

Package ‘rsurveycto’

September 8, 2022

Type Package

Title Interact with Data on 'SurveyCTO'

Version 0.0.5

Description 'SurveyCTO' is a platform for mobile data collection in offline settings. The 'rsurveycto' R package uses the 'SurveyCTO' REST API <<https://docs.surveycto.com/05-exporting-and-publishing-data/05-api-access/01-api-access.html>> to read datasets and forms from a 'SurveyCTO' server into R as 'data.table's and to download file attachments. The package also has limited support to write datasets to a server.

URL <https://youth-impact.github.io/rsurveycto/>,
<https://github.com/youth-impact/rsurveycto>

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.2.1

Depends R (>= 4.1)

Imports checkmate (>= 2.1.0), curl (>= 4.3.2), data.table (>= 1.14.2), glue (>= 1.6.2), httr (>= 1.4.3), jsonlite (>= 1.8.0), withr (>= 2.5.0)

Suggests knitr, rmarkdown, testthat (>= 3.1.4)

Config/testthat/edition 3

NeedsCompilation no

Author Jake Hughey [aut, cre],
Robert On [aut]

Maintainer Jake Hughey <jakejhughey@gmail.com>

Repository CRAN

Date/Publication 2022-09-08 06:50:02 UTC

R topics documented:

drop_empties	2
scto_auth	3
scto_get_attachments	4
scto_read	5
scto_write	6

Index	7
--------------	----------

drop_empties	<i>Drop empty columns from a data.table</i>
--------------	---

Description

An empty column is one whose only values are NA or "".

Usage

```
drop_empties(d)
```

Arguments

d data.table.

Value

d modified by reference, invisibly.

See Also

[scto_write\(\)](#)

Examples

```
library('data.table')
d = data.table(w = 3:4, x = c('', 'foo'), y = c(NA, NA), z = c(NA, ''))
drop_empties(d)
```

`scto_auth`*Get a SurveyCTO authentication session object*

Description

Authenticates with SurveyCTO and fetches corresponding credentials.

Usage

```
scto_auth(  
  auth_file = NULL,  
  servername = NULL,  
  username = NULL,  
  password = NULL  
)
```

Arguments

<code>auth_file</code>	String indicating path to file containing authorization information, which should have servername on the first line, username on the second, and password on the third. If <code>auth_file</code> is not NULL, other arguments are ignored. If <code>auth_file</code> is NULL, other arguments must be provided.
<code>servername</code>	String indicating name of the SurveyCTO server.
<code>username</code>	String indicating username for the SurveyCTO account.
<code>password</code>	String indicating password for the SurveyCTO account.

Value

`scto_auth` object for an authenticated SurveyCTO session.

See Also

[scto_read\(\)](#), [scto_get_attachments\(\)](#), [scto_write\(\)](#)

Examples

```
## Not run:  
# preferred approach, avoids storing any credentials in code  
auth = scto_auth('scto_auth.txt')  
  
# alternate approach  
auth = scto_auth('my_server', 'my_user', 'my_pw', auth_file = NULL)  
  
## End(Not run)
```

scto_get_attachments *Download file attachments from a SurveyCTO form*

Description

This function downloads files in bulk.

Usage

```
scto_get_attachments(  
  auth,  
  urls,  
  output_dir,  
  private_key = NULL,  
  overwrite = TRUE  
)
```

Arguments

auth	scto_auth() object.
urls	Character vector of API URLs for file attachments. Will typically be derived from a column of a data table returned by scto_read() . Can contain missing values.
output_dir	String indicating path to directory in which to save files.
private_key	String indicating path to private key file. Only needs to be non-NULL to decrypt encrypted file attachments.
overwrite	Logical indicating whether to overwrite existing files.

Value

A character vector of file names of the same length as `urls`, with NA for missing or invalid URLs.

See Also

[scto_auth\(\)](#), [scto_read\(\)](#), [scto_write\(\)](#)

Examples

```
## Not run:  
auth = scto_auth('scto_auth.txt')  
scto_data = scto_read(auth, 'my_form', 'form')  
filenames = scto_get_attachments(auth, scto_data[['my_attachment']])  
  
## End(Not run)
```

scto_read

*Access SurveyCTO data using the API***Description**

This function reads data from SurveyCTO using the API.

Usage

```
scto_read(
  auth,
  id,
  type = c("dataset", "form"),
  start_date = "1900-01-01",
  review_status = "approved",
  private_key = NULL,
  drop_empty_cols = TRUE,
  convert_datetime = c("CompletionDate", "SubmissionDate", "starttime", "endtime"),
  datetime_format = "%b %e, %Y %I:%M:%S %p"
)
```

Arguments

auth	scto_auth() object.
id	String indicating ID of the dataset or form.
type	String indicating whether id corresponds to a dataset or form.
start_date	Date-time or something coercible to a date-time indicating the earliest date-time for which to fetch data. Only used for forms.
review_status	String or character vector indicating which submissions to fetch. Possible values are "approved", "pending", "rejected", or any combination of the three. Only used for forms.
private_key	String indicating path to private key file. Only needs to be non-NULL to read encrypted form data.
drop_empty_cols	Logical indicating whether to drop columns that contain only NA or only an empty string.
convert_datetime	Character vector of column names in the data for which to convert strings to datetimes (POSIXct). Use NULL to not convert any columns to datetimes.
datetime_format	String indicating format of datetimes from SurveyCTO. See strptime() .

Value

A data.table.

See Also

[scto_auth\(\)](#), [scto_get_attachments\(\)](#), [scto_write\(\)](#)

Examples

```
## Not run:
auth = scto_auth('scto_auth.txt')
scto_data = scto_read(auth, 'my_form', 'form')

## End(Not run)
```

scto_write

Upload data to SurveyCTO

Description

This function uses a web POST request to replace an existing dataset on a SurveyCTO server. The function is in beta, so use with caution.

Usage

```
scto_write(auth, data, dataset_id, dataset_title)
```

Arguments

auth	scto_auth() object.
data	data.frame to upload.
dataset_id	String indicating ID of existing dataset.
dataset_title	String indicating title of dataset.

Value

An object of class [httr::response\(\)](#).

See Also

[scto_auth\(\)](#), [scto_read\(\)](#), [scto_get_attachments\(\)](#)

Examples

```
## Not run:
auth = scto_auth('scto_auth.txt')
res = scto_write(auth, data, 'my_dataset', 'My Dataset')

## End(Not run)
```

Index

`drop_empties`, 2

`htr::response()`, 6

`scto_auth`, 3

`scto_auth()`, 4–6

`scto_get_attachments`, 4

`scto_get_attachments()`, 3, 6

`scto_read`, 5

`scto_read()`, 3, 4, 6

`scto_write`, 6

`scto_write()`, 2–4, 6

`strptime()`, 5