Package 'rjwsacruncher'

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Title Interface to the 'JWSACruncher' of 'JDemetra+'

Version 0.2.0

Description 'JDemetra+' (<https://github.com/jdemetra/jdemetra-app>) is the seasonal adjustment software officially recommended to the members of the European Statistical System and the European System of Central Banks. Seasonal adjustment models performed with 'JDemetra+' can be stored into workspaces. 'JWSACruncher' (<https://github.com/jdemetra/jwsacruncher/releases>) is a console tool that re-estimates all the multi-processing defined in a workspace and to export the result. 'rjwsacruncher' allows to launch easily the 'JWSACruncher'.

URL <https://github.com/AQLT/rjwsacruncher>

BugReports <https://github.com/AQLT/rjwsacruncher/issues>

Imports XML

Suggests knitr, rmarkdown

License GPL-3

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R topics documented:

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configure_jwsacruncher

Configure the 'JWSACruncher' with a portable version of 'Java'

Description

Function configure the 'JWSACruncher' with a portable version of 'Java'.

Usage

```
configure_jwsacruncher(jwsacruncher_path, java_path)
```

Arguments

jwsacruncher_path

Path to the file jwsacruncher.bat of the 'JWSACruncher' (see details).

java_path   Path to the file java.exe of the portable version of 'Java' (see details).

Details

Since the version 2.2.0, the 'JWSACruncher' needs 'Java' 8 or higher to run. For versions 3.0.0 and higher, 'JWSACruncher' needs 'Java' 17 or higher. In 'Windows' versions 3.0.0 and higher of 'JWSACruncher' includes a portable version of 'Java'. For lower version of 'JWSACruncher', if you cannot install 'Java' (for example for security reasons) you can install a portable version of 'Java' (that does not require administrator rights) and configure the 'JWSACruncher' to use this portable version. To do it you have to:

1. Unzip the downloaded file of the 'JWSACruncher';

2. Open, with a Text Editor, the file jwsacruncher.bat that is in the sub-folder /bin/ of the 'JWSACruncher';

3. Edit the line 71 that contains if "%JAVACMD%"=="" set JAVACMD=java and replace java by the path to the file java.exe of the portable version. For example, if the portable version of 'Java' is installed under D:/Software/Java, the path to java.exe should be at D:/Software/Java/bin/java.exe and the new line 71 would be if "%JAVACMD%"=="" set JAVACMD="D:\Software\Java\bin\java.exe".

The function configure_jwsacruncher() does the steps 2 and 3.

See Also

[download_cruncher()](#).

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create_param_file   *Create parameter file for the 'JWSACruncher'*

Description

To run the 'JWSACruncher' needs a parameter file and `create_param_file` allows to create it.

Usage

```
create_param_file(
  dir_file_param,
  bundle = 10000,
  csv_layout = "list",
  csv_separator = ";",
  ndecs = 6,
  full_series_name = TRUE,
  rslt_name_level = 2,
  policy = "parameters",
  refreshall = TRUE,
  output = NULL,
  matrix_item = getOption("default_matrix_item"),
  tsmatrix_series = getOption("default_tsmatrix_series"),
  paths_path = NULL,
  v3 = getOption("is_cruncher_v3")
)
```

Arguments

dir_file_param Path to the directory that will contains the parameter file `"parameters.param"`.

bundle   Maximum size for a group of series (in output). By default `bundle = 10000`.

csv_layout   Layout of the CSV files (series only). By default `csv_layout = "list"`. Other options: `csv_layout = "vtable"` (vertical table) or `csv_layout = "htable"` (horizontal table).

csv_separator   The field separator string used in the CSV file. By default `csv_separator = ";"`.

ndecs   Number of decimals used in the output. By default `ndec = 6`.

full_series_name

        Boolean indicating if the fully qualified name of the series will be used (the default `full_series_name = TRUE`) or if only the name of the series should be displayed. Only used when `v3 = TRUE`.

rslt_name_level

        Only used when `v3 = TRUE`.

policy	Refreshing policy of the processing. By default policy = "parameters" (re-estimation of the coefficients of the reg-ARIMA model, see details).
refreshall	Boolean indicating if the data is refreshed (by default refreshall = TRUE).
output	Full path of the output folder. By default (output = NULL) a folder is create in the path to the workspace ([workspace]/Output).
matrix_item	Character containing the items of the matrix output (see the 'JDemetra+' manual for more information). By default, the items defined in the option getOption("default_matrix_item") are used (option initialized by the default output of the 'JWSACruncher' 2.2.2).
tsmatrix_series	
	Character containing the names of the times series to export (see the 'JDemetra+' manual for more information). By default, the items defined in the option getOption("default_tsmatrix_series") are used (option initialized by the default output of the 'JWSACruncher' 2.2.2).
paths_path	The paths used for relative addresses (see the "Demetra Paths" of the graphical interface of 'JDemetra+').
v3	Boolean indicating if the parameter file should be compatible with a version 3.0.0 and higher of 'JWSACRuncher' (v3 = TRUE) or a lower version (v3 = FALSE). By default the value of the option "is_cruncher_v3" is used (equals to FALSE by default).

Details

When the 'JWSACruncher' is launched, the data is refreshed with a specific policy that is defined by the parameter policy. The available options are:

- policy = "current": all the estimations are fixed;

- policy = "fixedparameters" or policy = "fixed": re-estimation of the coefficients of the regression variables (but not the ARIMA coefficients);

- policy = "parameters" (the default): policy = "fixedparameters" + re-estimation of ARIMA coefficients;

- policy = "lastoutliers": policy = "parameters" + re-identification of last outliers (on the last year);

- policy = "outliers": policy = "lastoutliers" + re-identification of all outliers;

- policy = "stochastic": policy = "outliers" + re-identification of ARIMA orders;

- policy = "complete" or policy = "concurrent": the model is completely re-identified and re-estimated.

Value

Path to the parameter file.

See Also

read_param_file(), list2param_file(), default_param_file cruncher_and_param().

Examples

```
## Not run:
dir = tempdir()
# Here a file parameters.param is created in the directory dir
# with default parameters of the different options
create_param_file(dir)
# to only export the raw and the seasonally adjusted series
 create_param_file(dir,
                    tsmatrix_series = c("y", "sa"))

## End(Not run)
```

---

cruncher   *Run the 'JWSACruncher'*

Description

Function to run the 'JWSACruncher' on a workspace from a parameter file.

Usage

```
cruncher(
  workspace,
  cruncher_bin_directory = getOption("cruncher_bin_directory"),
  param_file_path,
  log_file = NULL
)
```

Arguments

workspace   Path to the workspace. By default a dialog box opens to choose the workspace.

cruncher_bin_directory

                Path to the "bin" directory of the 'JWSACruncher'. By default the value of the
                option "cruncher_bin_directory" is used.

param_file_path

                Path to the parameter file of the 'JWSACruncher'. By default a .params file is
                search in the save directory of the workspace.

log_file   Name of the log file of 'JWSACruncher'. By default the log isn't exported.

Value

The path to the workspace.

See Also

Around the 'JWSACruncher': cruncher_and_param(), update_workspace(). To create the parameter file: create_param_file() and list2param_file().

Examples

```
## Not run:
dir = tempdir()
# First create a parameter file
# here a file parameters.param is created in the directory dir
# with default parameters of 'JWSACruncher' v2
list2param_file(dir, default_param_file(v3 = FALSE))
# If the option "cruncher_bin_directory" is correctly defined:
cruncher("workspace.xml",
         param_file_path = file.path(dir, "parameters.param"))

## End(Not run)
```

cruncher_and_param   *Run quickly the 'JWSACruncher'*

Description

Function to run the 'JWSACruncher' on a workspace while creating the parameter file.

Usage

```
cruncher_and_param(
  workspace = NULL,
  output = NULL,
  rename_multi_documents = FALSE,
  delete_existing_file = FALSE,
  log_file = NULL,
  cruncher_bin_directory = getOption("cruncher_bin_directory"),
  ...
)
```

Arguments

workspace	Path to the workspace. By default a dialog box opens to choose the workspace.
output	Full path of the output folder. By default (output = NULL) a folder is create in the path to the workspace ([workspace]/Output).
rename_multi_documents	
	Boolean indicating whether to rename the folders containing the outputs according to the names of the multi-documents of the workspace. By default rename_multi_documents = FALSE: the names of the XML files of the multi-documents are used.
delete_existing_file	
	Only used if rename_multi_documents = TRUE. Boolean indicating whether to delete existing folders when renaming them. By default (delete_existing_file = FALSE) they are not deleted.

log_file   Name of the log file of 'JWSACruncher'. By default the log isn't exported.

cruncher_bin_directory

                  Path to the "bin" directory of the 'JWSACruncher'. By default the value of the
                  option "cruncher_bin_directory" is used.

...   Other parameters of [create_param_file()](#).

Value

Path to the workspace.

See Also

[cruncher()](#), [update_workspace()](#), [create_param_file()](#), [multiprocessing_names()](#).

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default_param_file   *Get default parameters of the 'JWSACruncher'*

Description

Get default parameters of the 'JWSACruncher'

Usage

```
default_param_file(v3 = getOption("is_cruncher_v3"))
```

Arguments

v3   Boolean indicating if the parameters are the from a version 3.0.0 and higher of
                  'JWSACRuncher' (v3 = TRUE) or a lower version (v3 = FALSE). By default the
                  value of the option "is_cruncher_v3" is used (equals to FALSE by default).

See Also

[create_param_file()](#), [read_param_file()](#), [list2param_file()](#), [cruncher_and_param()](#).

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download_cruncher   *Dowload the 'JWSACruncher'*

Description

Function to download the ZIP file of the 'JWSACruncher'

Usage

```
download_cruncher(
  directory,
  cruncher_version,
  v3 = getOption("is_cruncher_v3")
)
```

Arguments

directory   Directory where to save the 'JWSACruncher'. In Windows, a dialog box opens
                   by default to select the directory.

cruncher_version

                   Character of the version of the 'JWSACruncher' to download ("X.Y.Z" format).
                   By default the last version is downloaded.

v3   Boolean indicating, when parameter cruncher_version is missing, if the last
                   version of the 'JWSACruncher' should be a 3.x.y version or a 2.x.y. By default
                   the value of the option "is_cruncher_v3" is used (equals to FALSE by default).

Details

The 'JWSACruncher' is downloaded from https://github.com/jdemetra/jwsacruncher/releases
for versions lower than 3.0.0 and from https://github.com/jdemetra/jdplus-main/releases
for the other versions. To use it, it has to be unzip.

See Also

configure_jwsacruncher().

Examples

```
## Not run:
# On Windows opens a dialog box to choose the directory where to
# download the last version of the 'JWSACruncher'
download_cruncher()

dir <- tempdir()
# To download the last release:
download_cruncher(dir)

# To download the release of the version 2.2.2:
```

```
download_cruncher(dir, "2.2.2")

## End(Not run)
```

---

list2param_file   *Create parameter file from list*

Description

Create parameter file from list

Usage

```
list2param_file(dir_file_param, x)
```

Arguments

dir_file_param   Path to the directory that will contains the parameter file "parameters.param".

x   A list, for example create by read_param_file() or default_param_file().

See Also

create_param_file(), read_param_file(), default_param_file() cruncher_and_param().

Examples

```
## Not run:
dir = tempdir()
# Here a file parameters.param is created in the directory dir
# with default parameters of 'JWSACruncher' v2
list_param <- default_param_file(v3 = FALSE)
list2param_file(dir, list_param)
# to only export the raw and the seasonally adjusted series
list_param$tsmatrix_series <- c("y", "sa")
list2param_file(dir, list_param)

## End(Not run)
```

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multiprocessing_names   *Get the names of the multiprocessings of a workspace*

Description

Function to get the name of the multiprocessings that appears on 'JDemetra+' and the name of the corresponding XML file.

Usage

```
multiprocessing_names(workspace)
```

Arguments

workspace   Path to the workspace. By default a dialog box opens to choose the workspace.

Value

A data.frame containing the name of the multiprocessings that appears on 'JDemetra+' (column name) and the name of the associated XML files (column file).

See Also

[cruncher_and_param()](#).

---

read_param_file   *Read parameter file of the 'JWSACruncher'*

Description

Read parameter file of the 'JWSACruncher'

Usage

```
read_param_file(file)
```

Arguments

file   Path to the parameter file.

See Also

[create_param_file()](#), [list2param_file()](#), [default_param_file()](#) [cruncher_and_param()](#).

Examples

```
dir = tempdir()
list_param <- default_param_file(v3 = FALSE)
list2param_file(dir, list_param)
list_param_2 <- read_param_file(file.path(dir, "parameters.param"))
all.equal(list_param, list_param_2)
```

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update_workspace   *Update a workspace*

Description

Function to update a workspace without exporting the results.

Usage

```
update_workspace(
  workspace = NULL,
  policy = "parameters",
  cruncher_bin_directory = getOption("cruncher_bin_directory"),
  log_file = NULL
)
```

Arguments

workspace	Path to the workspace. By default a dialog box opens to choose the workspace.
policy	Refreshing policy of the processing. By default policy = "parameters" (re-estimation of the coefficients of the reg-ARIMA model, see details).
cruncher_bin_directory	
	Path to the "bin" directory of the 'JWSACruncher'. By default the value of the option "cruncher_bin_directory" is used.
log_file	Name of the log file of 'JWSACruncher'. By default the log isn't exported.

Value

Path to the workspace.

See Also

cruncher(), cruncher_and_param().

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