Package: rjd3providers (via r-universe)

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Type Package

Title Interface to 'JDemetra+' 3.x Time Series Analysis Software

Version 3.9.0

Description Interface to 'JDemetra+' 3.x
(<https://github.com/jdemetra>) time series analysis software.
It offers full access to txt, csv, xml and spreadsheets files
which are meant to be read by 'JDemetra+' Graphical User
Interface.

License EUPL

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https://rjdverse.github.io/rjd3providers/

BugReports https://github.com/rjdverse/rjd3providers/issues

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.obs_format *Generates the Java object for data formats*

Description

Generates the Java object for data formats

Usage

```
.obs_format(
  locale = NULL,
  dateFmt = NULL,
  numberFmt = NULL,
  ignoreNumberGrouping = TRUE
)
```

Arguments

locale	Locale language. Null to use the default
dateFmt	Format of the date. Null to use the default of the locale
numberFmt	Format of the number. Null to use the default of the locale
ignoreNumberGrouping	Ignore number grouping

Value

An internal Java object.

Examples

```
.obs_format(locale = "french-be")
```

.obs_gathering *Generates the Java object for automatic aggregation of the data*

Description

Generates the Java object for automatic aggregation of the data

Usage

```
.obs_gathering(
  period = 0,
  aggregationType = NULL,
  allowPartialAggregation = FALSE,
  cleanMissing = TRUE
)
```

Arguments

period	The annual frequency of the series. If 0, the frequency.
aggregationType	The type of the aggregation to be applied on the series (only used if "period" is different from 0).
allowPartialAggregation	Specifies if the aggregation is performed or not when they are missing periods.
cleanMissing	Specifies if missing values at the beginning and at the end of the data are removed from the series.

Value

An internal Java object.

Examples

```
.obs_gathering(period=4, aggregationType="Sum")
```

.spreadsheet_moniker *Generates a java moniker for the corresponding id.*

Description

Generates a java moniker for the corresponding id.

Usage

```
.spreadsheet_moniker(id)
```

Arguments

id	Identifier of the requested information.

Value

An internal Java moniker.

Examples

```
.spreadsheet_moniker("toy_id")
```

`.txt_moniker` *Generates a java moniker for the corresponding id.*

Description

Generates a java moniker for the corresponding id.

Usage

```
.txt_moniker(id)
```

Arguments

`id`	Identifier of the requested information.

Value

An internal java moniker.

Examples

```
.txt_moniker("toy_id")
```

`.xml_moniker` *Generates a java moniker for the corresponding id.*

Description

Generates a java moniker for the corresponding id.

Usage

```
.xml_moniker(id)
```

Arguments

`id`	Identifier of the requested information.

Value

An internal java moniker.

Examples

```
.xml_moniker("toy_id")
```

`get_providers_option` *Set an option for providers*

Description

Set an option for providers

Usage

```
get_providers_option(name)
```

Arguments

`name`	Name of the option

Value

The requested option or NULL if it doesn't exist

Examples

```
providers_option("test", "DUMMY")
get_providers_option("test")
```

`providers_option` *Set an option for providers*

Description

Set an option for providers

Usage

```
providers_option(name, obj)
```

Arguments

name	Name of the option
obj	Option

Value

Invisibly NULL

Examples

```
providers_option("test", "DUMMY")
```

---

set_spreadsheet_paths *Set the paths to spreadsheet files (to be used with relative identifiers).*

Description

Set the paths to spreadsheet files (to be used with relative identifiers).

Usage

```
set_spreadsheet_paths(paths)
```

Arguments

paths	The folders containing the spreadsheet files Only used in relative addresses.

Value

No output.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
```

set_txt_paths *Set the paths to txt files (to be used with relative identifiers)*

Description

Set the paths to txt files (to be used with relative identifiers)

Usage

```
set_txt_paths(paths)
```

Arguments

paths	The folders containing the txt files Only used in relative addresses.

Value

An internal java moniker

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
```

set_xml_paths *Set the paths to xml files (to be used with relative identifiers).*

Description

Set the paths to xml files (to be used with relative identifiers).

Usage

```
set_xml_paths(paths)
```

Arguments

paths	The folders containing the xml files. Only used in relative addresses.

Value

No output.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
```

spreadsheet_change_file

Change the file of a spreadsheet moniker.

Description

Change the file of a spreadsheet moniker.

Usage

```
spreadsheet_change_file(id, nfile, ofile = NULL)
```

Arguments

id	Identifier of a series or of a collection of series.
nfile	New file name.
ofile	Old file name. NULL or "" to change any file to the new file.

Value

Returns the new identifier.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
xls_all <- spreadsheet_data("Insee.xlsx", 1)
id<-xls_all$moniker$id
spreadsheet_change_file(id, "test.xlsx")
```

spreadsheet_content

Provides the content of a spreadsheet designed for time series.

Description

Provides the content of a spreadsheet designed for time series.

Usage

```
spreadsheet_content(file)
```

Arguments

file	The considered workbook.

Value

Provides all the names of the time series contained in the workbook, organized by worksheet; the output is a list of lists of names.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
print(spreadsheet_content("Insee.xlsx"))
```

---

spreadsheet_data *Retrieves all the time series in a specified sheet from a spreadsheet file.*

Description

Retrieves all the time series in a specified sheet from a spreadsheet file.

Usage

```
spreadsheet_data(
  file,
  sheet = 1,
  gathering.period = 0,
 gathering.aggregation = c("None", "Sum", "Average", "First", "Last", "Max", "Min"),
  gathering.partialAggregation = FALSE,
  gathering.cleanMissing = TRUE,
  fullNames = FALSE
)
```

Arguments

file	The spreadsheet file.
sheet	The name or the 1-based position of the sheet containing the requested data.
gathering.period	The annual frequency of the transformed series. If 0, the actual frequency is used.
gathering.aggregation	The type of the aggregation to be applied on the series (only used if "period" is different from 0).
gathering.partialAggregation	Specifies if the aggregation is performed or not when they are missing periods.
gathering.cleanMissing	Specifies if missing values at the beginning or at the end of the data are removed from the series.
fullNames	Specifies if full names (containing the name of the sheet and the name of the series) are used or not.

Value

A ts collection with all the series.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
xls_all <- spreadsheet_data("Insee.xlsx", 1)
txt_all <- spreadsheet_data("Insee.xlsx", "FRANCE Textile")
```

---

spreadsheet_id_to_properties

Gets the list of the properties corresponding to the identifier of a moniker.

Description

Gets the list of the properties corresponding to the identifier of a moniker.

Usage

```
spreadsheet_id_to_properties(id)
```

Arguments

id	Identifier of a series or of a collection of series.

Details

When the period in the gathering list is defined, the user must specify the aggregation type ("Sum", "Average", "First", "Last", "Min", "Max") and some additional parameters (partial aggregation and suppression of leading/trailing missing values).

Value

Returns a list with the elements of the id: file, sheet, series, gathering); the gathering is a list with the following items: period (-1 by default), the aggregation ("None"), partialAggregation (FALSE), includeMissing (FALSE).

See Also

spreadsheet_properties_to_id()

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
xls_s1_3 <- spreadsheet_series("Insee.xlsx", 1, 3)
id<-xls_s1_3$moniker$id
print(spreadsheet_id_to_properties(id))
```

---

spreadsheet_name *Gets the name of the spreadsheet provider.*

Description

Gets the name of the spreadsheet provider.

Usage

```
spreadsheet_name()
```

Value

The name of the spreadsheet provider, to be used in monikers.

Examples

```
print(spreadsheet_name())
```

---

spreadsheet_properties_to_id *Generates the id corresponding to a list of spreadsheet properties.*

Description

Generates the id corresponding to a list of spreadsheet properties.

Usage

```
spreadsheet_properties_to_id(props)
```

Arguments

props	The properties defining the identifier.

Value

The identifier corresponding to the properties.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
xls_s1_3 <- spreadsheet_series("Insee.xlsx", 1, 3)
id<-xls_s1_3$moniker$id
source<-spreadsheet_name()
props<-spreadsheet_id_to_properties(xls_s1_3$moniker$id)
props$gathering$period<-4
props$gathering$aggregation<-"Max"
M<-rjd3toolkit::to_ts(spreadsheet_name(), spreadsheet_properties_to_id(props))
props$gathering$aggregation<-"Min"
m<-rjd3toolkit::to_ts(spreadsheet_name(), spreadsheet_properties_to_id(props))
ts.plot(ts.union(M$data,m$data), col=c("red", "blue"))
```

---

spreadsheet_series *Retrieves a time series from a spreadsheet file.*

Description

Retrieves a time series from a spreadsheet file.

Usage

```
spreadsheet_series(
  file,
  sheet = 1,
  series = 1,
  gathering.period = 0,
 gathering.aggregation = c("None", "Sum", "Average", "First", "Last", "Max", "Min"),
  gathering.partialAggregation = FALSE,
  gathering.cleanMissing = TRUE,
  fullName = TRUE
)
```

Arguments

file	The spreadsheet file.
sheet	The name or the 1-based position of the sheet containing the requested data.
series	The name or the 1-based position of the series in the selected sheet.
gathering.period	The annual frequency of the transformed series. If 0, the actual frequency is used.

gathering.aggregation
: The type of the aggregation to be applied on the series (only used if "period" is different from 0).

gathering.partialAggregation
: Specifies if the aggregation is performed or not when they are missing periods.

gathering.cleanMissing
: Specifies if missing values are removed at the beginning or at the end of the data.

fullName
: Specifies if a full name (containing the name of the sheet and the name of the series) is used or not.

Value

Returns the specified time series.

Examples

```
set_spreadsheet_paths(system.file("extdata", package = "rjd3providers"))
xls_s1_3 <- spreadsheet_series("Insee.xlsx", 1, 3)
txt_s1 <- spreadsheet_series("Insee.xlsx", "FRANCE Textile", 1)
```

---

txt_change_file *Change the file of a text moniker*

Description

Change the file of a text moniker

Usage

```
txt_change_file(id, nfile, ofile = NULL)
```

Arguments

id
: Identifier of a series or of a collection of series.

nfile
: New file name.

ofile
: Old file name. NULL or "" to change any file to the new file.

Value

The new identifier

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
txt_15 <- txt_series("ABS.csv", series = 15, delimiter = "COMMA")
id<-txt_15$moniker$id
txt_change_file(id, "test.csv")
```

`txt_content` *Provides the content of a text file designed for time series*

Description

Provides the content of a text file designed for time series

Usage

```
txt_content(
  file,
  fmt.locale = NULL,
  fmt.date = NULL,
  fmt.number = NULL,
  fmt.ignoreNumberGrouping = TRUE,
  gathering.period = 0,
 gathering.aggregation = c("None", "Sum", "Average", "First", "Last", "Max", "Min"),
  gathering.partialAggregation = FALSE,
  gathering.cleanMissing = TRUE,
  charset = NULL,
  delimiter = c("TAB", "SEMICOLON", "COMMA", "SPACE"),
  txtQualifier = c("NONE", "QUOTE", "DOUBLE_QUOTE"),
  header = TRUE,
  skip = 0
)
```

Arguments

`file`	The text file
`fmt.locale`	Locale language. Null to use the default
`fmt.date`	Format of the date. Null to use the default of the locale
`fmt.number`	Format of the number. Null to use the default of the locale
`fmt.ignoreNumberGrouping`	Ignore number grouping
`gathering.period`	The annual frequency of the series. If 0, the frequency

gathering.aggregation
: The type of the aggregation to be applied on the series (only used if "period" is different from 0)

gathering.partialAggregation
: Specifies if the aggregation is performed or not when they are missing periods

gathering.cleanMissing
: Specifies if missing values at the beginning or at the end of the data are removed from the series.

charset
: Specifies the charset

delimiter
: Specifies the delimiter. Should be in ("TAB", "SEMICOLON", "COMMA", "SPACE")

txtQualifier
: Character used to qualify text. Should be in ("NONE", "QUOTE", "DOUBLE_QUOTE")

header
: The file contains headers

skip
: Skips some lines

Value

Provides all the names of the time series contained in the text file

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
txt_all <- txt_content("ABS.csv", delimiter = "COMMA")
```

---

txt_data *Retrieves all the time series in a text file (.txt, .csv...)*

Description

Retrieves all the time series in a text file (.txt, .csv...)

Usage

```
txt_data(
  file,
  fmt.locale = NULL,
  fmt.date = NULL,
  fmt.number = NULL,
  fmt.ignoreNumberGrouping = TRUE,
  gathering.period = 0,
 gathering.aggregation = c("None", "Sum", "Average", "First", "Last", "Max", "Min"),
  gathering.partialAggregation = FALSE,
```

```
  gathering.cleanMissing = TRUE,
  charset = NULL,
  delimiter = c("TAB", "SEMICOLON", "COMMA", "SPACE"),
  txtQualifier = c("NONE", "QUOTE", "DOUBLE_QUOTE"),
  header = TRUE,
  skip = 0
)
```

Arguments

file	The text file
fmt.locale	Locale language. Null to use the default
fmt.date	Format of the date. Null to use the default of the locale
fmt.number	Format of the number. Null to use the default of the locale
fmt.ignoreNumberGrouping	Ignore number grouping
gathering.period	The annual frequency of the transformed series. If 0, the actual frequency is used.
gathering.aggregation	The type of the aggregation to be applied on the series (only used if "period" is different from 0)
gathering.partialAggregation	Specifies if the aggregation is performed or not when they are missing periods
gathering.cleanMissing	Specifies if missing values at the beginning or at the end of the data are removed from the series.
charset	Specifies the charset
delimiter	Specifies the delimiter. Should be in ("TAB", "SEMICOLON", "COMMA", "SPACE")
txtQualifier	Character used to qualify text. Should be in ("NONE", "QUOTE", "DOUBLE_QUOTE")
header	The file contains headers
skip	Skips some lines

Value

A ts collection with all the series

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
all <- txt_data("ABS.csv", delimiter = "COMMA")
```

txt_id_to_properties *Gets the list of the properties corresponding to the identifier of a moniker*

Description

Gets the list of the properties corresponding to the identifier of a moniker

Usage

```
txt_id_to_properties(id)
```

Arguments

id	Identifier of a series or of a collection of series.

Value

Returns a list with the elements of the id: file , series, format, gathering, ...

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
txt_15 <- txt_series("ABS.csv", series = 15, delimiter = "COMMA")
id<-txt_15$moniker$id
print(txt_id_to_properties(id))
```

txt_name *Gets the name of the text provider*

Description

Gets the name of the text provider

Usage

```
txt_name()
```

Value

The name of the text provider, to be used in monikers

Examples

```
txt_name()
```

`txt_properties_to_id` *Generates the id corresponding to a list of a text properties.*

Description

Generates the id corresponding to a list of a text properties.

Usage

```
txt_properties_to_id(props)
```

Arguments

`props`	The properties defining the identifier.

Value

The identifier corresponding to the properties.

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
txt_15 <- txt_series("ABS.csv", series = 15, delimiter = "COMMA")
id<-txt_15$moniker$id
source<-txt_name()
props<-txt_id_to_properties(id)
props$gathering$period<-4
props$gathering$aggregation<-"Max"
M<-rjd3toolkit::to_ts(txt_name(), txt_properties_to_id(props))
props$gathering$aggregation<-"Min"
m<-rjd3toolkit::to_ts(txt_name(), txt_properties_to_id(props))
ts.plot(ts.union(M$data,m$data), col=c("red", "blue"))
```

txt_series *Retrieves a time series from a a text file (.txt, .csv...)*

Description

Retrieves a time series from a a text file (.txt, .csv...)

Usage

```
txt_series(
  file,
  series,
  fmt.locale = NULL,
  fmt.date = NULL,
  fmt.number = NULL,
  fmt.ignoreNumberGrouping = TRUE,
  gathering.period = 0,
 gathering.aggregation = c("None", "Sum", "Average", "First", "Last", "Max", "Min"),
  gathering.partialAggregation = FALSE,
  gathering.cleanMissing = TRUE,
  charset = NULL,
  delimiter = c("TAB", "SEMICOLON", "COMMA", "SPACE"),
  txtQualifier = c("NONE", "QUOTE", "DOUBLE_QUOTE"),
  header = TRUE,
  skip = 0
)
```

Arguments

file	The text file
series	The name or the 1-based position of the series in the selected sheet
fmt.locale	Locale language. Null to use the default
fmt.date	Format of the date. Null to use the default of the locale
fmt.number	Format of the number. Null to use the default of the locale
fmt.ignoreNumberGrouping	Ignore number grouping
gathering.period	The annual frequency of the transformed series. If 0, the actual frequency is used.
gathering.aggregation	The type of the aggregation to be applied on the series (only used if "period" is different from 0)
gathering.partialAggregation	Specifies if the aggregation is performed or not when they are missing periods

gathering.cleanMissing	Specifies if missing values at the beginning or at the end of the data are removed from the series.
charset	Specifies the charset
delimiter	Specifies the delimiter. Should be in ("TAB", "SEMICOLON", "COMMA", "SPACE")
txtQualifier	Character used to qualify text. Should be in ("NONE", "QUOTE", "DOUBLE_QUOTE")
header	The file contains headers
skip	Skips some lines

Value

Returns the specified time series

Examples

```
set_txt_paths(system.file("extdata", package = "rjd3providers"))
txt_15 <- txt_series("ABS.csv", series = 15, delimiter = "COMMA")
txt_09 <- txt_series("ABS.csv", series = "0.2.09.10.M", delimiter = "COMMA")
```

---

xml_change_file *Change the file of an xml moniker.*

Description

Change the file of an xml moniker.

Usage

```
xml_change_file(id, nfile, ofile = NULL)
```

Arguments

id	Identifier of a series or of a collection of series.
nfile	New file name.
ofile	Old file name. NULL or "" to change any file to the new file.

Value

The new identifier.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_1_5 <- xml_series("Prod.xml", 1, 5, charset = "iso-8859-1")
id<-xml_1_5$moniker$id
xml_change_file(id, "test.xml")
```

`xml_content` *Provides the content of an xml file designed for time series.*

Description

Provides the content of an xml file designed for time series.

Usage

```
xml_content(file, charset = NULL)
```

Arguments

`file`	The considered file.
`charset`	The character set used in the file (NULL to use the default).

Value

Provides all the names of the time series contained in the file, grouped by collection.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_content("Prod.xml")
print(xml_content)
```

xml_data — *Retrieves all the time series in a specified collection from an xml file.*

Description

Retrieves all the time series in a specified collection from an xml file.

Usage

```
xml_data(file, collection = 1, charset = NULL, fullNames = FALSE)
```

Arguments

file	The xml file.
collection	The name or the 1-based position of the collection containing the requested data.
charset	The character set used in the file
fullNames	Specifies if full names (containing the name of the sheet and the name of the series) are used or not.

Value

A ts collection with all the series.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_1 <- xml_data("Prod.xml", 1, charset = "iso-8859-1")
xml_all <- xml_data("Prod.xml", "industrial production", charset = "iso-8859-1")
```

xml_id_to_properties — *Gets the list of the properties corresponding to the identifier of a moniker.*

Description

Gets the list of the properties corresponding to the identifier of a moniker.

Usage

```
xml_id_to_properties(id)
```

Arguments

id	Identifier of a series or of a collection of series.

Value

Returns a list with the elements of the id: file, collection, series, charset, fullnames.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_1_5 <- xml_series("Prod.xml", 1, 5, charset = "iso-8859-1")
xml_id_to_properties(xml_1_5$moniker$id)
xml_1 <- xml_data("Prod.xml", 1, charset = "iso-8859-1")
xml_id_to_properties(xml_1$moniker$id)
```

---

xml_name *Gets the name of the xml provider.*

Description

Gets the name of the xml provider.

Usage

```
xml_name()
```

Value

The name of the xml provider, to be used in monikers.

Examples

```
xml_name()
```

xml_properties_to_id *Generates the id corresponding to a list of an xml properties.*

Description

Generates the id corresponding to a list of an xml properties.

Usage

```
xml_properties_to_id(props)
```

Arguments

props	The properties defining the identifier.

Value

The identifier corresponding to the properties.

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_1_5 <- xml_series("Prod.xml", 1, 5, charset = "iso-8859-1")
q <- xml_id_to_properties(xml_1_5$moniker$id)
q$series <- 50
xml_properties_to_id(q)
```

xml_series *Retrieves a time series from an xml file*

Description

Retrieves a time series from an xml file

Usage

```
xml_series(file, collection = 1, series = 1, charset = NULL, fullName = TRUE)
```

Arguments

file	The xml file.
collection	The name or the 1-based position of the collection containing the requested data.
series	The name or the 1-based position of the series in the selected collection.
charset	The character set used in the file.
fullName	Specifies if a full name (containing the name of the collection and the name of the series) is used or not.

Value

Returns the specified time series

Examples

```
set_xml_paths(system.file("extdata", package = "rjd3providers"))
xml_1_5 <- xml_series("Prod.xml", 1, 5, charset = "iso-8859-1")
xml_cn <- xml_series("Prod.xml", "industrial production",
            "Construction navale", charset = "iso-8859-1")
```

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