Package 'sta4R'

December 1, 2020

Title Client for OGC SensorThings API Services

Version 0.1.0

Description A client for SensorThings API (STA,
  see <https://www.ogc.org/standards/sensorthings>) as specified
  by the Open Geospatial Consortium (OGC). With the package users
  can retrieve (meta)data from STA instances and interactively
  create requests, plots, and maps for near real-time observation
  data based on available sensors, observed properties, locations etc.
  using thematic, temporal, and spatial filtering. Users can also
  create requests to load data into STA instances.

License `use_mit_license()`

Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.1.0

Suggests knitr,
  rmarkdown

VignetteBuilder knitr

Imports dplyr,
  httr,
  mapview,
  sf,
  geojsonio,
  jsonlite,
  rjson,
  purrr,
  timetk,
  ggplot2

R topics documented:

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convert_links   *Convert links*

Description

Given a data.frame/ tibble, converts any texts in a data frame/ tibble that begin with "httr" to a hyperlink

Usage

```
convert_links(x)
```

Arguments

x   a data.frame or tibble

Value

the same data frame with any http text converted to hyperlink html.

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sta_getLocations   *Retrieve all locations from STA instance*

Description

Given an STA endpoint, will get all location entities and collate them into an sf object. It checks if the STA call has been paginated. If it is paginated, it retrieves the total number of locations and the default $skip value, and iterates through, retrieving all locations.

Usage

```
sta_getLocations(api)
```

Arguments

api   character URL of an STA endpoint.

Value

an sf object of every STA location entity.

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sta_getLocationsCall *Parse a GET Locations request response from an STA instance*

Description

Given an STA/Locations call, including any query parameters, will get all location entities collate into an `sf` object. A helper function for `sta_getLocations` as it iterates through a paginated STA Location document.

Usage

```
sta_getLocationsCall(call)
```

Arguments

call   character URL of an STA Locations call, including any query parameters

Value

an sf object of every STA location entity.

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sta_iterate *Iterator*

Description

Given an STA call, response document, and parsing function, will detect the total entity count and default $skip value. It will use these values to iterate through the paginated response document, and collate together the resulting responses according to the passed function

Usage

```
sta_iterate(call, response, fun)
```

Arguments

call   character URL of STA call.

fun   any function that parses STA responses into R data structures that can be row-binded. An example is `sta_getLocationsCall()`

resonse   json document corresponding to the `call`

Value

a collation of objects created by `fun`

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sta_mapview   *Map locations of SensorThings API Locations entities*

Description

Given a STA endpoint, creates a `mapview` html map of the endpoints and any links provided by STA.

Usage

```
sta_mapview(api, ...)
```

Arguments

`api`	a character URL for an STA endpoint
`...`	any arguments for `mapview`

Value

`mapview` plot

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