Package ‘valetr’

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getSeriesData Retrieves series’ observations

Description

gaeletr workhorse function. getSeriesData() retrieves observations from one or more series. This list may have one or more components. Each component is a series. This function accepts query arguments as specified on the API's manual.

Usage

gaeletrSeriesData(series, ...)

Arguments

series character string of length >= 1. It accepts both series’ link and their name only (see Details).

... additional API’s query arguments. See Details

Details

series

The argument series accepts a character vector in which each element is either a series link or a series name. getSeriesData() does not throw an error if some components do not have a valid name or link in the API. Instead, getSeriesData() issues a warning message with the series and API error message details. Additionally, the final output removes elements without a valid link. If all components in series do not have a valid address then the function throws an error.

... The following arguments are accepted in ...: start_date, end_date, recent, recent_weeks, recent_months, recent_years. These are the API’s options for time subsetting (see API documentation). Only start_date and end_date can be jointly used in ... Using any other combination of two or more arguments causes getSeriesData() to accept only one of them according to a pre-established hierarchy. This argument hierarchy causes the function to ignore the additional arguments. The hierarchy flows as follows:

• start_date and end_date
• recent
• recent_weeks
• recent_months
• recent_years

The function converts numeric inputs to recent.

The series observations may have a frequency that is not compatible to the query (i.e. recent_weeks query in a monthly series). Valet API converts the query time interval into the corresponding frequency of the series. If the time interval component is less than the most recent observation in the
getSeriesInfo

getSeriesInfo returns a data.frame with a single row containing the series information. This behaviour allows getSeriesData() to return some series for which there is a valid interval. Also note that any invalid arguments passed to ... is ignored during execution. For more details on the arguments' input format, see examples, the package’s vignette and Valet’s documentation.

Value

An object of class list of one or more data.frames with nx5 dimensions each. The columns are respectively: series_name, series_label, series_desc, d (observation date) and v (series values).

Examples

```r
### step 1: find the series link or name
# get series info
seriesInfo <- getSeriesInfo(patternGroupLabel="(?i)consumer price",
                              patternSeriesLabel="(?i)seasonally")

# use link from resulting object to get series obs
series <- getSeriesData(seriesInfo["series_link"])

#### query example ####
# ex1: start and end date
series <- getSeriesData(seriesInfo["series_link"],
                          start_date="2010-01-01", end_date="2012-01-01")

# ex2: the most recent 10 obs
series <- getSeriesData(seriesInfo["series_link"], recent=10L)

# ex3: most recent weeks
series <- getSeriesData(seriesInfo["series_link"], recent_weeks=20L)

# ex4: most recent months
series <- getSeriesData(seriesInfo["series_link"], recent_months=29L)

# ex4: most recent years
series <- getSeriesData(seriesInfo["series_link"], recent_years=20L)
```

getSeriesInfo

Retrieves series information

Description

Exploratory function (albeit more complete than regexSeriesLabel). The pattern arguments searches for information on series based on their group label and series label. A data.frame is returned with the series’ group name, group label, group description, series label, series link and series name. This function utilizes the "Series Group" route in the Valet API and provides the full
set of information available to a series. The series’ link (or name) can be used in the function `getSeriesData` to fetch data.

Usage

```r
getSeriesInfo(patternGroupLabel = NULL, patternSeriesLabel = NULL, ...)
```

Arguments

- `patternGroupLabel` character string as regular expression. Only accepts character string or NULL (default). If length is greater than 1, the first element is used. `patternGroupLabel=NULL` retrieves the details for all groups in the API.
- `patternSeriesLabel` character string as regular expression. Only accepts character string or NULL (default). If length is greater than 1, the first element is used. If NULL, no pattern-matching is executed on the series’ label.
- `...` accepts the following extra arguments from `grep`: `ignore.case`, `perl`, `fixed` and `useBytes`.

Details

The data frame returned from this function contains all information available in the Series Group router in the Valet API. This function is more complete than `regexSeriesLabel`. `getSeriesInfo` returns not only the series label and link (also available in `regexSeriesLabel`) but also a series’ group name, group label, group description and series name.

If `patternGroupLabel` is NULL, then the function will retrieve information for all groups (and their associated series). This results in a longer processing time. A progress bar tracks the retrieval process.

Value

An `n x 6` data frame with columns representing the different characteristic of a series.

See Also

`getSeriesInfo`, `grep`

Examples

```r
# returns series info

seriesInfo <- getSeriesInfo(patternGroupLabel="(?i)consumer price",
                            patternSeriesLabel="(?i)seasonally")
```
regexSeriesLabel

Searches for matches in series’ labels

Description

Exploratory function. If the pattern successfully matches one or more series labels, then a data.frame is returned with the series label and link. The link can be used in the function getSeriesData to fetch the data.

Usage

regexSeriesLabel(pattern = NULL, ...)

Arguments

pattern character string as regular expression. Only accepts character string. If length is greater than 1, the first element is used. Defaults to NULL. The default option returns a data.frame with all series with labels and links in the API.

... accepts the following extra arguments from grep: ignore.case, perl, fixed and useBytes.

Value

A data.frame. Columns are the series label, link and name respectively.

See Also

getSeriesInfo, grep

Examples

# get a list of series that matches the pattern “CPI”

#'
cpiList <- regexSeriesLabel(pattern="cpi") # no match, returns an empty data.frame
cpiList2 <- regexSeriesLabel(pattern="cpi", ignore.case=TRUE) # finds match
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