

Package ‘couchDB’

September 9, 2014

Type Package

Title Connect and work with couchDB databases

Version 1.3.0

Date 2014-02-25

Author Aleksander Dietrichson

Maintainer Aleksander Dietrichson <sasha@xrrch.com>

Depends R (>= 3.0.0), RCurl, bitops, httr, rjson

Description Interface to couchDB

SystemRequirements couchDB instance to connect to and work on.

License AGPL-3

NeedsCompilation no

Repository CRAN

Date/Publication 2014-09-09 07:24:25

R topics documented:

couchDB	2
couch_attach	3
couch_create_database	3
couch_delete	4
couch_fetch	4
couch_fetch_attachment	5
couch_fetch_attachment_url	5
couch_fetch_default	6
couch_http_connection	6
couch_list_databases	7
couch_new_object	7

couch_ping	8
couch_set_default_connection	8
couch_set_default_database	9
couch_store	9
couch_store_default	10
print.couch_connection	10
Index	11

couchDB

Functions for interacting with a couchDB database,

Description

This package contains various functions for interacting with couchDB - a document database. For more information about the couchDB database see: <http://couchdb.apache.org>.

Get connected

To interact with a couchDB instance you will need to create a connection object. Communication with couchDB happens over a http protocol. A minimal connection (running on the default port and no password protection) would be:

```
myConn <- couch_http_connection("localhost")
```

The variable "myConn" can now be used as parameters to other functions.

For convenience a default connection can also be created with [couch_set_default_connection](#) using the same parameters.

Once a connection object exists, you may want to make sure it is connecting correctly with the [couch_ping](#) function. If you are properly connected the reponse should be like:

```
Response [http://localhost:5984]
Status: 200
Content-type: text/plain; charset=utf-8
Size: 151 B
{"couchdb":"Welcome","uuid":"c1a367c91517195b57ddafe788a72b75","version":"1.4.0","vendor"
{"name": "...
```

Databases

On a couchDB install there can be several databases (i.e. namespaces). The function [couch_list_databases](#) will provide a list of available databases on the connection provided.

The function [couch_create_database](#) will, similarly, allow you to create a new database or namespace on the couchDB instance.

Fetch, store and delete documents

Once you have a connection and a database to work with you can fetch, store and delete documents by using the corresponding functions:

- [couch_fetch](#) and [couch_fetch_default](#)
- [couch_store](#) and [couch_store_default](#)
- [couch_delete](#)

Author(s)

Aleksander Dietrichson

couch_attach	<i>Add attachment to document</i>
--------------	-----------------------------------

Description

Send attachment to an existing url

Usage

```
couch_attach(location, revtag, attachment, content_type = "image/png")
```

Arguments

location	url of the
revtag	revision (version)
attachment	file to attach
content_type	Content type of the attachment (for example: "image/png")

couch_create_database	<i>Create database</i>
-----------------------	------------------------

Description

Creates a new database based on the dbname.

Usage

```
couch_create_database(conn, dbname)
```

Arguments

conn	a couchDB connection object
dbname	the name of the database

Examples

```
## Not run:
#Note: this example assumes that there is a couchDB instance available on localhost
myConn <- couch_http_connection("localhost");
couch_create_database(myConn, "myDatabase")

## End(Not run)
```

couch_delete	<i>Delete a record.</i>
--------------	-------------------------

Description

Delete a record on the connection provided

Usage

```
couch_delete(conn, database, key, myOpts = NULL)
```

Arguments

conn	A couchDB connection object
database	Name of database to operate on
key	key (record) to delete
myOpts	Additional options (not implemented in this version)

couch_fetch	<i>Fetch a document/record.</i>
-------------	---------------------------------

Description

Fetches a couch object based on the key

Usage

```
couch_fetch(conn, database, key, myOpts = NULL)
```

Arguments

conn	A couchDB connection object
database	The database to connect to.
key	Key of document to fetch
myOpts	Additional options (not implemented in this version)

Value

A list object with the values from the record.

couch_fetch_attachment
Fetch attachment

Description

Gets a named attachment from a recors

Usage

```
couch_fetch_attachment(conn, database, key, attachment)
```

Arguments

conn	A couchDB connection object
database	The database to connecto to
key	Key of document
attachment	name of attachment

couch_fetch_attachment_url
Get attachment url

Description

Get the url for a specific attachment, This is sometimes useful for direct reads to functions, in lieu of storing tempfiles.

Usage

```
couch_fetch_attachment_url(conn, database, key = NULL, attachment = NULL)
```

Arguments

conn	A connection object
database	The database name
key	Document key
attachment	Name of the attachment

`couch_fetch_default` *Fetch document/record from default store.*

Description

Fetches a document specified by Key from the default database on the default connection

Usage

```
couch_fetch_default(key, myOpts = NULL)
```

Arguments

<code>key</code>	The key of the document to fetch
<code>myOpts</code>	Additional options (not implemented in this version)

Value

A list object with the values from the record.

`couch_http_connection` *Connection to couchDB*

Description

Creates a connection object on the host and ports provided

Usage

```
couch_http_connection(host, port = 5984, https = FALSE, user = NULL,
  password = NULL)
```

Arguments

<code>host</code>	The IP address of the couchDB instance
<code>port</code>	The port to connect to
<code>https</code>	Should a ssl protocol be used
<code>user</code>	Username on the database server
<code>password</code>	Password for the database server

Examples

```
## Not run:
  myConn <- couch_http_connection(host="localhost");

## End(Not run)
```

couch_list_databases *List available databases.*

Description

Lists the available databases on the connection provided.

Usage

```
couch_list_databases(conn)
```

Arguments

conn	A couchDB connection object
------	-----------------------------

couch_new_object *New couchDB document*

Description

Creates a new object to insert to the couchDB. Takes either a list or a formatted json object as value. Any attachment to the record needs to be base64-encoded and added to the list as "_attachments". If key is provided this is used, null sends a key-less record to couch and the key will have to be retrieved from the response object.

Usage

```
couch_new_object(value, database = NULL, key = NULL)
```

Arguments

value	List to be converted to json for transmission or preformatted JSON string
database	The database to use
key	The key (recordname) to use for the object.

Examples

```
## Not run:
# This code creates a document containing a small list for storage in the "localhost"
# database with the key "testDoc".
myDoc <- couch_new_object(list(a=1,b=2),"localhost","testDoc");

#Same as above but with json entered directly (not recommended).
myDoc <- couch_new_object('{"a":1,"b":2}',"localhost","testDoc")

## End(Not run)
```

couch_ping	<i>Ping connection</i>
------------	------------------------

Description

Check connection to the database.

Usage

```
couch_ping(conn)
```

Arguments

conn	A couchDB connection object.
------	------------------------------

couch_set_default_connection	<i>Set default connection</i>
------------------------------	-------------------------------

Description

Sets up a couchDB connection to use as default

Usage

```
couch_set_default_connection(host, port = 5984, https = FALSE)
```

Arguments

host	The IP address of the couchDB instance
port	The port to connect to
https	Should a ssl protocol be used?

couch_set_default_database
Set a database as default document store

Description

Specifies a database to write to on a couch connection by default.

Usage

```
couch_set_default_database(database)
```

Arguments

database the database to use as default (String);

couch_store *Store a record*

Description

Stores a record to the connection provided (database spec is in object)

Usage

```
couch_store(conn, obj, myOpts = NULL)
```

Arguments

conn A couchDB connection object
obj A list formatted by calling couch_new_object
myOpts Additional options (not implemented in this version)

`couch_store_default` *Store a document on the default connection.*

Description

Stores a record on the default connection.

Usage

```
couch_store_default(obj, myOpts = NULL)
```

Arguments

<code>obj</code>	A list formatted by calling <code>couch_new_object</code> .
<code>myOpts</code>	Additional options (not implemented in this version)

`print.couch_connection`
Print method for couchDB connection object

Description

Prints the couchDB connection object.

Usage

```
## S3 method for class 'couch_connection'  
print(conn)
```

Arguments

<code>conn</code>	a couchDB connection object
-------------------	-----------------------------

Index

`couch_attach`, 3
`couch_create_database`, 2, 3
`couch_delete`, 3, 4
`couch_fetch`, 3, 4
`couch_fetch_attachment`, 5
`couch_fetch_attachment_url`, 5
`couch_fetch_default`, 3, 6
`couch_http_connection`, 6
`couch_list_databases`, 2, 7
`couch_new_object`, 7
`couch_ping`, 2, 8
`couch_set_default_connection`, 2, 8
`couch_set_default_database`, 9
`couch_store`, 3, 9
`couch_store_default`, 3, 10
`couchDB`, 2
`couchDB-package (couchDB)`, 2
`print.couch_connection`, 10