Package 'rfieldclimate'

December 21, 2020

Type Package

Title Client for the 'FieldClimate' API

Version 0.1.0

Maintainer Eduard Szöcs <eduard.szoecs@basf.com>

Description Provides functionality and parsers to interact with the 'FieldClimate' API <https://api.fieldclimate.com/v2/docs/>.

License GPL-3

Imports digest, dplyr, httr, jsonlite, lubridate, magrittr, purrr, tidyr

Suggests covr, testthat

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

NeedsCompilation no

Author Eduard Szöcs [aut, cre], BASF SE [cph]

Repository CRAN

Date/Publication 2020-12-21 10:20:08 UTC

R topics documented:

`fc_get_user` *Read user information*

Description

Read user information

List of user devices.

Get station information

Get min and max date of device data availability

Getdata between specified time periods.

Usage

```
fc_get_user(...)

fc_get_user_stations(...)

fc_get_station(station_id = NULL, ...)

fc_get_data(station_id = NULL, ...)

fc_get_data_range(
  station_id = NULL,
  data_group = c("raw", "hourly", "daily", "monthly"),
  from = NULL,
  to = NULL,
  ...
)
```

Arguments

`...`	additional arguments passed to `fc_request()`
`station_id`	station id to query
`data_group`	how to group data
`from`	time in unix timestamps since UTC, e.g. via as.integer(as.POSIXct(Sys.time()))
`to`	time in unix timestamps since UTC as.integer(as.POSIXct(Sys.time()))

Examples

```
## Not run:
  fc_get_user()

## End(Not run)
## Not run:
stations <- fc_get_user_stations()
```

```
## End(Not run)
## Not run:
stations <- fc_get_user_stations()
fc_get_station(stations[[1]]$station_name)

## End(Not run)
## Not run:
stations <- fc_get_user_stations()
fc_get_data(stations[[1]]$station_name)

## End(Not run)
## Not run:
stations <- fc_get_user_stations()
fc_get_data_range(
  station_id = stations[[1]]$station_name,
  data_group = "raw",
  from = as.integer(as.POSIXct(Sys.time() - 60*60*24)),
  to =  as.integer(as.POSIXct(Sys.time())))

## End(Not run)
```

`fc_headers` *Create authentication headers*

Description

authentication is done via hmac, see `fc_headers()`.

Usage

```
fc_headers(
  method = c("GET", "PUT", "POST", "DELETE"),
  path = NULL,
  public_key = Sys.getenv("FC_PUBLIC_KEY"),
  private_key = Sys.getenv("FC_PRIVATE_KEY")
)

fc_request(
  method = c("GET", "PUT", "POST", "DELETE"),
  path = NULL,
  body = NULL,
  public_key = Sys.getenv("FC_PUBLIC_KEY"),
  private_key = Sys.getenv("FC_PRIVATE_KEY"),
  verbose = FALSE
)
```

Arguments

method	request method
path	request path (required)
public_key	public key. Read by default from env variable FC_PUBLIC_KEY
private_key	private key. Read by default from env variable FC_PRIVATE_KEY
body	request body named list. Will be passed to httr::VERB() and form-encoded.
verbose	logical, should the request be printed?

See Also

https://api.fieldclimate.com/v2/docs/#authentication-hmac

Examples

```
fc_headers(path = "/user", public_key = "invalid", private_key = "invalid")
## Not run:
fc_request("GET", "/user")

## End(Not run)
```

---

fc_parse_data *parse data into long data.frame*

Description

parse data into long data.frame

parse stations into data.frame

Usage

```
fc_parse_data(obj)

fc_parse_stations(obj)
```

Arguments

obj	stations object as returned by e.g. fc_get_user_stations()

Examples

```
## Not run:
stations <- fc_get_user_stations()
obj <- fc_get_data_range(
  station_id = stations[[1]]$station_name,
  data_group = "raw",
  from = as.integer(as.POSIXct(Sys.time() - 60*60*24)),
```

```
  to =  as.integer(as.POSIXct(Sys.time())))
fc_parse_data(obj)

## End(Not run)
## Not run:
stations <- fc_get_user_stations()
fc_parse_stations(stations)

## End(Not run)
```

`parse_sensor` *parse a sensor*

Description

parse a sensor

Usage

```
parse_sensor(sensor)
```

Arguments

`sensor`	a sensor

`parse_station` *parse a station*

Description

parse a station

Usage

```
parse_station(station)
```

Arguments

`station`	a stations

`parse_timepoint` *parse a timepoint into a long data.frame*

Description

parse a timepoint into a long data.frame

Usage

```
parse_timepoint(timepoint)
```

Arguments

`timepoint`	a timepoint

Index