Package 'neo4r'

October 13, 2022

Title A 'Neo4J' Driver

Version 0.1.1

Description A Modern and Flexible 'Neo4J' Driver, allowing you to query data on a 'Neo4J' server and handle the results in R. It's modern in the sense it provides a driver
that can be easily integrated in a data analysis workflow, especially by providing an API working smoothly with other data analysis and graph packages. It's flexible in the way it returns the results, by
trying to stay as close as
possible to the way 'Neo4J' returns data. That way, you have the control over the way you will compute the results. At the same time, the result is not too complex, so that the ``heavy lifting'' of data wrangling is not left to the user.

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URL https://github.com/neo4j-rstats/neo4r

BugReports https://github.com/neo4j-rstats/neo4r/issues

Imports attempt, data.table, glue, httr, igraph, jsonlite, magrittr, purrr, R6, rlang, rstudioapi, shiny, tibble, tidyr, tidyselect, utils

Encoding UTF-8

LazyData true

RoxygenNote 6.1.0

NeedsCompilation no

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Repository CRAN

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R topics documented:

`call_neo4j` *Call Neo4J API*

Description

Call Neo4J API

Usage

```
call_neo4j(query, con, type = c("row", "graph"), output = c("r",
  "json"), include_stats = FALSE, include_meta = FALSE)
```

Arguments

`query`	The cypher query
`con`	A NEO4JAPI connection object
`type`	Return the result as row or as graph
`output`	Use "json" if you want the output to be printed as JSON
`include_stats`	tShould the stats about the transaction be included?
`include_meta`	tShould the stats about the transaction be included?

Value

the result from the Neo4J Call

extract_nodes *Extract nodes or relationships*

Description

Extract nodes or relationships

Usage

```
extract_nodes(x)

extract_relationships(x)
```

Arguments

x	a result from Neo4J

Value

a tibble

launch_con_pane *Launch Neo4J Connection Pane*

Description

Launch Neo4J Connection Pane

Usage

```
launch_con_pane(con)
```

Arguments

con	a connection object

Value

an opened Connection Pane

load_csv *Load a CSV to Neo4J*

Description

Load a CSV to Neo4J

Usage

```
load_csv(on_load = "", con, url, header = TRUE,
  periodic_commit = 1000, as = "csv", type = c("row", "graph"),
  output = c("r", "json"), include_stats = TRUE,
  include_meta = FALSE)
```

Arguments

on_load	the code to execute on load
con	A NEO4JAPI connection object
url	the url of the csv
header	does the csv have a header?
periodic_commit	the PERIODIC COMMIT cypher arg
as	the AS cypher arg
type	Return the result as row or as graph
output	Use "json" if you want the output to be printed as JSON
include_stats	tShould the stats about the transaction be included?
include_meta	tShould the stats about the transaction be included?

Value

a csv loaded to Neo4J

neo4j_api *A Neo4J Connexion*

Description

A Neo4J Connexion

Usage

```
neo4j_api
```

Format

An object of class `R6ClassGenerator` of length 24.

Value

A Neo4J Connexion

Methods

`access` list url, user and password

`ping` test your connexion

`version` Neo4J version

`get` Get a list of either relationship, labels,

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Data

`url` list url, user and password

`user` test your connexion

Examples

```
## Not run:
con <- neo4j_api$new(url = "http://localhost:7474", user = "neo4j", password = "password")

## End(Not run)
```

`read_cypher` *Read a cypher file*

Description

Read a cypher file

Usage

```
read_cypher(file)
```

Arguments

`file`	the path to the cypher file

Value

a tibble with the queries

Examples

```
## Not run:
read_cypher("random/create.cypher")

## End(Not run)
```

`send_cypher` *Send a cypher file to be executed*

Description

Send a cypher file to be executed

Usage

```
send_cypher(path, con, type = c("row", "graph"), output = c("r",
  "json"), include_stats = TRUE, meta = FALSE)
```

Arguments

`path`	the path to the cypher file
`con`	a connexion object created with neo4j_api$new()
`type`	the type of the format to query for (row or graph)
`output`	the printing method (r or json)
`include_stats`	whether of not to include stats
`meta`	whether of not to include meta info

Value

a cypher call

Examples

```
## Not run:
send_cypher("random/create.cypher")
path <- "data-raw/constraints.cypher"

## End(Not run)
```

unnest_graph *Unnest both relationships and nodes*

Description

Unnest both relationships and nodes

Usage

```
unnest_graph(res)
```

Arguments

res	an api graph result

Value

a list of two unnested data.frames

unnest_nodes *Unnest a node data.frame*

Description

Unnest a node data.frame

Usage

```
unnest_nodes(nodes_tbl, what = c("all", "label", "properties"))
```

Arguments

nodes_tbl	the node table
what	what to unnest

Value

a new dataframe

unnest_relationships *Unnest a Relationships table*

Description

Unnest a Relationships table

Usage

```
unnest_relationships(relationships_tbl)
```

Arguments

relationships_tbl	a relationship table

Value

an unnested table

Note

Please note that the properties will be converted to character if the class is not unique.

vec_to_cypher *Turn a named vector into a cypher list*

Description

‘vec_to_cypher()‘ creates a list, and ‘vec_to_cypher_with_var()‘ creates a cypher call starting with a variable.

Usage

```
vec_to_cypher(vec, label)

vec_to_cypher_with_var(vec, label, variable)
```

Arguments

vec	the vector
label	the label of each vector
variable	the variable to use (for ‘vec_to_cypher()‘)

Details

This function can be used with small vectors you want to send to the server. It can for example be used this way : “‘ paste("MERGE", vec_to_cypher(iris[1, 1:3], "Species")) “‘ to create a cypher call.

Value

a character vector

Examples

```
vec_to_cypher(iris[1, 1:3], "Species")
vec_to_cypher_with_var(iris[1, 1:3], "Species", a)
```

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