

Package ‘doconv’

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Type Package

Title Document Conversion to 'PDF' or 'PNG'

Version 0.3.2

Description It provides the ability to generate images from documents of different types. Three main features are provided: functions for generating document thumbnails, functions for performing visual tests of documents and a function for updating fields and table of contents of a 'Microsoft Word' or 'RTF' document. In order to work, 'LibreOffice' must be installed on the machine and or 'Microsoft Word'. If the latter is available, it can be used to produce PDF documents or images identical to the originals; otherwise, 'LibreOffice' is used and the rendering can be sometimes different from the original documents.

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Encoding UTF-8

RoxygenNote 7.2.3

Imports magick, pdftools, locatexec, processx, tools

Depends R (>= 4.0.0)

Suggests tinytest, testthat, webshot2

BugReports <https://github.com/ardata-fr/doconv/issues>

SystemRequirements LibreOffice, Microsoft Word

NeedsCompilation no

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check_libreoffice_export

Check if PDF export is functional

Description

Test if 'LibreOffice' can export to PDF. An attempt to export to PDF is made to confirm that the PDF export is functional.

Usage

```
check_libreoffice_export(UserInstallation = NULL)
```

Arguments

UserInstallation

use this value to set a non-default user profile path for "LibreOffice". If not provided a temporary dir is created. It makes possibles to use more than a single session of "LibreOffice."

Value

a single logical value.

Examples

```
library(locatexec)
if(exec_available("libreoffice")){
  check_libreoffice_export()
}
```

`docx2pdf`*Convert docx to pdf*

Description

Convert docx to pdf directly using "Microsoft Word". This function will not work if "Microsoft Word" is not available on your machine.

The calls to "Microsoft Word" are made differently depending on the operating system:

- On "Windows", a "PowerShell" script using COM technology is used to control "Microsoft Word". The resulting PDF is containing a browsable TOC.
- On macOS, an "AppleScript" script is used to control "Microsoft Word". The resulting PDF is not containing a browsable TOC as when on 'Windows'.

Usage

```
docx2pdf(input, output = gsub("\\.(docx|doc|rtf)$", ".pdf", input))
```

Arguments

`input`, `output` file input and optional file output (default to input with pdf extension).

Value

the name of the produced pdf (the same value as output)

Windows authorizations

If your execution policy is set to "RemoteSigned", 'doconv' will not be able to run powershell script. Set it to "Unrestricted" and it should work. If you are in a managed and administrated environment, you may not be able to use 'doconv' because of execution policies.

Macos manual authorizations

On macOS the call is happening into a working directory managed with function `working_directory()`.

Manual interventions are necessary to authorize 'Word' and 'PowerPoint' applications to write in a single directory: the working directory. These permissions must be set manually, this is required by the macOS security policy. We think that this is not a problem because it is unlikely that you will use a Mac machine as a server.

You must click "allow" two times to:

1. allow R to run 'AppleScript' scripts that will control Word
2. allow Word to write to the working directory.

This process is a one-time operation.

Examples

```

library(locatexec)
if (exec_available('word')) {
  file <- system.file(package = "doconv",
    "doc-examples/example.docx")

  out <- docx2pdf(input = file,
    output = tempfile(fileext = ".pdf"))

  if (file.exists(out)) {
    message(basename(out), " is existing now.")
  }
}

```

docx_update

Update docx fields

Description

Update all fields and table of contents of a Word document using "Microsoft Word". This function will not work if "Microsoft Word" is not available on your machine.

The calls to "Microsoft Word" are made differently depending on the operating system. On "Windows", a "PowerShell" script using COM technology is used to control "Microsoft Word". On macOS, an "AppleScript" script is used to control "Microsoft Word".

Usage

```
docx_update(input)
```

Arguments

```
input          file input
```

Value

the name of the produced pdf (the same value as output)

Examples

```

library(locatexec)
if (exec_available('word')) {
  file <- system.file(package = "doconv",
    "doc-examples/example.docx")
  docx_out <- tempfile(fileext = ".docx")
  file.copy(file, docx_out)
  docx_update(input = docx_out)
}

```

expect_snapshot_doc *Visual test for document*

Description

This expectation can be used with 'tinytest' and 'testthat' to check if a current document of type pdf, docx, doc, rtf, pptx or png matches a target document. When the expectation is checked for the first time, the expectation fails and a target miniature of the document is saved in a folder named `_tinytest_doconv` or `_snaps`.

Usage

```
expect_snapshot_doc(  
  name,  
  x,  
  tolerance = 0.001,  
  engine = c("tinytest", "testthat")  
)
```

Arguments

name	a string to identify the test. Each document in the test suite must have a unique name.
x	file path of a document
tolerance	the ratio of different pixels that is acceptable before triggering a failure.
engine	test package being used in the test suite, one of "tinytest" or "testthat".

Value

A `tinytest::tinytest()` or a `testthat::expect_snapshot_file` object.

Examples

```
file <- system.file(package = "doconv",  
  "doc-examples/example.docx")  
## Not run:  
if (require("tinytest") && msoffice_available()){  
  # first run add a new snapshot  
  expect_snapshot_doc(x = file, name = "docx file", engine = "tinytest")  
  # next runs compare with the snapshot  
  expect_snapshot_doc(x = file, name = "docx file", engine = "tinytest")  
  
  # cleaning directory  
  unlink("_tinytest_doconv", recursive = TRUE, force = TRUE)  
}  
if (require("testthat") && msoffice_available()){  
  local_edition(3)  
  # first run add a new snapshot
```

```

expect_snapshot_doc(x = file, name = "docx file", engine = "testthat")
# next runs compare with the snapshot
expect_snapshot_doc(x = file, name = "docx file", engine = "testthat")
}

## End(Not run)

```

expect_snapshot_html *Visual test for an HTML document*

Description

This expectation can be used with 'tinytest' and 'testthat' to check if a current document of type HTML matches a target document. When the expectation is checked for the first time, the expectation fails and a target miniature of the document is saved in a folder named `_tinytest_doconv` or `_snaps`.

Usage

```

expect_snapshot_html(
  name,
  x,
  tolerance = 0.001,
  engine = c("tinytest", "testthat"),
  ...
)

```

Arguments

name	a string to identify the test. Each document in the test suite must have a unique name.
x	file path of an HTML document
tolerance	the ratio of different pixels that is acceptable before triggering a failure.
engine	test package being used in the test suite, one of "tinytest" or "testthat".
...	arguments used by <code>webshot::webshot2()</code> .

Value

A `tinytest::tinytest()` or a `testthat::expect_snapshot_file` object.

Examples

```

file <- tempfile(fileext = ".html")
html <- paste0("<html><head><title>hello</title></head>",
  "<body><h1>Hello World</h1></body></html>\n")
cat(html, file = file)

```

```
## Not run:
if (require("tinytest") && require("webshot2")){
  # first run add a new snapshot
  expect_snapshot_html(x = file, name = "html file",
    engine = "tinytest")
  # next runs compare with the snapshot
  expect_snapshot_html(x = file, name = "html file",
    engine = "tinytest")

  # cleaning directory
  unlink("_tinytest_doconv", recursive = TRUE,
    force = TRUE)
}
if (require("testthat") && require("webshot2")){
  local_edition(3)
  # first run add a new snapshot
  expect_snapshot_html(x = file, name = "html file",
    engine = "testthat")
  # next runs compare with the snapshot
  expect_snapshot_html(x = file, name = "html file",
    engine = "testthat")
}

## End(Not run)
```

msoffice_available *Check if 'Microsoft Office' is available*

Description

The function test if 'Microsoft Office' is available.

Usage

```
msoffice_available()
```

Value

a single logical value.

Examples

```
msoffice_available()
```

pptx2pdf

Convert pptx to pdf

Description

Convert pptx to pdf directly using "Microsoft PowerPoint". This function will not work if "Microsoft PowerPoint" is not available on your machine.

The calls to "Microsoft PowerPoint" are made differently depending on the operating system. On "Windows", a "PowerShell" script using COM technology is used to control "Microsoft PowerPoint". On macOS, an "AppleScript" script is used to control "Microsoft PowerPoint".

Usage

```
pptx2pdf(input, output = gsub("\\.pptx$", ".pdf", input))
```

Arguments

input, output file input and optional file output (default to input with pdf extension).

Value

the name of the produced pdf (the same value as output)

Macos manual authorizations

On macOS the call is happening into a working directory managed with function [working_directory\(\)](#).

Manual interventions are necessary to authorize 'PowerPoint' applications to write in a single directory: the working directory. These permissions must be set manually, this is required by the macOS security policy. We think that this is not a problem because it is unlikely that you will use a Mac machine as a server.

You must also click "allow" two times to:

1. allow R to run 'AppleScript' scripts that will control PowerPoint
2. allow PowerPoint to write to the working directory.

This process is a one-time operation.

Examples

```
library(locatexec)
if (exec_available('powerpoint')) {
  file <- system.file(package = "doconv",
    "doc-examples/example.pptx")

  out <- pptx2pdf(input = file,
    output = tempfile(fileext = ".pdf"))

  if (file.exists(out)) {
```



```

        message(basename(out), " is existing now.")
    }
}

```

to_miniaature

Thumbnail of a document

Description

Convert a file into an image (magick image) where the pages are arranged in rows, each row can contain one to several pages.

The result can be saved as a png file.

Usage

```

to_miniaature(
  filename,
  row = NULL,
  width = NULL,
  border_color = "#ccc",
  border_geometry = "2x2",
  dpi = 150,
  fileout = NULL,
  timeout = 120,
  ...
)

```

Arguments

filename	input filename, supported documents are 'Microsoft Word', 'Microsoft PowerPoint', 'RTF' and 'PDF' document.
row	row index for every pages. 0 are to be used to drop the page from the final miniature. <ul style="list-style-type: none"> • c(1, 1) is to be used to specify that a 2 pages document is to be displayed in a single row with two columns. • c(1, 1, 2, 3, 3) is to be used to specify that a 5 pages document is to be displayed as: first row with pages 1 and 2, second row with page 3, third row with pages 4 and 5. • c(1, 1, 0, 2, 2) is to be used to specify that a 5 pages document is to be displayed as: first row with pages 1 and 2, second row with pages 4 and 5.
width	width of a single image, recommended values are: <ul style="list-style-type: none"> • 650 for docx files • 750 for pptx files
border_color	border color, see image_border() .

border_geometry	border geometry to be added around images, see image_border() .
dpi	resolution (dots per inch) to use for images, see pdf_convert() .
fileout	if not NULL, result is saved in a png file whose filename is defined by this argument.
timeout	timeout in seconds that libreoffice is allowed to use in order to generate the corresponding pdf file, ignored if 0.
...	arguments used by webshot2 when HTML document.

Value

a magick image object as returned by [image_read\(\)](#).

Examples

```
library(locatexec)
docx_file <- system.file(
  package = "doconv",
  "doc-examples/example.docx"
)
if(exec_available("word"))
  to_miniature(docx_file)

pptx_file <- system.file(
  package = "doconv",
  "doc-examples/example.pptx"
)
if(exec_available("libreoffice") && check_libreoffice_export())
  to_miniature(pptx_file)
```

to_pdf

Convert documents to pdf

Description

Convert documents to pdf with a script using 'Office' or 'Libre Office'.

If 'Microsoft Word' and 'Microsoft PowerPoint' are available, files 'docx', 'doc', 'rtf' and 'pptx' will be converted to PDF with 'Office' via a script.

If 'Microsoft Word' and 'Microsoft PowerPoint' are not available (on linux for example), 'Libre Office' will be used to convert documents. In that case the rendering can be different from the original document. It supports very well 'Microsoft PowerPoint' to PDF. 'Microsoft Word' can also be converted but some Word features are not supported, such as sections.

Usage

```
to_pdf(
  input,
  output = gsub("\\.[:alnum:]]+$", ".pdf", input),
  timeout = 120,
  UserInstallation = NULL
)
```

Arguments

`input`, `output` file input and optional file output. If output file is not provided, the value will be the value of input file with extension 'pdf'.

`timeout` timeout in seconds, ignored if 0.

`UserInstallation` use this value to set a non-default user profile path for 'LibreOffice'. If not provided a temporary dir is created. It makes possible to use more than a single session of 'LibreOffice'.

Value

the name of the produced pdf (the same value as output), invisibly.

Ubuntu platforms

On some Ubuntu platforms, 'LibreOffice' require to add in the environment variable `LD_LIBRARY_PATH` the following path: `/usr/lib/libreoffice/program` (you should see the message "libreglo.so cannot open shared object file" if it is the case). This can be done with R command `Sys.setenv(LD_LIBRARY_PATH = "/usr/lib/libreoffice/program/")`

Examples

```
library(locatexec)
if (exec_available("libreoffice") && check_libreoffice_export()) {

  out_pptx <- tempfile(fileext = ".pdf")
  file <- system.file(package = "doconv",
    "doc-examples/example.pptx")

  to_pdf(input = file, output = out_pptx)

  out_docx <- tempfile(fileext = ".pdf")
  file <- system.file(package = "doconv",
    "doc-examples/example.docx")

  to_pdf(input = file, output = out_docx)

}
```

working_directory *manage docx2pdf working directory*

Description

Initialize or remove working directory used when docx2pdf create the PDF.

On 'macOS', the operation require writing rights to the directory by the Word or PowerPoint program. Word or PowerPoint program must be authorized to write in the directories, if the authorization does not exist, a manual confirmation window is launched, thus preventing automation.

Fortunately, users only have to do this once. The package implementation use only one directory where results are saved in order to have only one time to click this confirmation.

This directory is managed by R function `R_user_dir()`. Its value can be read with the `working_directory()` function. The directory can be deleted with `rm_working_directory()` and created with `init_working_directory()`. Each call will remove that directory when completed.

As a user, you do not have to use these functions because they are called automatically by the `docx2pdf()` function. They are provided to meet the requirements of CRAN policy:

"[...] packages may store user-specific data, configuration and cache files in their respective user directories [...], provided that by default sizes are kept as small as possible and the contents are actively managed (including removing outdated material)."

Usage

`working_directory()`

`rm_working_directory()`

`init_working_directory()`

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