The pdfcrypt package

Heiko Oberdiek*

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Abstract

This package supports the setting of pdf encryption options for VTEX and some older versions of pdfTEX.

Contents

*Please report any issues at https://github.com/ho-tex/oberdiek/issues

1 Documentation

This package allows the setting of pdf encryption options for

- VTEX, since version 7.35, http://www.micropress-inc.com/.
- pdfTEX, patched by Ricardo Sanchez Carmenes[1].
  Some supported versions are:

  pdfTEX-1.00a,
  pdfTEX-0.14h-pdfcrypt-20010310,
  pdfcrypt-20010331

Note: Since pdfTEX-1.10a (2003-01-16) encryption support was dropped! Thus the package is now obsolete for recent pdfTEX versions.

1.1 Alternatives

There are free alternatives, programs that can be used for postprocessing the pdf file:

- pdftk
  http://www.accesspdf.com/pdftk/
- Multivalent
  http://multivalent.sourceforge.net/
- PDFBox
  http://www.pdfbox.org/
- PDFTrans
  http://maddingue.free.fr/softwares/pdftrans.html
- ...

1.2 Usage

The options can be set as package options or with the command `\pdfcryptsetup`:

`owner=`⟨*owner password*⟩
`user=`⟨*user password*⟩
`print`, `copy`, `edit`, `annotate=true`, `false`
`all`, `none`
`debug`

The encryption is set at `\begin{document}` by default, but this can be forced for an earlier time using the option `set`. Example:

```
\usepackage[owner=Donald,user=Knuth,print=false]{pdfcrypt}
...
\begin{document}
```

[1] Ricardo Sanchez Carmenes's email address: carmenes@bioquimica.uniovi.es

or

```
\usepackage{pdfcrypt}
\pdfcryptsetup{owner=Donald,user=Knut}
\pdfcryptsetup{print=false,set}
...
\begin{document}
```

1.2.1 Special characters

The characters '`{`', '`}`', and '`\`' have to be escaped with '`\`'. Then the string should not be specified as package option but with the macro `\pdfcryptsetup`, eg:

```
\pdfcryptsetup{user={\{\\Hello\}},print=false}
```

The password here is "`{\Hello}`". Active characters can be used and are not expanded. Macros except for `\{`, `\}`, and `\\` should not be used and are not expanded.

1.2.2 `\nopdfcrypt`

Often the whole process of pdf generation includes several TEX compilations and perhaps other postprocessing steps. Therefore a feature would be useful to disable the encryption stuff in order to speed up the first compilations. Therefore package pdfcrypt will look for the macro `\nopdfcrypt`. If it has the meaning of the letter '`Y`', the package will be disabled. Example:

```
pdflatex '\let\nopdfcrypt=Y\input myfile'
thumbpdf myfile
pdfelatex myfile
```

1.2.3 Configuration file

If the file `pdfcrypt.cfg` exists it is loaded and can be used for common settings.

1.2.4 Support for plain TEX

The package can also be used with plain TEX. It defines the missing LATEX macros and loads package keyval. The configuration file is not supported and automatically loaded.

1.3 Hints for pdfTEX

This section is out of date, because the encryption support was removed from pdfTEX. Therefore this hints are of historical interest only.

```
* There are packages such as thumbpdf that ship out
  some stuff (\immediate\pdfobj{...}). In these cases
  \pdfcrypt will be ignored without warning or error
  message. Therefore the package pdfcrypt should be
  loaded before and option "set" should be used in
  order to force the call of \pdfcrypt, for example:
     \usepackage{pdfcrypt}
     \pdfcryptsetup{..., set}
     ...
     \usepackage{thumbpdf}
```

```
* Compiling pdfTeX (eg. version 1.00a-pretest-20010804):
  pdfTeX versions are available at
      ftp://ftp.cstug.cz/pub/tex/local/cstug/thanh/pdftex/snapshots/
  Unpack the latest .tgz file:
      > tar xzf pdftex-20010804.tgz
  Enable encryption support:
      src> cd src/texk/web2c/pdftexdir
      src/texk/web2c/pdftexdir> ln -fs pdfcrypt-full.c pdfcrypt.c
  Compile:
      src/texk/web2c/pdftexdir> cd ../../..
      src> ./configure
      src> cd texk/web2c
      src/texk/web2c> make pdftexbin
  At last install the binary and pool files.
```

2 Implementation

1 ⟨*package⟩

2.1 Help macros for plain TEX

```
2 \expandafter\edef\csname pc@endinput\endcsname{%
3   \catcode`\noexpand\@=\the\catcode`\@\relax
4   \noexpand\endinput
5 }
6 \catcode`\@=11 %
7
8 \expandafter\ifx\csname @firstoftwo\endcsname\relax
9   \long\def\@firstoftwo#1#2{#1}%
10 \fi
11
12 \expandafter\ifx\csname @secondoftwo\endcsname\relax
13   \long\def\@secondoftwo#1#2{#2}%
14 \fi
15
16 \expandafter\ifx\csname @ifundefined\endcsname\relax
17   \def\@ifundefined#1{%
18     \expandafter\ifx\csname #1\endcsname\relax
19       \expandafter\@firstoftwo
20     \else
21       \expandafter\@secondoftwo
22     \fi
23   }%
24 \fi
25
26 \@ifundefined{@ifnextchar}{%
27   \long\def\@ifnextchar#1#2#3{%
28     \let\reserved@d=#1%
29     \def\reserved@a{#2}%
30     \def\reserved@b{#3}%
31     \futurelet\@let@token\@ifnch
32   }%
33   \def\@ifnch{%
34     \ifx\@let@token\@sptoken
35       \let\reserved@c\@xifnch
36     \else
37       \ifx\@let@token\reserved@d
38         \let\reserved@c\reserved@a
```

```
      \else
        \let\reserved@c\reserved@b
      \fi
    \fi
    \reserved@c
  }%
  \begingroup
    \def\:{\global\let\@sptoken= }%
    \: %
    \def\:{\@xifnch}%
    \expandafter\gdef\: {\futurelet\@let@token\@ifnch}%
  \endgroup
}{}

\@ifundefined{ProvidesPackage}{%
  \def\ProvidesPackage#1{%
    \@ifnextchar[{\pc@ProvidesPackage{#1}}%
                 {\pc@ProvidesPackage{#1}[]}%
  }%
  \def\pc@ProvidesPackage#1[#2]{%
    \immediate\write-1{Package: #1 #2}%
  }%
}{}

\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname RequirePackage\endcsname\relax
  \input infwarerr.sty\relax
\else
  \RequirePackage{infwarerr}%
\fi

\@ifundefined{@gobble}{%
  \long\def\@gobble#1{}%
}{}

\@ifundefined{@empty}{%
  \def\@empty{}%
}{}
```

2.2 Package Identification and checks

```
\ProvidesPackage{pdfcrypt}%
  [2016/05/16 v1.1 Allows the setting of PDF encryption (HO)]%
\@ifundefined{pdfcryptsetup}{%
  \let\pdfcryptsetup\@gobble
}{%
  \@PackageWarningNoLine{pdfcrypt}{Package pdfcrypt is already loaded}%
  \pc@endinput
}
```

Support for `\nopdfcrypt`.

```
\newif\ifpc@nopdfcrypt
\ifx Y\nopdfcrypt
  \@PackageWarningNoLine{pdfcrypt}{%
    Encryption disabled by \string \nopdfcrypt\space request%
  }%
  \global\pc@nopdfcrypttrue
\fi
```

2.3 Driver detection

```
\let\pc@driver\@empty
\begingroup
  % pdfTeX detection
  \@ifundefined{pdfoutput}{%
  }{%
    \ifcase\pdfoutput
    \else
      \@ifundefined{pdfcrypt}{%
        \@PackageError{pdfcrypt}{%
          PDF encryption is not supported with this pdfTeX%
        }{%
          Encryption support was added in 0.14h (2001/03/10)\MessageBreak
          and removed in 1.10a (2003/01/16).%
        }%
        \endgroup
        \pc@endinput
      }{%
        \gdef\pc@driver{pdftex}%
      }%
    \fi
  }%
  % VTeX detection
  \@ifundefined{OpMode}{%
  }{%
    \ifnum\OpMode=1 %
      \ifnum\@ifundefined{VTeXversion}0\VTeXversion<735 %
        \@PackageError{pdfcrypt}{%
          PDF encryption is not supported with this VTeX%
        }{%
          You need VTeX 7.35 or higher.%
        }%
        \endgroup
        \pc@endinput
      \else
        \gdef\pc@driver{vtex}%
      \fi
    \fi
  }%
\endgroup
```

2.4 Load package **keyval**

```
\@ifundefined{@makeother}{%
  \def\@makeother#1{\catcode`#1=12\relax}%
}{}

\@ifundefined{g@addto@macro}{%
  \long\def\g@addto@macro#1#2{%
    \begingroup
      \toks@\expandafter{#1#2}%
      \xdef#1{\the\toks@}%
    \endgroup
  }%
}{}

\@ifundefined{@namedef}{%
  \def\@namedef#1{\expandafter\def\csname#1\endcsname}%
```

```
}{}

\@ifundefined{@nameuse}{%
  \def\@nameuse#1{\csname #1\endcsname}%
}{}

\def\pc@KeyvalRestore{%
  \let\pc@KeyvalRestore\@undefined
}

\let\pcOrg@NeedsTeXFormat\NeedsTeXFormat
\@ifundefined{NeedsTeXFormat}{%
  \def\NeedsTeXFormat#1{}%
  \g@addto@macro\pc@KeyvalRestore{%
    \let\NeedsTeXFormat\pcOrg@NeedsTeXFormat
  }%
}{}

\let\pcOrg@DeclareOption\DeclareOption
\@ifundefined{DeclareOption}{%
  \def\DeclareOption#1#2{#2}%
  \g@addto@macro\pc@KeyvalRestore{%
    \let\DeclareOption\pcOrg@DeclareOption
  }%
}{}

\let\pcOrg@ExecuteOptions\ExecuteOptions
\@ifundefined{ExecuteOptions}{%
  \def\ExecuteOptions#1{}%
  \g@addto@macro\pc@KeyvalRestore{%
    \let\ExecuteOptions\pcOrg@ExecuteOptions
  }%
}{}

\let\pcOrg@ProcessOptions\ProcessOptions
\@ifundefined{ProcessOptions}{%
  \def\ProcessOptions{}%
  \g@addto@macro\pc@KeyvalRestore{%
    \let\ProcessOptions\pcOrg@ProcessOptions
  }%
}{}%

\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname RequirePackage\endcsname\relax
  \input keyval.sty\relax
\else
  \RequirePackage{keyval}%
\fi
\pc@KeyvalRestore
```

2.5 Define options

```
\@ifundefined{@dblarg}{%
  \long\def\@dblarg#1{\@ifnextchar[{#1}{\@xdblarg{#1}}}%
  \long\def\@xdblarg#1#2{#1[{#2}]{#2}}%
}{}

\newif\ifpc@set
\newif\ifpc@print
```

```
\newif\ifpc@copy
\newif\ifpc@edit
\newif\ifpc@annotate
\newif\ifpc@debug
\let\pc@owner\@empty
\let\pc@user\@empty

% default: allow all
\pc@printtrue
\pc@copytrue
\pc@edittrue
\pc@annotatetrue

\edef\pc@temp{\catcode`\noexpand\"=\the\catcode`\"\relax}
\@makeother\"
\def\pc@set{%
  \@PackageInfo{pdfcrypt}{%
    \ifpc@debug
      \ifx\pc@owner\@empty
        No owner password%
      \else
        Owner password: `\pc@owner'%
      \fi
      \MessageBreak
      \ifx\pc@user\@empty
        No user password%
      \else
        User password: `\pc@user'%
      \fi
      \MessageBreak
      Flags: %
      \ifpc@print   \else no\fi print, %
      \ifpc@copy    \else no\fi copy, %
      \ifpc@edit    \else no\fi edit, %
      \ifpc@annotate\else no\fi annotate%
      \MessageBreak
    \fi
    \ifpc@nopdfcrypt
      Encryption is disabled by `\string\nopdfcrypt'%
    \else
      Encryption is set for `\pc@driver'%
    \fi
  }%
  \ifpc@nopdfcrypt
  \else
    \@ifundefined{pc@set@\pc@driver}{%
      \ifx\pc@driver\@empty
        \@PackageError{pdfcrypt}{No driver for encryption %
          support found}\@ehc
      \else
        \@PackageError{pdfcrypt}{Cannot set encryption for %
          unknown driver `\pc@driver'}\@ehc
      \fi
    }{%
      \@nameuse{pc@set@\pc@driver}%
    }%
  \fi
}
```

```
\def\pc@set@pdftex{%
  \ifnum\pdftexversion<100 %
    \pc@set@pdftexold
  \else
    \pc@set@pdftexnew
  \fi
}
\def\pc@set@pdftexold{%
  \pdfcrypt{%
    owner "\pc@owner" %
    user "\pc@user" %
    \ifpc@print   \else no\fi print %
    \ifpc@copy    \else no\fi copy %
    \ifpc@edit    \else no\fi edit %
    \ifpc@annotate\else no\fi annotate%
  }%
}
\def\pc@set@pdftexnew{%
  \pdfcrypt
    owner{\pc@owner}%
    user{\pc@user}%
    \ifpc@print   \else no\fi print %
    \ifpc@copy    \else no\fi copy %
    \ifpc@edit    \else no\fi edit %
    \ifpc@annotate\else no\fi annotate%
  \relax
}
\def\pc@set@vtex{%
  \immediate\special{!security %
    O=\pc@MakeVTeXString\pc@owner,%
    U=\pc@MakeVTeXString\pc@user,%
    P\ifpc@print +\else -\fi,%
    C\ifpc@copy +\else -\fi,%
    M\ifpc@edit +\else -\fi,%
    A\ifpc@annotate +\else -\fi
  }%
}
\def\pc@MakeVTeXString#1{%
  "\expandafter\pc@@MakeVTeXString#1"\@nil"%
}
\def\pc@@MakeVTeXString#1"#2\@nil{%
  #1%
  \ifx\\#2\\%
  \else
    ""%
    \@ReturnAfterFi{%
      \pc@@MakeVTeXString#2\@nil
    }%
  \fi
}
\long\def\@ReturnAfterFi#1\fi{\fi#1}
\pc@temp

\begingroup
  \catcode`\ =12 \gdef\pc@spaceother{ }\catcode`\ =10\relax
  \catcode`\|=0 %
  \catcode`\\=12 %
  |gdef|pc@DefString#1#2{%
```

```
    |def#1{#2}%
    |edef#1{|expandafter|strip@prefix|meaning#1}%
    |edef#1{|expandafter|pc@SpaceToOther#1 |@nil}%
    |edef#1{|expandafter|pc@EscapeRemove#1|@empty\|@empty|@nil}%
  }%
  |gdef|pc@EscapeRemove#1\#2#3|@nil{%
    #1#2%
    |ifx|\#3|\%%
    |else
      |@ReturnAfterFi{%
        |pc@EscapeRemove#3|@nil
      }%
    |fi
  }%
|endgroup
\def\pc@SpaceToOther#1 #2\@nil{%
  #1%
  \ifx\\#2\\%
  \else
    \pc@spaceother
    \@ReturnAfterFi{%
      \pc@SpaceToOther#2\@nil
    }%
  \fi
}

\def\pc@boolkey{\@dblarg\pc@@boolkey}
\def\pc@@boolkey[#1]#2#3{%
  \lowercase{\def\pc@temp{#3}}%
  \ifx\pc@temp\@empty
    \let\pc@temp\pc@true
  \fi
  \ifx\pc@temp\pc@true
  \else
    \ifx\pc@temp\pc@false
    \else
      \let\pc@temp\relax
    \fi
  \fi
  \ifx\pc@temp\relax
    \@PackageWarning{pdfcrypt}{%
      Unexpected value \string‘#3\string’ of %
      option \string‘#2\string’\MessageBreak
      instead of %
      \string‘true\string’ or \string‘false\string’%
    }%
  \else
    \csname pc@#2\pc@temp\endcsname
  \fi
}
\def\pc@true{true}
\def\pc@false{false}

\define@key{pc}{set}[true]{%
  \pc@boolkey{set}{#1}%
}
\define@key{pc}{pdftex}[]{%
  \def\pc@driver{pdftex}%
```

```
}
\define@key{pc}{vtex}[]{%
  \def\pc@driver{vtex}%
}
\define@key{pc}{print}[true]{%
  \pc@boolkey{print}{#1}%
}
\define@key{pc}{copy}[true]{%
  \pc@boolkey{copy}{#1}%
}
\define@key{pc}{edit}[true]{%
  \pc@boolkey{edit}{#1}%
}
\define@key{pc}{annotate}[true]{%
  \pc@boolkey{annotate}{#1}%
}
\define@key{pc}{all}[]{%
  \pc@boolkey{print}{true}%
  \pc@boolkey{copy}{true}%
  \pc@boolkey{edit}{true}%
  \pc@boolkey{annotate}{true}%
}
\define@key{pc}{none}[]{%
  \pc@boolkey{print}{false}%
  \pc@boolkey{copy}{false}%
  \pc@boolkey{edit}{false}%
  \pc@boolkey{annotate}{false}%
}

\define@key{pc}{owner}{%
  \pc@DefString\pc@owner{#1}%
}
\define@key{pc}{user}{%
  \pc@DefString\pc@user{#1}%
}
\define@key{pc}{debug}[true]{%
  \pc@boolkey{debug}{#1}%
}

\def\pdfcryptsetup#1{%
  \setkeys{pc}{#1}%
  \ifpc@set
    \pc@set
    \global\let\pc@set\relax
    \gdef\pdfcryptsetup##1{%
      \@PackageWarning{pdfcrypt}{%
        Encryption options are already set\MessageBreak
        new values are ignored%
      }%
    }%
  \fi
}
\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname @onlypreamble\endcsname\relax
\else
  \@onlypreamble\pdfcryptsetup
\fi
```

2.6 support of configuration file

```
\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname InputIfFileExists\endcsname\relax
  \@PackageInfo{pdfcrypt}{%
    Configuration file pdfcrypt.cfg not supported.%
  }%
\else
  \let\pc@ExecuteOptions\ExecuteOptions
  \InputIfFileExists{pdfcrypt.cfg}{}{}%
  \let\ExecuteOptions\pc@ExecuteOptions
\fi
```

2.7 Package options

Plain format does not know package options.

```
\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname @classoptionslist\endcsname\relax
  \expandafter\pc@endinput
\fi
```

Process global and local options.

```
\def\pc@ProcessOptionsWithKV{%
  \let\pc@temp\@empty
  \@for\CurrentOption:=\@classoptionslist\do{%
    \@ifundefined{KV@pc@\CurrentOption}{}{%
      \edef\pc@temp{\pc@temp,\CurrentOption,}%
      \@expandtwoargs\@removeelement\CurrentOption
        \@unusedoptionlist\@unusedoptionlist
    }%
  }%
  \edef\pc@temp{%
    \noexpand\pdfcryptsetup{%
      \pc@temp\@ptionlist{\@currname.\@currext}%
    }%
  }%
  \pc@temp
}
\pc@ProcessOptionsWithKV
\AtEndOfPackage{\let\@unprocessedoptions\relax}
\AtBeginDocument{\pc@set}

\pc@endinput
```

⟨/package⟩

3 Installation

3.1 Download

Package. This package is available on CTAN[2]:

CTAN:macros/latex/contrib/oberdiek/pdfcrypt.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/pdfcrypt.pdf Documentation.

[2] CTAN:pkg/pdfcrypt

Bundle. All the packages of the bundle 'oberdiek' are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

CTAN:install/macros/latex/contrib/oberdiek.tds.zip

TDS refers to the standard "A Directory Structure for TEX Files" (CTAN:pkg/tds). Directories with `texmf` in their name are usually organized this way.

3.2 Bundle installation

Unpacking. Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

3.3 Package installation

Unpacking. The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain TEX:

```
tex pdfcrypt.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
pdfcrypt.sty → tex/generic/oberdiek/pdfcrypt.sty
pdfcrypt.pdf → doc/latex/oberdiek/pdfcrypt.pdf
pdfcrypt.dtx → source/latex/oberdiek/pdfcrypt.dtx
```

If you have a `docstrip.cfg` that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

3.4 Refresh file name databases

If your TEX distribution (TEX Live, MiKTEX, ...) relies on file name databases, you must refresh these. For example, TEX Live users run `texhash` or `mktexlsr`.

3.5 Some details for the interested

Unpacking with LATEX. The `.dtx` chooses its action depending on the format:

plain TEX: Run docstrip and extract the files.

LATEX: Generate the documentation.

If you insist on using LATEX for docstrip (really, docstrip does not need LATEX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{pdfcrypt.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfLaTeX:

```
pdflatex pdfcrypt.dtx
makeindex -s gind.ist pdfcrypt.idx
pdflatex pdfcrypt.dtx
makeindex -s gind.ist pdfcrypt.idx
pdflatex pdfcrypt.dtx
```

4 History

[2001/04/02 v0.1]

- First public version, published in the pdftex mailing list for testing with pdfcrypt-20010331

[2001/07/19 v0.2]

- Default: all allowed.
- Support for VTeX added.

[2001/07/19 v0.3]

- Bug fix: VTeX letter for edit is M (modify).

[2001/07/19 v0.4]

- Bug fix: `\VTeXversion` is correct after regenerating the format file.

[2001/08/05 v0.5]

- Syntax change in pdfTeX 1.00a.

[2001/08/09 v0.6]

- Support of special characters:
  input: `\{`, `\}`, `\\` for {, }, \
  output: `"` in VTeX
- Option debug added.

[2001/10/28 v0.7]

- Plain compatibility.
- `\nopdfcrypt` added.
- Typos corrected.

[2006/02/20 v0.8]

- Obsolete remarks for pdfTEX.
- DTX framework.
- LPPL 1.3

[2007/04/11 v0.9]

- Line ends sanitized.

[2007/04/26 v1.0]

- Use of package infwarerr.

[2016/05/16 v1.1]

- Documentation updates.

5 Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.