------

Description

Returns the path to the currently active RStudio project.

Usage

```
getActiveProject()
```

Value

Returns a single element character vector with the path of the currently active RStudio project. Returns NULL if no project is active.

Note

The getActiveProject function was added in version 0.99.854 of RStudio.

Examples

```
## Not run:  
rstudioapi::getActiveProject()  
  
## End(Not run)
```

getThemeInfo	<i>Retrieve Themes</i>
--------------	------------------------

Description

Retrieves a list with information about the current color theme used by RStudio.

Usage

```
getThemeInfo()
```

Details

A list is returned with the following elements:

editor The name of the current editor theme, such as Textmate.

global The name of the current global theme. One of Modern, Classic, or Sky.

dark TRUE if the editor theme is dark, FALSE otherwise.

foreground The current editor theme's default text foreground color, formatted as a CSS-compatible color string, such as `rgb(1, 22, 39)`. Supported since RStudio 1.2.1214.

background The current editor theme's default text background color, formatted as a CSS-compatible color string. Supported since RStudio 1.2.1214.

getThemes	<i>Get Theme List</i>
-----------	-----------------------

Description

Retrieves a list of the names of all the editor themes installed for RStudio.

Usage

```
getThemes()
```

Note

The `getThemes` function was introduced in RStudio 1.2.879.

getVersion	<i>Return the current version of the RStudio API</i>
------------	--

Description

Return the current version of the RStudio API

Usage

```
getVersion()
```

Value

A `numeric_version` which you can compare to a string and get correct results.

Examples

```
## Not run:  
if (rstudioapi::getVersion() < "0.98.100") {  
  message("Your version of RStudio is quite old")  
}  
  
## End(Not run)
```

hasColorConsole	<i>Check if Console Supports ANSI Color Escapes</i>
-----------------	---

Description

Check if Console Supports ANSI Color Escapes

Usage

```
hasColorConsole()
```

Value

a boolean

Note

The `hasColorConsole` function was added in version 1.1.216 of RStudio.

Examples

```
## Not run:
if (rstudioapi::hasColorConsole()) {
  message("RStudio console supports ANSI color sequences.")
}

## End(Not run)
```

hasFun	<i>Exists/get for RStudio functions</i>
--------	---

Description

These are specialized versions of `get` and `exists` that look in the `rstudio` package namespace. If RStudio is not running, `hasFun` will return `FALSE`.

Usage

```
hasFun(name, version_needed = NULL, ...)

findFun(name, version_needed = NULL, ...)
```

Arguments

<code>name</code>	name of object to look for
<code>version_needed</code>	An optional version specification. If supplied, ensures that RStudio is at least that version. This is useful if function behavior has changed over time.
<code>...</code>	other arguments passed on to <code>exists</code> and <code>get</code>

Examples

```
rstudioapi::hasFun("viewer")
```

isAvailable	<i>Check if RStudio is running.</i>
-------------	-------------------------------------

Description

Check if RStudio is running.

Usage

```
isAvailable(version_needed = NULL)

verifyAvailable(version_needed = NULL)
```

Arguments

version_needed An optional version specification. If supplied, ensures that RStudio is at least that version.

Value

isAvailable a boolean; verifyAvailable an error message if RStudio is not running

Examples

```
rstudioapi::isAvailable()
## Not run: rstudioapi::verifyAvailable()
```

jobAdd	<i>Add a Job</i>
--------	------------------

Description

Inform RStudio's Jobs pane that a job has been added.

Usage

```
jobAdd(name, status = "", progressUnits = 0L, actions = NULL,
        running = FALSE, autoRemove = TRUE, show = TRUE)
```

Arguments

name	The job's name.
status	The initial status text for the job; optional.
progressUnits	The integer number of units of work in the job; for example, 100L if the job's progress is expressed in percentages. Use 0L if the number of units of work is unknown.
actions	A list of actions that can be performed on the job (see Actions).
running	Whether the job is currently running.
autoRemove	Whether to remove the job from the Jobs pane when it's complete.
show	Whether to show the job in the Jobs pane.

Value

An ID representing the newly added job, used as a handle to provide further updates of the job's status.

Actions

The actions parameter is a named list of functions that the user can invoke on the job; for example: `actions = list(stop = function(id) { ... })`. The function will be passed a parameter named `id` with the job ID that invoked it.

There are two special action names:

stop If there is an action named `stop`, then the job will have a Stop button in in the Jobs pane, and pressing that button will invoke the `stop` action.

info If there is an action named `info`, then the job will have an informational link in the Jobs pane rather than an output display, and clicking the link will invoke the `info` action.

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobRemove](#), [jobRunScript](#), [jobSetProgress](#), [jobSetState](#), [jobSetStatus](#)

jobAddOutput	<i>Add Job Output</i>
--------------	-----------------------

Description

Adds text output to a job.

Usage

```
jobAddOutput(job, output, error = FALSE)
```

Arguments

job	The ID of the job that has emitted text.
output	The text output emitted by the job.
error	Whether the output represents an error.

See Also

Other jobs: [jobAddProgress](#), [jobAdd](#), [jobRemove](#), [jobRunScript](#), [jobSetProgress](#), [jobSetState](#), [jobSetStatus](#)

jobAddProgress	<i>Add Job Progress</i>
----------------	-------------------------

Description

Adds incremental progress units to a job.

Usage

```
jobAddProgress(job, units)
```

Arguments

job	The ID of the job to update progress for.
units	The integer number of new progress units completed.

See Also

Other jobs: [jobAddOutput](#), [jobAdd](#), [jobRemove](#), [jobRunScript](#), [jobSetProgress](#), [jobSetState](#), [jobSetStatus](#)

jobRemove	<i>Remove a Job</i>
-----------	---------------------

Description

Remove a job from RStudio's Jobs pane.

Usage

```
jobRemove(job)
```

Arguments

job	The ID of the job to remove.
-----	------------------------------

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobAdd](#), [jobRunScript](#), [jobSetProgress](#), [jobSetState](#), [jobSetStatus](#)

jobRunScript	<i>Run R Script As Job</i>
--------------	----------------------------

Description

Starts an R script as a background job.

Usage

```
jobRunScript(path, encoding = "unknown", workingDir = NULL,
             importEnv = FALSE, exportEnv = "")
```

Arguments

path	The path to the R script to be run.
encoding	The text encoding of the script, if known.
workingDir	The working directory in which to run the job. When NULL (the default), the parent directory of the R script is used.
importEnv	Whether to import the global environment into the job.
exportEnv	The name of the environment in which to export the R objects created by the job. Use "" (the default) to skip export, "R_GlobalEnv" to export to the global environment, or the name of an environment object to create an object with that name.

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobAdd](#), [jobRemove](#), [jobSetProgress](#), [jobSetState](#), [jobSetStatus](#)

jobSetProgress	<i>Set Job Progress</i>
----------------	-------------------------

Description

Updates the progress for a job.

Usage

```
jobSetProgress(job, units)
```

Arguments

job	The ID of the job to set progress for.
units	The integer number of total units of work completed so far.

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobAdd](#), [jobRemove](#), [jobRunScript](#), [jobSetState](#), [jobSetStatus](#)

jobSetState	<i>Set Job State</i>
-------------	----------------------

Description

Changes the state of a job.

Usage

```
jobSetState(job, state = c("idle", "running", "succeeded", "cancelled",  
"failed"))
```

Arguments

job	The ID of the job on which to change state.
state	The new job state.

States

The following states are supported:

idle The job is waiting to run.

running The job is actively running.

succeeded The job has finished successfully.

cancelled The job was cancelled.

failed The job finished but did not succeed.

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobAdd](#), [jobRemove](#), [jobRunScript](#), [jobSetProgress](#), [jobSetStatus](#)

jobSetStatus	<i>Set Job Status</i>
--------------	-----------------------

Description

Update a job's informational status text.

Usage

```
jobSetStatus(job, status)
```

Arguments

job	The ID of the job to update.
status	Text describing job's new status.

See Also

Other jobs: [jobAddOutput](#), [jobAddProgress](#), [jobAdd](#), [jobRemove](#), [jobRunScript](#), [jobSetProgress](#), [jobSetState](#)

navigateToFile	<i>Navigate to File</i>
----------------	-------------------------

Description

Open a file in RStudio, optionally at a specified location.

Usage

```
navigateToFile(file, line = -1L, column = -1L)
```

Arguments

file	Path to the file to open)
line	Optional; integer specifying the line number on which to place the cursor
column	Optional; integer specifying the column number on which to place the cursor

Details

The `navigateToFile` opens a file in RStudio. If the file is already open, its tab or window is activated.

Once the file is open, the cursor is moved to the specified location. If the `line` and `column` arguments are both equal to `-1L` (the default), then the cursor position in the document that is opened will be preserved.

Note that if your intent is to navigate to a particular function within a file, you can also cause RStudio to navigate there by invoking [View](#) on the function, which has the advantage of falling back on deparsing if the file is not available.

Note

The `navigateToFile` function was added in version 0.99.719 of RStudio.

persistent-values *Persistent Keys and Values*

Description

Store persistent keys and values. Storage is per-project, if there is no project currently active then a global store is used.

Usage

```
setPersistentValue(name, value)
```

```
getPersistentValue(name)
```

Arguments

<code>name</code>	Key name
-------------------	----------

<code>value</code>	Key value
--------------------	-----------

Value

The stored value as a character vector (NULL if no value of the specified name is available).

Note

The `setPersistentValue` and `getPersistentValue` functions were added in version 1.1.57 of RStudio.

```
previewRd          Preview an Rd topic in the Help pane
```

Description

Preview an Rd topic in the Help pane

Usage

```
previewRd(rdFile)
```

Arguments

rdFile	Single element character vector containing the name of the Rd file to be displayed
--------	--

Note

The previewRd function was added in version 0.98.191 of RStudio.

Examples

```
## Not run:
rstudioapi::previewRd("~/MyPackage/man/foo.Rd")

## End(Not run)
```

```
previewSql          Preview SQL statement
```

Description

Makes use of 'DBI' and dbGetQuery() to preview a SQL statement for a given 'DBI' connection.

Usage

```
previewSql(conn, statement, ...)
```

Arguments

conn	The 'DBI' connection to be used to execute this statement.
statement	The SQL statement to execute. Either a path to a file containing a SQL statement or the SQL statement itself.
...	Additional arguments to be used in dbGetQuery().

Note

The previewSql function was introduced in RStudio 1.2.600

primary_selection	<i>Extract the Primary Selection</i>
-------------------	--------------------------------------

Description

By default, functions returning a document context will return a list of selections, including both the 'primary' selection and also 'other' selections (e.g. to handle the case where a user might have multiple cursors active). Use `primary_selection()` to extract the primary selection.

Usage

```
primary_selection(x, ...)
```

Arguments

x	A document context, or a selection.
...	Optional arguments (currently ignored).

projects	<i>Open a Project in RStudio</i>
----------	----------------------------------

Description

Initialize and open RStudio projects.

Usage

```
openProject(path = NULL, newSession = FALSE)
```

```
initializeProject(path = getwd())
```

Arguments

path	Either the path to an existing <code>.Rproj</code> file, or a path to a directory in which a new project should be initialized and opened.
newSession	Boolean; should the project be opened in a new session, or should the current RStudio session switch to that project? Note that TRUE values are only supported with RStudio Desktop and RStudio Server Pro.

Details

Calling `openProject()` without arguments effectively re-opens the currently open project in RStudio. When switching projects, users will be prompted to save any unsaved files; alternatively, you can explicitly save any open documents using `documentSaveAll()`.

Note

The openProject and initializeProject functions were added in version 1.1.287 of RStudio.

readPreference	<i>Read Preference</i>
----------------	------------------------

Description

Reads a user interface preference, useful to remember preferences across different r sessions for the same user.

Usage

```
readPreference(name, default)
```

Arguments

name	The name of the preference.
default	The default value to use when the preference is not available.

Note

The readPreference function was added in version 1.1.67 of RStudio.

removeTheme	<i>Remove a custom theme from RStudio.</i>
-------------	--

Description

Remove a custom theme from RStudio.

Usage

```
removeTheme(name)
```

Arguments

name	The unique name of the theme to remove.
------	---

Note

The removeTheme function was introduced in RStudio 1.2.879.

restartSession	<i>Restart the R Session</i>
----------------	------------------------------

Description

Restart the RStudio R session.

Usage

```
restartSession(command = "")
```

Arguments

command An R command (as a string) to be run after restarting R.

Note

The restartSession function was added in version 1.1.281 of RStudio.

rstudio-documents	<i>Interact with Documents open in RStudio</i>
-------------------	--

Description

Use these functions to interact with documents open in RStudio.

Creates a new document in RStudio

Usage

```
insertText(location, text, id = NULL)
```

```
modifyRange(location, text, id = NULL)
```

```
setDocumentContents(text, id = NULL)
```

```
setCursorPosition(position, id = NULL)
```

```
setSelectionRanges(ranges, id = NULL)
```

```
documentSave(id = NULL)
```

```
documentSaveAll()
```

```
documentNew(text, type = c("r", "rmarkdown", "sql"),  
  position = document_position(0, 0), execute = FALSE)
```

Arguments

location	An object specifying the positions, or ranges, wherein text should be inserted. See Details for more information.
text	A character vector, indicating what text should be inserted at each aforementioned range. This should either be length one (in which case, this text is applied to each range specified); otherwise, it should be the same length as the ranges list.
id	The document id. When NULL or blank, the mutation will apply to the currently open, or last focused, RStudio document. Use the id returned from <code>getActiveDocumentContext()</code> to ensure that the operation is applied on the intended document.
position	The cursor position, typically created through <code>document_position()</code> .
ranges	A list of one or more ranges, typically created through <code>document_range()</code> .
type	The type of document to be created.
execute	Should the code be executed after the document is created?

Details

location should be a (list of) `document_position` or `document_range` object(s), or numeric vectors coercable to such objects.

To operate on the current selection in a document, call `insertText()` with only a text argument, e.g.

```
insertText("# Hello\n")
insertText(text = "# Hello\n")
```

Otherwise, specify a (list of) positions or ranges, as in:

```
# insert text at the start of the document
insertText(c(1, 1), "# Hello\n")

# insert text at the end of the document
insertText(Inf, "# Hello\n")

# comment out the first 5 rows
pos <- Map(c, 1:5, 1)
insertText(pos, "# ")

# uncomment the first 5 rows, undoing the previous action
rng <- Map(c, Map(c, 1:5, 1), Map(c, 1:5, 3))
modifyRange(rng, "")
```

`modifyRange` is a synonym for `insertText`, but makes its intent clearer when working with ranges, as performing text insertion with a range will replace the text previously existing in that range with new text. For clarity, prefer using `insertText` when working with `document_positions`, and `modifyRange` when working with `document_ranges`.

Note

The `insertText`, `modifyRange` and `setDocumentContents` functions were added with version 0.99.796 of RStudio.

The `setCursorPosition` and `setSelectionRanges` functions were added with version 0.99.1111 of RStudio.

The `documentSave` and `documentSaveAll` functions were added with version 1.1.287 of RStudio.

The `documentNew` function was introduced in RStudio 1.2.640

`rstudio-editors`*Retrieve Information about an RStudio Editor*

Description

Returns information about an RStudio editor.

Usage

```
getActiveDocumentContext()
```

```
getSourceEditorContext()
```

```
getConsoleEditorContext()
```

Details

The `selection` field returned is a list of document selection objects. A document selection is just a pairing of a document range, and the text within that range.

Value

A list with elements:

<code>id</code>	The document ID.
<code>path</code>	The path to the document on disk.
<code>contents</code>	The contents of the document.
<code>selection</code>	A list of selections. See Details for more information.

Note

The `getActiveDocumentContext` function was added with version 0.99.796 of RStudio, while the `getSourceEditorContext` and the `getConsoleEditorContext` functions were added with version 0.99.1111.

savePlotAsImage	<i>Save Active RStudio Plot as an Image</i>
-----------------	---

Description

Save the currently active RStudio as an image file.

Usage

```
savePlotAsImage(file, format = c("png", "jpeg", "bmp", "tiff", "emf",  
  "svg", "eps"), width, height)
```

Arguments

file	Target filename
format	Image format ("png", "jpeg", "bmp", "tiff", "emf", "svg", or "eps")
width	Image width in pixels
height	Image height in pixels

Note

The savePlotAsImage function was introduced in RStudio 1.1.57

sendToConsole	<i>Send Code to the R Console</i>
---------------	-----------------------------------

Description

Send code to the R console and optionally execute it.

Usage

```
sendToConsole(code, execute = TRUE)
```

Arguments

code	Character vector containing code to be executed.
execute	TRUE to execute the code immediately.

Note

The sendToConsole function was added in version 0.99.787 of RStudio.

Examples

```
## Not run:  
rstudioapi::sendToConsole(".Platform", execute = TRUE)  
  
## End(Not run)
```

showDialog	<i>Show Dialog Box</i>
------------	------------------------

Description

Shows a dialog box with a given title and contents.

Usage

```
showDialog(title, message, url = "")
```

Arguments

title	The title to display in the dialog box.
message	A character vector with the contents to display in the main dialog area. Contents can contain the following HTML tags: "p", "em", "strong", "b" and "i".
url	An optional url to display under the message.

Details

```
showDialog("A dialog", "Showing <b>bold</b> text in the message.")
```

Note

The showDialog function was added in version 1.1.67 of RStudio.

showPrompt	<i>Show Prompt Dialog Box</i>
------------	-------------------------------

Description

Shows a dialog box with a prompt field.

Usage

```
showPrompt(title, message, default = NULL)
```

Arguments

title	The title to display in the dialog box.
message	A character vector with the contents to display in the main dialog area.
default	An optional character vector that fills the prompt field with a default value.

Note

The showPrompt function was added in version 1.1.67 of RStudio.

showQuestion	<i>Show Question Dialog Box</i>
--------------	---------------------------------

Description

Shows a dialog box asking a question.

Usage

```
showQuestion(title, message, ok = NULL, cancel = NULL)
```

Arguments

title	The title to display in the dialog box.
message	A character vector with the contents to display in the main dialog area.
ok	And optional character vector that overrides the caption for the OK button.
cancel	An optional character vector that overrides the caption for the Cancel button.

Note

The showQuestion function was added in version 1.1.67 of RStudio.

sourceMarkers	<i>Display Source Markers</i>
---------------	-------------------------------

Description

Display user navigable source markers in a pane within RStudio

Usage

```
sourceMarkers(name, markers, basePath = NULL,
              autoSelect = c("none", "first", "error"))
```

Arguments

name	Name of marker set (will replace any markers of the same name previously shown)
markers	List or data frame containing source markers (see below for details on how to specify markers)
basePath	Optional. If all source files are within a base path then specifying that path here will result in file names being displayed as relative paths. Note that in this case markers still need to specify source file names as full paths.
autoSelect	Optional. Automatically select and drive focus to either the first marker or the first marker that is an error.

Details

The markers argument can contains either a list of marker lists or a data frame with the appropriate marker columns. The fields in a marker are as follows (all are required):

type	Marker type ("error", "warning", "info", "style", or "usage")
file	Path to source file
line	Line number within source file
column	Column number within line
message	Short descriptive message

Note that if the message field is of class "html" (i.e. inherits(message, "html") == TRUE) then it's contents will be treated as HTML.

Note

The sourceMarkers function was added in version 0.99.225 of RStudio.

terminalActivate	<i>Activate Terminal</i>
------------------	--------------------------

Description

Ensure terminal is running and optionally bring to front in RStudio.

Usage

```
terminalActivate(id = NULL, show = TRUE)
```

Arguments

id	The terminal id. The id is obtained from terminalList() , terminalVisible() , terminalCreate() , or terminalExecute() . If NULL, the terminal tab will be selected but no specific terminal will be chosen.
show	If TRUE, bring the terminal to front in RStudio.

Note

The terminalActivate function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
# create a hidden terminal and run a lengthy command
termId = rstudioapi::terminalCreate(show = FALSE)
rstudioapi::terminalSend(termId, "sleep 5\n")

# wait until a busy terminal is finished
while (rstudioapi::terminalBusy(termId)) {
  Sys.sleep(0.1)
}
print("Terminal available")#'

rstudioapi::terminalActivate(termId)

## End(Not run)
```

terminalBuffer

Get Terminal Buffer

Description

Returns contents of a terminal buffer.

Usage

```
terminalBuffer(id, stripAnsi = TRUE)
```

Arguments

id	The terminal id. The id is obtained from terminalList() , terminalVisible() , terminalCreate() , or terminalExecute() .
stripAnsi	If FALSE, don't strip out Ansi escape sequences before returning terminal buffer.

Value

The terminal contents, one line per row.

Note

The terminalBuffer function was added in version 1.1.350 of RStudio.

terminalBusy	<i>Is Terminal Busy</i>
--------------	-------------------------

Description

Are terminals reporting that they are busy?

Usage

```
terminalBusy(id)
```

Arguments

id	The terminal id. The id is obtained from terminalList() , terminalVisible() , terminalCreate() , or terminalExecute() .
----	---

Value

a boolean

Note

The terminalBusy function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
# create a hidden terminal and run a lengthy command
termId <- rstudioapi::terminalCreate(show = FALSE)
rstudioapi::terminalSend(termId, "sleep 5\n")

# wait until a busy terminal is finished
while (rstudioapi::terminalBusy(termId)) {
  Sys.sleep(0.1)
}
print("Terminal available")

## End(Not run)
```

terminalClear *Clear Terminal Buffer*

Description

Clears the buffer for specified terminal.

Usage

```
terminalClear(id)
```

Arguments

id The terminal id. The id is obtained from [terminalList\(\)](#), [terminalVisible\(\)](#), [terminalCreate\(\)](#), or [terminalExecute\(\)](#).

Note

The terminalClear function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
termId <- rstudioapi::terminalCreate()
rstudioapi::terminalSend(termId, 'ls -l\n')
Sys.sleep(3)
rstudioapi::terminalClear(termId)

## End(Not run)
```

terminalContext *Retrieve Information about RStudio Terminals*

Description

Returns information about RStudio terminal instances.

Usage

```
terminalContext(id)
```

Arguments

id The terminal id. The id is obtained from [terminalList\(\)](#), [terminalVisible\(\)](#), [terminalCreate\(\)](#), or [terminalExecute\(\)](#).

Value

A list with elements:

handle	the internal handle
caption	caption
title	title set by the shell
working_dir	working directory
shell	shell type
running	is terminal process executing
busy	is terminal running a program
exit_code	process exit code or NULL
connection	websockets or rpc
sequence	creation sequence
lines	lines of text in terminal buffer
cols	columns in terminal
rows	rows in terminal
pid	process id of terminal shell
full_screen	full screen program running

Note

The terminalContext function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
termId <- rstudioapi::terminalCreate("example", show = FALSE)
View(rstudioapi::terminalContext(termId))
```

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

terminalCreate	<i>Create a Terminal</i>
----------------	--------------------------

Description

Create a new Terminal.

Usage

```
terminalCreate(caption = NULL, show = TRUE, shellType = NULL)
```

Arguments

caption	The desired terminal caption. When NULL or blank, the terminal caption will be chosen by the system.
show	If FALSE, terminal won't be brought to front.
shellType	Shell type for the terminal: NULL or "default" to use the shell selected in Global Options. For Microsoft Windows, alternatives are "win-cmd" for 64-bit Command Prompt, "win-ps" for 64-bit PowerShell, "win-git-bash" for Git Bash, or "win-wsl-bash" for Bash on Windows Subsystem for Linux. On Linux, Mac, and RStudio Server "custom" will use the custom terminal defined in Global Options. If the requested shell type is not available, the default shell will be used, instead.

Value

The terminal identifier as a character vector (NULL if unable to create the terminal or the given terminal caption is already in use).

Note

The terminalCreate function was added in version 1.1.350 of RStudio and the ability to specify shellType was added in version 1.2.696.

Examples

```
## Not run:
termId <- rstudioapi::terminalCreate('My Terminal')

## End(Not run)
```

terminalExecute	<i>Execute Command</i>
-----------------	------------------------

Description

Execute a command, showing results in the terminal pane.

Usage

```
terminalExecute(command, workingDir = NULL, env = character(),
  show = TRUE)
```

Arguments

command	System command to be invoked, as a character string.
workingDir	Working directory for command
env	Vector of name=value strings to set environment variables
show	If FALSE, terminal won't be brought to front

Value

The terminal identifier as a character vector (NULL if unable to create the terminal).

Note

The terminalExecute function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
termId <- rstudioapi::terminalExecute(
  command = 'echo $HELLO && echo $WORLD',
  workingDir = '/usr/local',
  env = c('HELLO=WORLD', 'WORLD=EARTH'),
  show = FALSE)

while (is.null(rstudioapi::terminalExitCode(termId))) {
  Sys.sleep(0.1)
}

result <- terminalBuffer(termId)
terminalKill(termId)
print(result)

## End(Not run)
```

terminalExitCode	<i>Terminal Exit Code</i>
------------------	---------------------------

Description

Get exit code of terminal process, or NULL if still running.

Usage

```
terminalExitCode(id)
```

Arguments

id The terminal id. The id is obtained from [terminalList\(\)](#), [terminalVisible\(\)](#), [terminalCreate\(\)](#), or [terminalExecute\(\)](#).

Value

The exit code as an integer vector, or NULL if process still running.

Note

The terminalExitCode function was added in version 1.1.350 of RStudio.

terminalKill	<i>Kill Terminal</i>
--------------	----------------------

Description

Kill processes and close a terminal.

Usage

```
terminalKill(id)
```

Arguments

`id` The terminal id. The id is obtained from `terminalList()`, `terminalVisible()`, `terminalCreate()`, or `terminalExecute()`.

Note

The `terminalKill` function was added in version 1.1.350 of RStudio.

terminalList	<i>Get All Terminal Ids</i>
--------------	-----------------------------

Description

Return a character vector containing all the current terminal identifiers.

Usage

```
terminalList()
```

Value

The terminal identifiers as a character vector.

Note

The `terminalList` function was added in version 1.1.350 of RStudio.

terminalRunning	<i>Is Terminal Running</i>
-----------------	----------------------------

Description

Does a terminal have a process associated with it? If the R session is restarted after a terminal has been created, the terminal will not restart its shell until it is displayed either via the user interface, or via `terminalActivate()`.

Usage

```
terminalRunning(id)
```

Arguments

`id` The terminal id. The id is obtained from `terminalList()`, `terminalVisible()`, `terminalCreate()`, or `terminalExecute()`.

Value

a boolean

Note

The `terminalRunning` function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:
# termId has a handle to a previously created terminal
# make sure it is still running before we send it a command
if (!rstudioapi::terminalRunning(termId)) {
  rstudioapi::terminalActivate(termId)

  # wait for it to start
  while (!rstudioapi::terminalRunning(termId)) {
    Sys.sleep(0.1)
  }

  terminalSend(termId, "echo Hello\n")
}

## End(Not run)
```

terminalSend	<i>Send Text to a Terminal</i>
--------------	--------------------------------

Description

Send text to an existing terminal.

Usage

```
terminalSend(id, text)
```

Arguments

id	The terminal id. The id is obtained from terminalList() , terminalVisible() , terminalCreate() , or terminalExecute() .
text	Character vector containing text to be inserted.

Note

The terminalSend function was added in version 1.1.350 of RStudio.

Examples

```
## Not run:  
termId <- rstudioapi::terminalCreate()  
rstudioapi::terminalSend(termId, 'ls -l\n')  
  
## End(Not run)
```

terminalVisible	<i>Get Visible Terminal</i>
-----------------	-----------------------------

Description

Get Visible Terminal

Usage

```
terminalVisible()
```

Value

Terminal identifier selected in the client, if any.

Note

The terminalVisible function was added in version 1.1.350 of RStudio.

translateLocalUrl	<i>Translate Local URL</i>
-------------------	----------------------------

Description

Translates a local URL into an externally accessible URL on RStudio Server.

Usage

```
translateLocalUrl(url, absolute = FALSE)
```

Arguments

url	The fully qualified URL to translate; for example, <code>http://localhost:1234/service/page.html</code> .
absolute	Whether to return a relative path URL (the default) or an absolute URL.

Details

On RStudio Server, URLs which refer to the local host network address (such as `http://localhost:1234/` and `http://127.0.0.1:5678/`) must be translated in order to be externally accessible from a browser. This method performs the required translation, and returns the translated URL, which RStudio Server uses to proxy HTTP requests.

Returns an unmodified URL on RStudio Desktop, and when the URL does not refer to a local address.

Value

The translated URL.

updateDialog	<i>Updates a Dialog Box</i>
--------------	-----------------------------

Description

Updates specific properties from the current dialog box.

Usage

```
updateDialog(...)
```

Arguments

...	Named parameters and values to update a dialog box.
-----	---

Details

Currently, the only dialog with support for this action is the New Connection dialog in which the code preview can be updated through this API.

```
updateDialog(code = "con <- NULL")
```

Note

The updateDialog function was added in version 1.1.67 of RStudio.

 versionInfo

RStudio Version Information

Description

Provides information about the currently running version of RStudio, including it's specific version number and whether it is running in desktop or server mode.

Usage

```
versionInfo()
```

Value

Returns a list with the following elements:

version	A package version object that can be used in comparisons. This is the same value which would be returned from
mode	Current program mode (either "desktop" or "server")
citation	An object inheriting from class bibentry

Note

The versionInfo function was added in version 0.97.124 of RStudio.

Examples

```
## Not run:
require(rstudioapi)
ver <- versionInfo()

# Test specific version constraint
if (ver$version >= "0.97") {
  # do some 0.97 dependent stuff
}

# Check current mode
desktopMode <- ver$mode == "desktop"
```

```
serverMode <- ver$mode == "server"  
  
# Get the citation  
ver$citation  
  
## End(Not run)
```

viewer

View local web content within RStudio

Description

View local web content within RStudio. Content can be served from static files in the R session temporary directory or can be a [Shiny](#), [Rook](#), [OpenCPU](#), or any other type of localhost web application.

Usage

```
viewer(url, height = NULL)
```

Arguments

url	Application URL. This can be either a localhost URL or a path to a file within the R session temporary directory (i.e. a path returned by tempfile).
height	Desired height. Specifies a desired height for the Viewer pane (the default is NULL which makes no change to the height of the pane). This value can be numeric or the string "maximize" in which case the Viewer will expand to fill all vertical space. See details below for a discussion of constraints imposed on the height.

Details

RStudio also sets the global viewer option to the `rstudioapi::viewer` function so that it can be invoked in a front-end independent manner.

Applications are displayed within the Viewer pane. The application URL must either be served from localhost or be a path to a file within the R session temporary directory. If the URL doesn't conform to these requirements it is displayed within a standard browser window.

The height parameter specifies a desired height, however it's possible the Viewer pane will end up smaller if the request can't be fulfilled (RStudio ensures that the pane paired with the Viewer maintains a minimum height). A height of 400 pixels or lower is likely to succeed in a large proportion of configurations.

A very large height (e.g. 2000 pixels) will allocate the maximum allowable space for the Viewer (while still preserving some view of the pane above or below it). The value "maximize" will force the Viewer to full height. Note that this value should only be specified in cases where maximum vertical space is essential, as it will result in one of the user's other panes being hidden.

Viewer Detection

When a page is displayed within the Viewer it's possible that the user will choose to pop it out into a standalone browser window. When rendering inside a standard browser you may want to make different choices about how content is laid out or scaled. Web pages can detect that they are running inside the Viewer pane by looking for the `viewer_pane` query parameter, which is automatically injected into URLs when they are shown in the Viewer. For example, the following URL:

```
http://localhost:8100
```

When rendered in the Viewer pane is transformed to:

```
http://localhost:8100?viewer_pane=1
```

To provide a good user experience it's strongly recommended that callers take advantage of this to automatically scale their content to the current size of the Viewer pane. For example, re-rendering a JavaScript plot with new dimensions when the size of the pane changes.

Note

The `viewer` function was added in version 0.98.423 of RStudio. The ability to specify `maximize` for the `height` parameter was introduced in version 0.99.1001 of RStudio.

Examples

```
## Not run:

# run an application inside the IDE
rstudioapi::viewer("http://localhost:8100")

# run an application and request a height of 500 pixels
rstudioapi::viewer("http://localhost:8100", height = 500)

# probe for viewer option then fall back to browseURL
viewer <- getOption("viewer")
if (!is.null(viewer))
  viewer("http://localhost:8100")
else
  utils::browseURL("http://localhost:8100")

# generate a temporary html file and display it
dir <- tempfile()
dir.create(dir)
htmlFile <- file.path(dir, "index.html")
# (code to write some content to the file)
rstudioapi::viewer(htmlFile)

## End(Not run)
```

writePreference	<i>Write Preference</i>
-----------------	-------------------------

Description

Writes a user interface preference, useful to remember preferences across different r sessions for the same user.

Usage

```
writePreference(name, value)
```

Arguments

name	The name of the preference.
value	The value of the preference.

Note

The writePreference function was added in version 1.1.67 of RStudio.

Index

addTheme, 3
applyTheme, 4
as.document_position
 (document_position), 9
as.document_range (document_range), 10
askForPassword, 4
askForSecret, 5

build-tools, 5
buildToolsCheck (build-tools), 5
buildToolsExec (build-tools), 5
buildToolsInstall (build-tools), 5

callFun, 6
convertTheme, 7
createProjectTemplate, 8

dictionaries, 8
dictionariesPath (dictionaries), 8
document_position, 9, 10, 26
document_range, 10, 26
documentNew (rstudio-documents), 25
documentSave (rstudio-documents), 25
documentSaveAll, 23
documentSaveAll (rstudio-documents), 25

exists, 14

file-dialogs, 10
findFun (hasFun), 14

get, 14
getActiveDocumentContext, 26
getActiveDocumentContext
 (rstudio-editors), 27
getActiveProject, 11
getConsoleEditorContext
 (rstudio-editors), 27
getPersistentValue (persistent-values),
 21

getSourceEditorContext
 (rstudio-editors), 27
getThemeInfo, 12
getThemes, 12
getVersion, 13

hasColorConsole, 13
hasFun, 6, 14

initializeProject (projects), 23
insertText (rstudio-documents), 25
is.document_position
 (document_position), 9
is.document_range (document_range), 10
isAvailable, 14

jobAdd, 15, 16–20
jobAddOutput, 16, 16, 17–20
jobAddProgress, 16, 17, 17, 18–20
jobRemove, 16, 17, 17, 18–20
jobRunScript, 16, 17, 18, 19, 20
jobSetProgress, 16–18, 18, 19, 20
jobSetState, 16–19, 19, 20
jobSetStatus, 16–19, 20

modifyRange (rstudio-documents), 25

navigateToFile, 20
numeric_version, 13

OpenCPU, 43
openProject (projects), 23

persistent-values, 21
previewRd, 22
previewSql, 22
primary_selection, 23
projects, 23

readPreference, 24
removeTheme, 24

restartSession, 25
Rook, 43
rstudio-documents, 25
rstudio-editors, 27

savePlotAsImage, 28
selectDirectory (file-dialogs), 10
selectFile (file-dialogs), 10
sendToConsole, 28
setCursorPosition (rstudio-documents),
25
setDocumentContents
(rstudio-documents), 25
setPersistentValue (persistent-values),
21
setSelectionRanges (rstudio-documents),
25
Shiny, 43
showDialog, 29
showPrompt, 29
showQuestion, 30
sourceMarkers, 30

tempfile, 43
terminalActivate, 31, 39
terminalBuffer, 32
terminalBusy, 33
terminalClear, 34
terminalContext, 34
terminalCreate, 31–34, 35, 37–40
terminalExecute, 31–34, 36, 37–40
terminalExitCode, 37
terminalKill, 38
terminalList, 31–34, 37, 38, 38, 39, 40
terminalRunning, 39
terminalSend, 40
terminalVisible, 31–34, 37–40, 40
translateLocalUrl, 41

updateDialog, 41
userDictionariesPath (dictionaries), 8

verifyAvailable (isAvailable), 14
versionInfo, 42
View, 21
viewer, 43

writePreference, 45