

PDF SPLIT AND MERGE 1.0.0 TUTORIAL

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<http://www.pdksam.org/>

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WHAT IS PDFSAM?

PDF Split and Merge is a very simple, easy to use, free, open source utility to split and merge pdf files. It has a simple graphical interface to let the user choose pdf files, split or merge them. Pdfsam is written with Java Swing that is *"a set of Java class libraries provided as part of [Java 2 Platform, Standard Edition \(J2SE\)](#) to support building graphics user interface (GUI) and graphics functionality for client applications that will run on popular platforms such as Microsoft Windows, Linux, and Mac OSX."*¹

Pdfsam uses some external libraries such as:

- itext-2.0.7 to manipulate pdf documents.
- dom4j-1.6.1 to deal with the xml format.
- jaxen-1.1 to deal with the xml format.
- pdfsam-jcmdline-1.0.3 to parse and validate console input arguments.
- looks-2.1.4 to have a nice and changeable look and feel.
- log4j-1.2.15 as log framework.
- bcmail-jdk14-138.jar to deal with encrypted documents.
- bcprov-jdk14-138.jar to deal with encrypted documents.

WHY PDFSAM?

I needed to merge together some pdf files some years ago and it happened again since that first time. Guess what? I couldn't find an open source software to make it easily and quickly, even if there are tons of commercial software for that. This is the reason why i decided to write pdfsam, a simple, open source and free software for pdf manipulation. Actually one more thing is that i knew about the iText library; i knew the main job about the pdf manipulation was already done by iText but people need something easier, simple interface, something "click and run". And here it is, pdfsam.

INSTALL AND RUN

Prerequisites:

pdfsam need a working Java Runtime Environment. It has been developed using Sun Java(TM) 2 SDK, Standard Edition, Version 1.4.2 and tested on many Microsoft Windows versions and on Ubuntu versions using J2SE 5.0 and J2SE 1.4.2 .

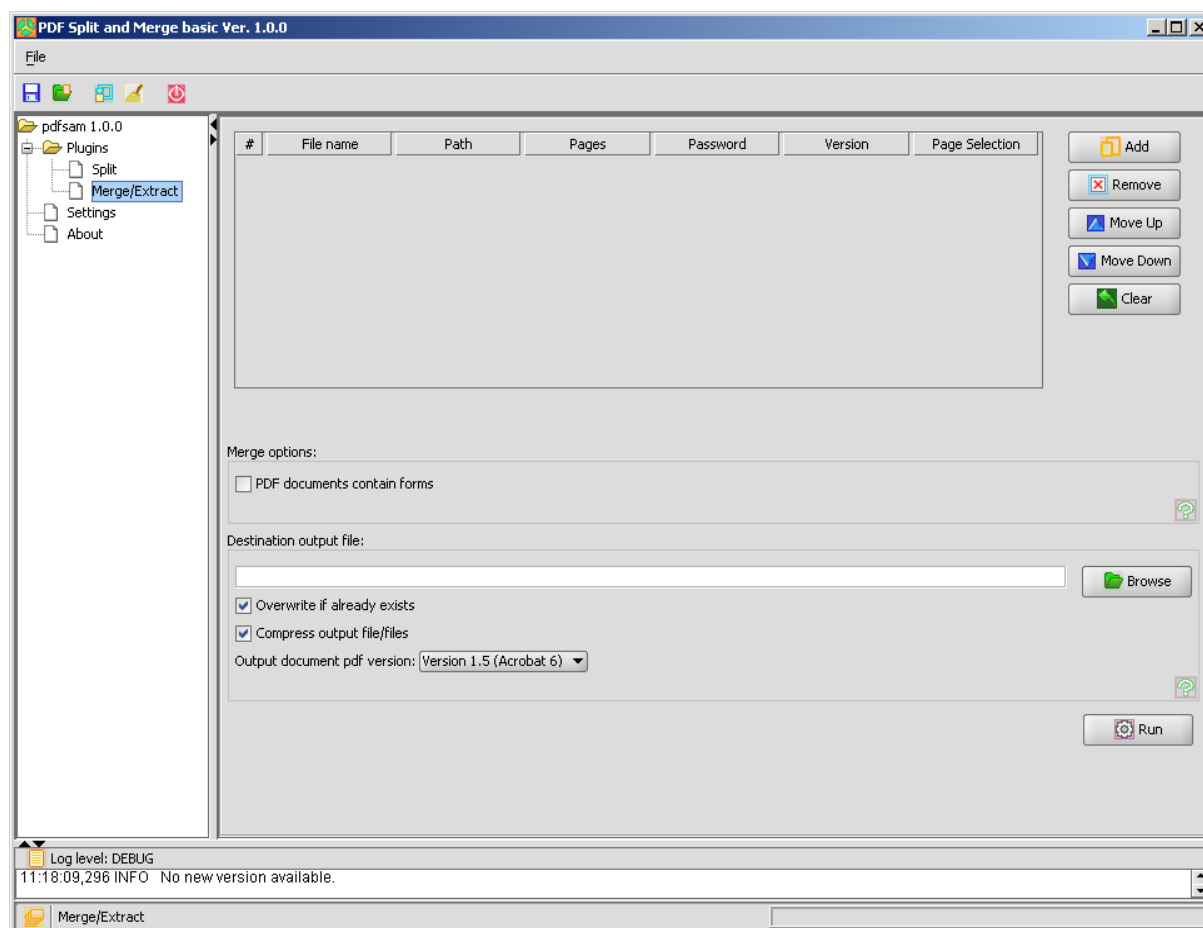
pdfsam-1.0.0-out.zip

Unzip the archive in a directory and double click the file pdfsam-1.0.0.jar or type the command "java -jar INSTALL_DIR/pdfsam-1.0.0.jar" in a console.

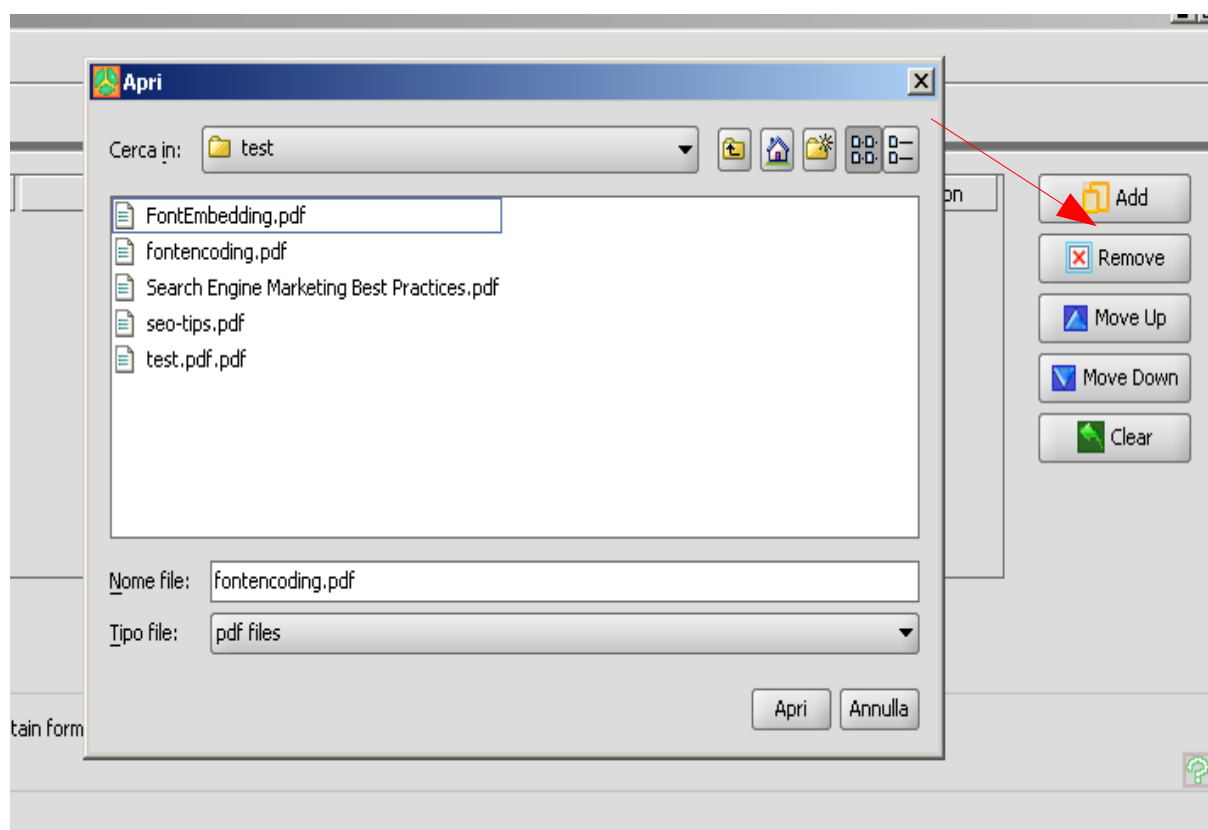
1 From the official <http://java.sun.com>

MERGE/EXTRACT

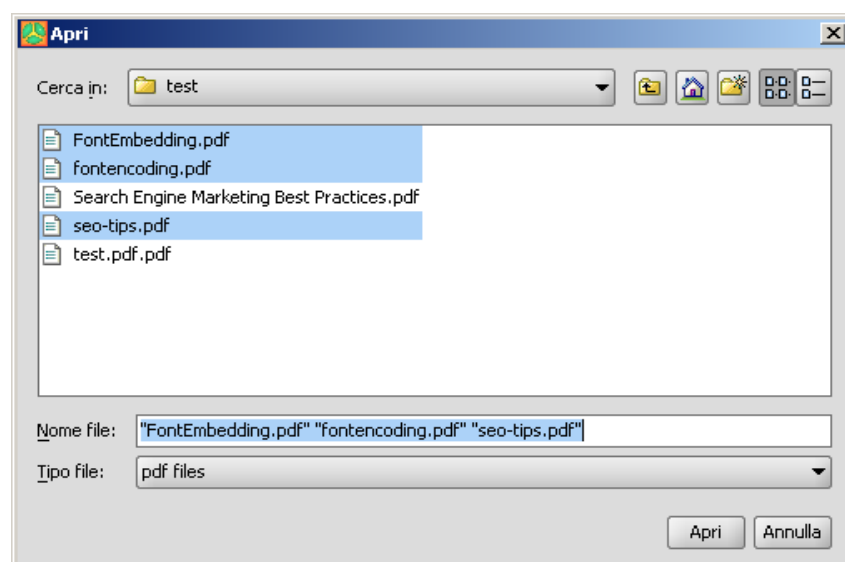
Here is the Merge/Extract main window:



Click the "Add" button to choose the pdf files you want to merge together.



Select pdf files you want to merge; if you want to select more the one file press the "shift" or "ctrl" button on you keyboard.

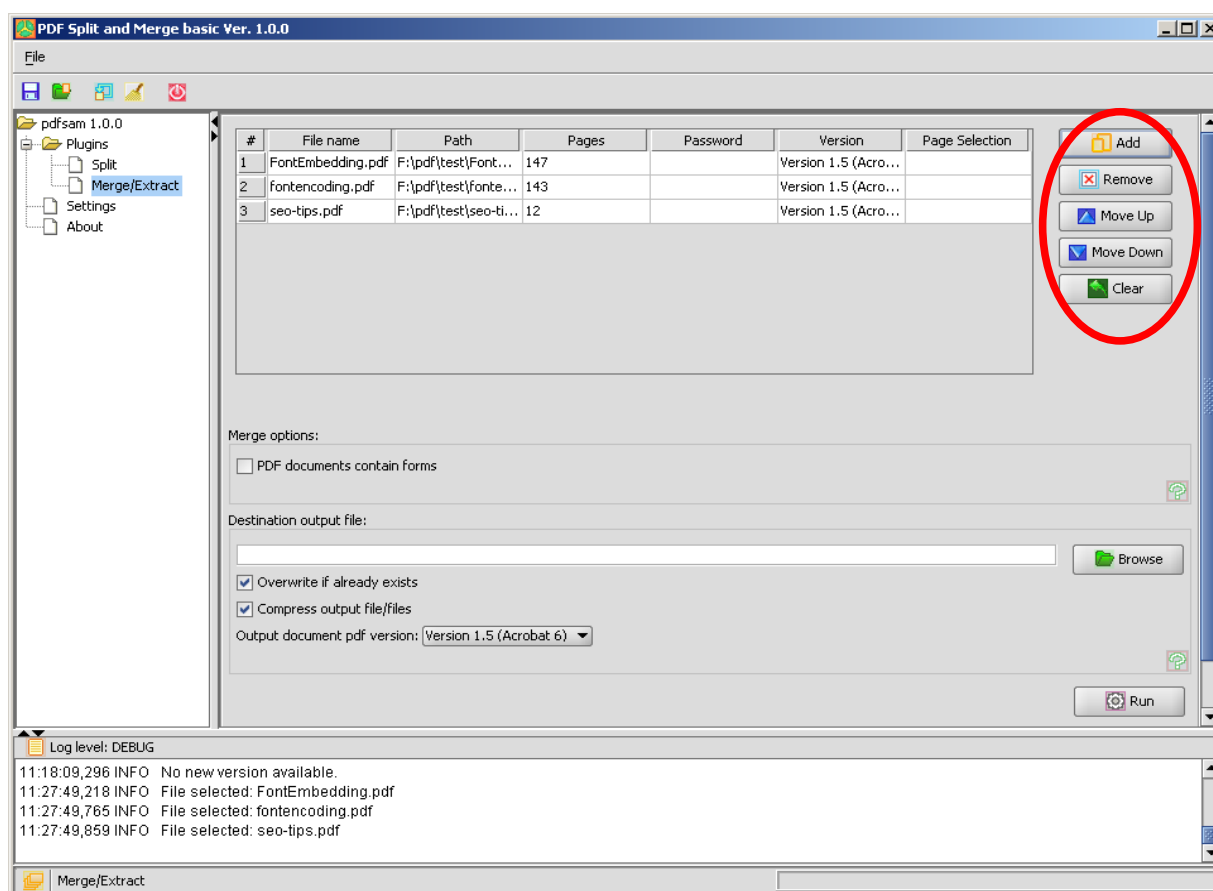


Once your files have been selected you'll see the selection table containing files details:

- Row number
- File name: The file name.
- Path: The file absolute path in the file system.

- Pages: The total number of pages of the document.
- Password: An editable field to input the password for protected documents.
- Version: Pdf Version of the document.
- Page Selection: "All" means that you want to merge the whole document, "page-topage" means you want to merge only pages between "page" and "topage" comprehensive, "page-" means you want to merge pages starting from page till the end of the document, a single page number means that page. Comma separated value are accepted. (ex 4,13-25 if you want to merge page 4 and pages between 13 and 25).

Use the buttons "Move Up", "Move Down" to change the files order or select one or more documents and drag&drop. Press "Remove" to remove unwanted files from the list. Press "Clear" to clear the selection table. Click on the columns header to have the table ordered on that column values.




Double click the Page Selection cell if you want to merge only a subset of the document.

| # | File name | Path | Pages | Password | Version | Page Selection |
|---|-------------------|-----------------------|-------|----------|----------------------|----------------|
| 1 | seo-tips.pdf | F:\pdf\test\seo-ti... | 12 | | Version 1.5 (Acro... | |
| 2 | fontencoding.pdf | F:\pdf\test\fonte... | 143 | | Version 1.5 (Acro... | 1,45-65 |
| 3 | FontEmbedding.pdf | F:\pdf\test\Font... | 147 | | Version 1.5 (Acro... | |

Fill with the pages subset you want to merge; page numbers are comprehended. You may use print notation like "2,12-16,17-" or simply "2" if you want to merge only page number 2.

Double click on the password field to set the password for protected documents. Protected documents may need you to input the password to be loaded by pdfsam. Fill the password field, right click on the table row and select "Reload".

| # | File name | Path | Pages | Password | Version | Page Selection |
|---|-------------------|-----------------------|-------|----------|----------------------|----------------|
| 1 | seo-tips.pdf | F:\pdf\test\seo-ti... | 12 | | Version 1.5 (Acro... | |
| 2 | fontencoding.pdf | F:\pdf\test\fonte... | 143 | | Version 1.5 (Acro... | 1,45-65 |
| 3 | FontEmbedding.pdf | F:\pdf\test\Font... | 147 | | Version 1.5 (Acro... | |



- Remove
- Reload
- Move Up
- Move Down
- Set output file
- Export as xml

Check the box if your documents contain pdf forms. This will tell pdfsam to use a different merge algorithm specific to deal with forms. Setting this options all the documents will be loaded into memory with a very high memory usage.

Merge options:

☐ PDF documents contain forms

Fill the destination field with the output file name or select it using the "Browse" button. Check or uncheck "Overwrite" if you want overwrite the output pdf document if it already exists. Check or uncheck "Compress output" if you want to compress output document (Output document version 1.5 or above). Select a version for the output document.

Destination output file:

F:\pdf\test\test_merge.pdf Browse

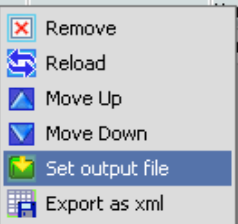
☒ Overwrite if already exists

☒ Compress output file/files

Output document pdf version: Version 1.5 (Acrobat 6) ▼

You can automatically set a default output file by clicking with the right button on a file in the merge table and selecting "Set output file". This will fill the output field with a default filename in the same directory as the selected file.

| # | File name | Path | Pages | Password | Version | Page Selection |
|---|-------------------|-----------------------|-------|----------|----------------------|----------------|
| 1 | seo-tips.pdf | F:\pdf\test\seo-ti... | 12 | | Version 1.5 (Acro... | |
| 2 | fontencoding.pdf | F:\pdf\test\fonte... | 143 | | Version 1.5 (Acro... | 1,45-65 |
| 3 | FontEmbedding.pdf | F:\pdf\test\Font... | 147 | | Version 1.5 (Acro... | |

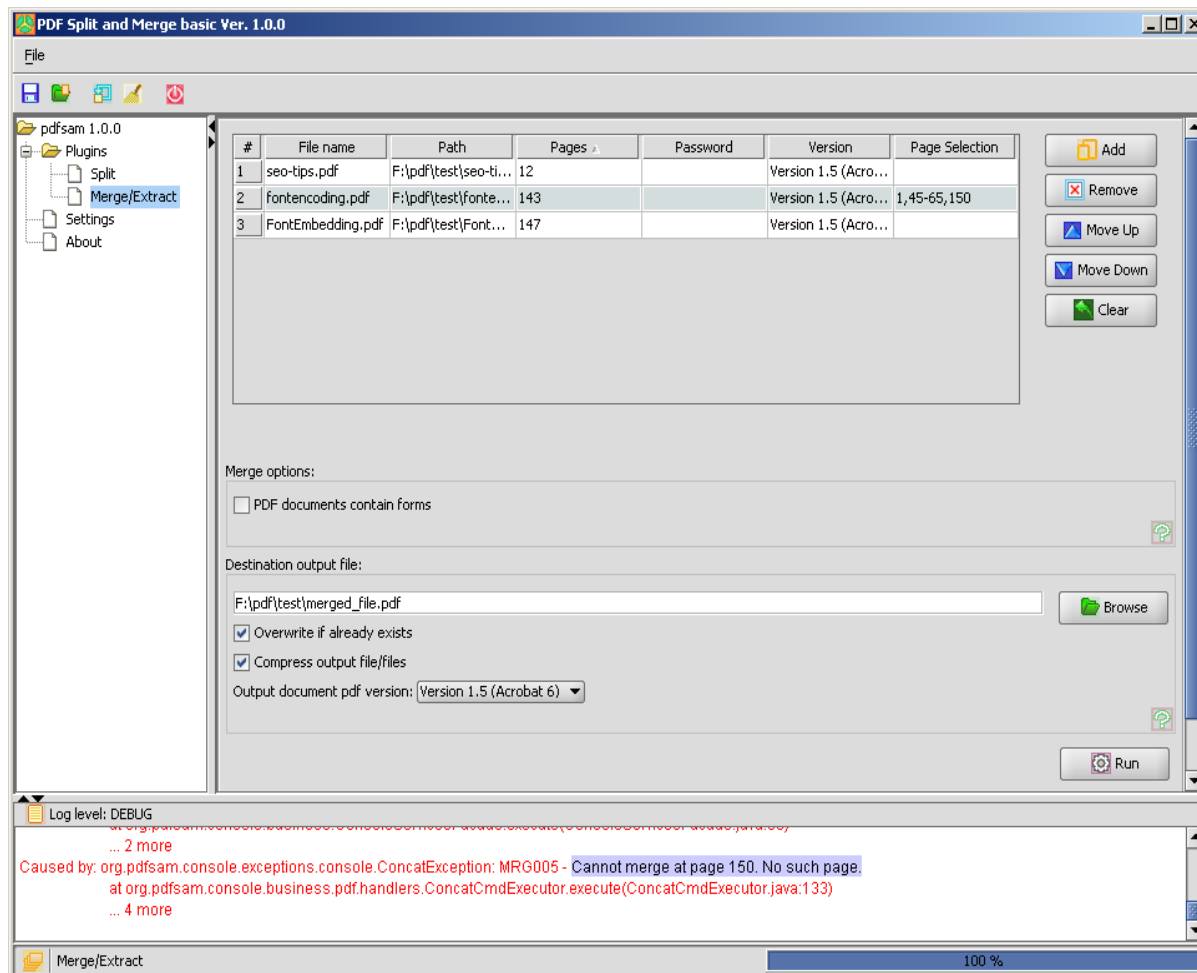


- Remove
- Reload
- Move Up
- Move Down
- Set output file
- Export as xml

Click the "Run" button.

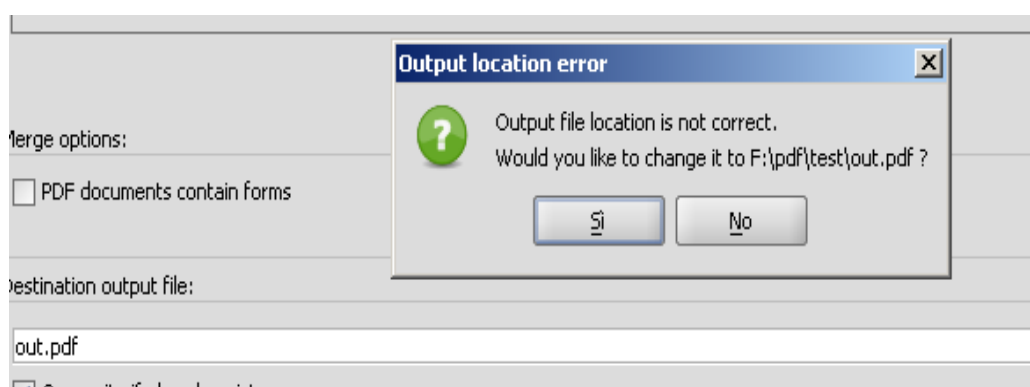


If no error occurs you'll see the progress bar growing till 100% and black messages on the log panel telling the process status, otherwise you'll find a red error message.



In the example above we had an error message saying we cannot merge page 150 because the document has only 143 pages.

If you don't provide a full output path for the output document pdfsam will ask you if you want to place the output document into the parent directory of the last selected input file.



PAGE EXTRACTION

You can extract portion of a single file:

- In merge section select only one file.
- Set a the page subset you need to extract (Ex. 12-23).
- Select an output file.
- Merge.

EXPORT SELECTED FILES

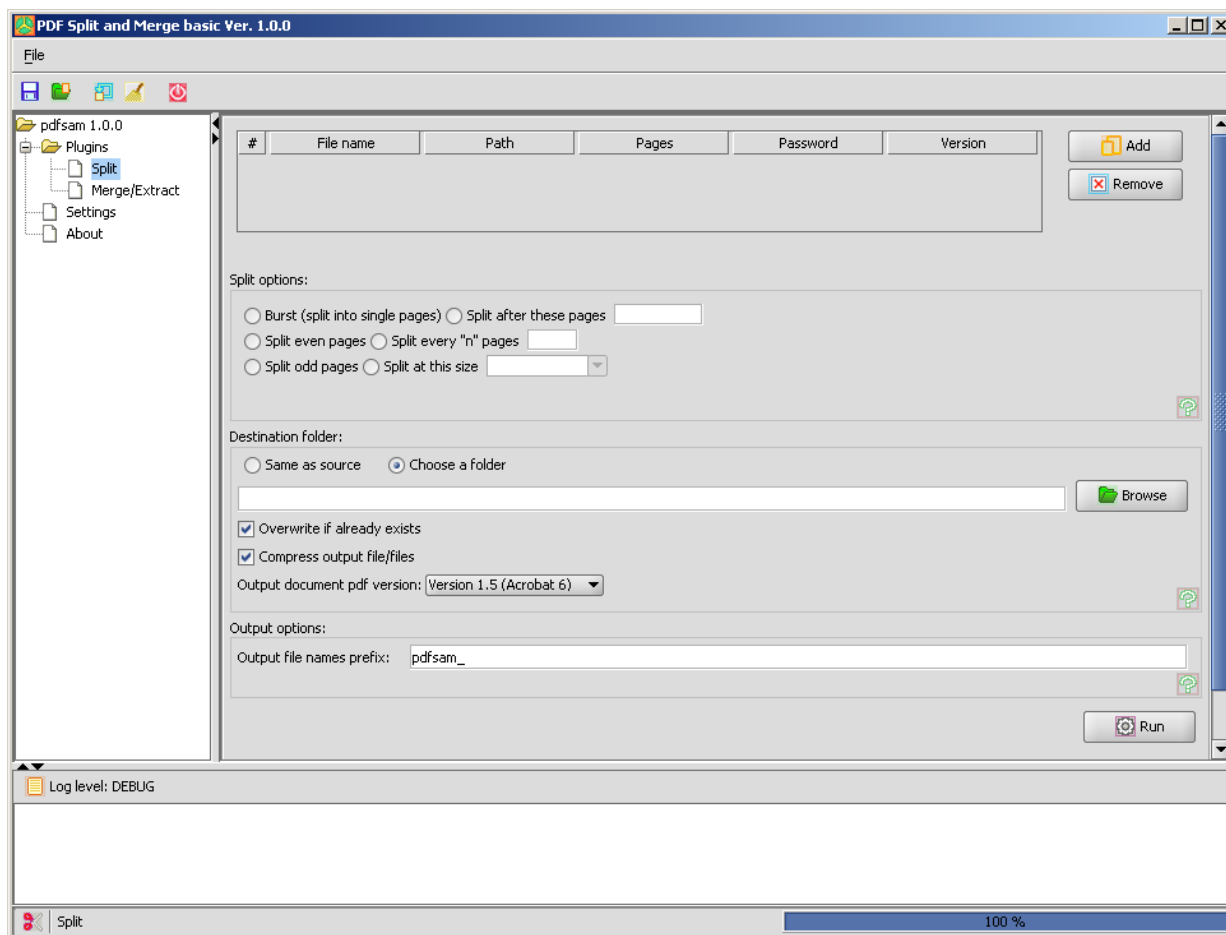
Right clicking on a selected file you can export the selected files list as an xml file that can be used as an input file for the console “concat” command, -l option.

| # | File name | Path | Pages | Password | Version | Page Selection |
|---|-------------------|-----------------------|-------|----------|----------------------|----------------|
| 1 | seo-tips.pdf | F:\pdf\test\seo-ti... | 12 | | Version 1.5 (Acro... | |
| 2 | fontencoding.pdf | F:\pdf\test\fonte... | 143 | | Version 1.5 (Acro... | 1, 45-65, 150 |
| 3 | FontEmbedding.pdf | F:\pdf\test\Font... | 147 | | Version | |

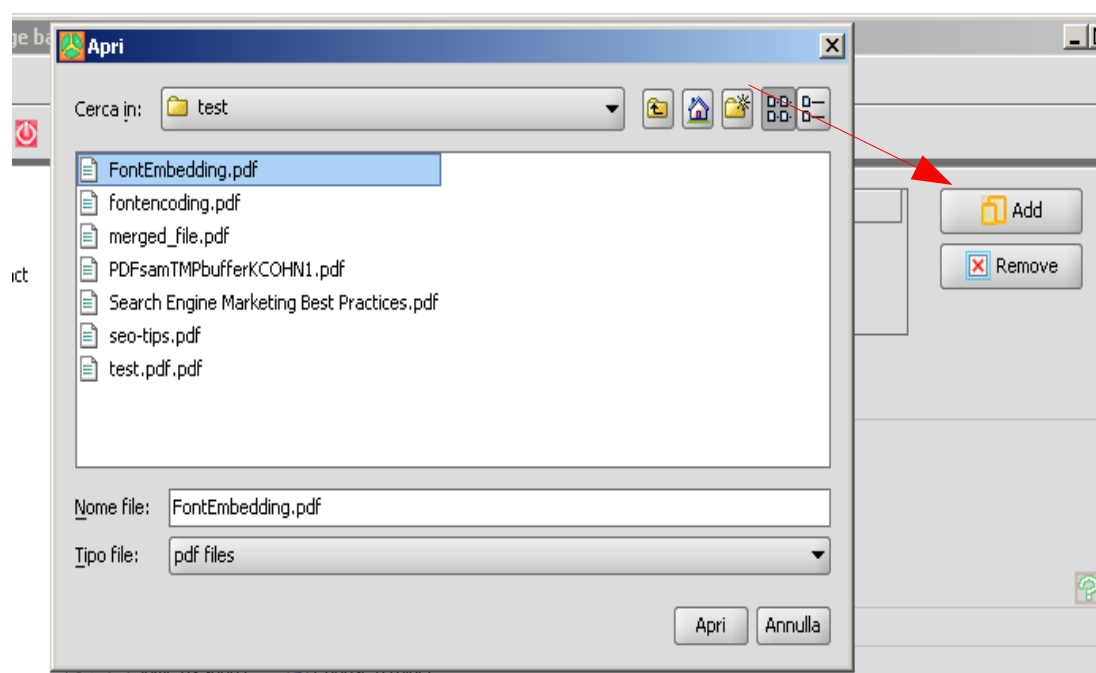
Remove
Reload
Move Up
Move Down
Set output file
Export as xml

SPLIT

Here is the split main window:

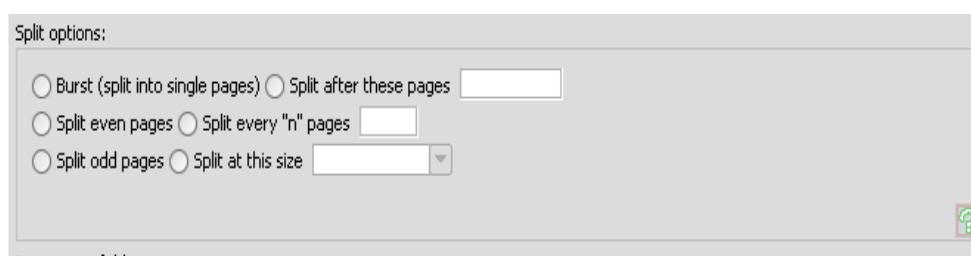


Click the "Add" button to select the pdf file to split.



Set the password for protected documents. Protected documents may need you to input the password to be loaded by pdfsam. Fill the password field, right click on the table row and select "Reload".

Select the split option you need:



- *Burst* splits the pdf file into single pages, one pdf file-one page.
- *Split every "n" pages* splits the pdf file into files made of "n" pages. (Ex. If you selected a file made of 100 pages and you split it every 25 pages, you'll have 4 pdf files made of 25 pages).
- *Split even pages* splits the pdf file every even page.
- *Split odd pages* splits the pdf file every odd page.
- *Split after these pages* splits the pdf file at the submitted page numbers. Numbers must be separated by "-" (Ex. 12-45-75). You may specify just one page number to split the document in two subdocuments. Note that page numbers will be ordered and zero, negative or too big numbers are pruned.
- *Split at this size* splits the pdf file in subfiles of the selected size (roughly).

Select the destination folder for resulting pdf files. Destination folder can be chosen clicking the "Browse" button and finding the folder on your filesystem or selecting "Same as source", with this option you'll have all output pdf files in the same directory as the source file. Check or uncheck "Overwrite" if you want overwrite the output pdf document if it already exists. Check or uncheck

"Compress output" if you want to compress output document (Output document version 1.5 or above).
Select a version for the output document.



The screenshot shows a dialog box with two radio buttons at the top: "Same as source" (unselected) and "Choose a folder" (selected). Below the radio buttons is a text input field and a "Browse" button with a folder icon. Underneath, there are two checked checkboxes: "Overwrite if already exists" and "Compress output file/files". At the bottom, there is a dropdown menu labeled "Output document pdf version:" with "Version 1.5 (Acrobat 6)" selected. A help icon (question mark in a circle) is in the bottom right corner.

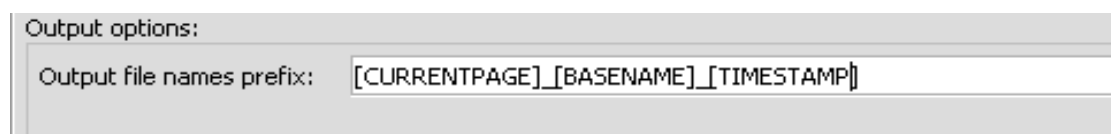
Select output prefix if needed.



This screenshot shows the "Output options:" section of the dialog box. It features a label "Output file names prefix:" followed by a text input field containing the text "pdfsam_". A help icon is visible in the bottom right corner.

Output files will be named with the same name of the input pdf file and with a progressive leading number. You can specify a prefix for the output name and the final result will be something like "0_prefix_filename.pdf".

Starting from the release 0.7 pdfsam supports complex prefix. If the prefix contains one among [CURRENTPAGE] and [TIMESTAMP] complex prefix are enabled and pdfsam perform variable substitution. Available variables are [CURRENTPAGE], [TIMESTAMP], [BASENAME]. The variable [BASENAME] doesn't enable complex prefix because it doesn't ensure unique output filenames but it can be use together with [CURRENTPAGE] or [TIMESTAMP] or both.

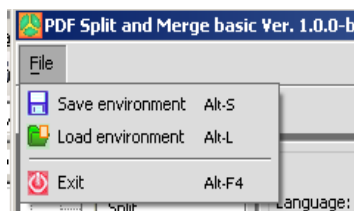


This screenshot shows the "Output options:" section with the "Output file names prefix:" label. The text input field contains the complex prefix "[CURRENTPAGE]_[BASENAME]_[TIMESTAMP]".

Click "Run" and you find the operation result in the log section.

ENVIRONMENT

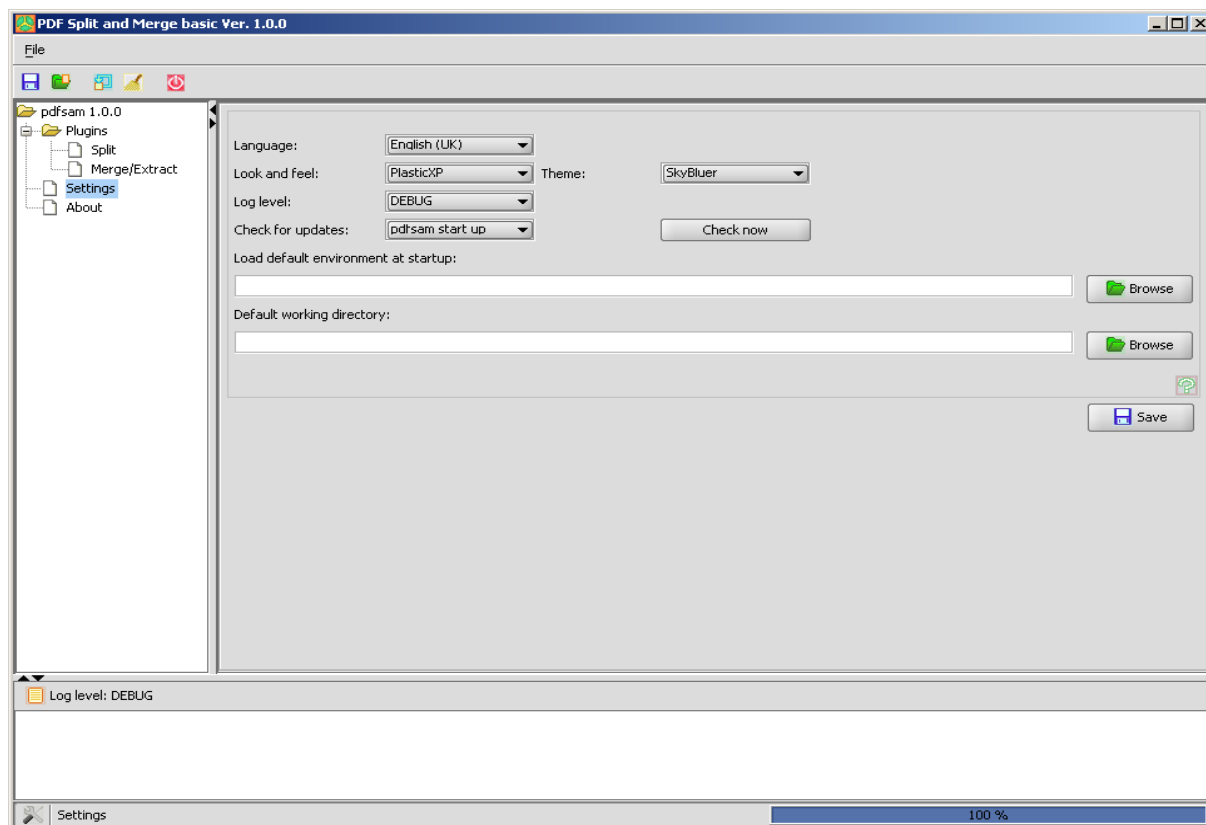
Using pdfsam you'll be able to save and load an environment.



The feature will let you save an xml file containing the current status of every pdfsam plugin. This feature is useful if you have recurrent jobs and you don't want to set plugin options every time.

SETTINGS

Here is the Settings main window.



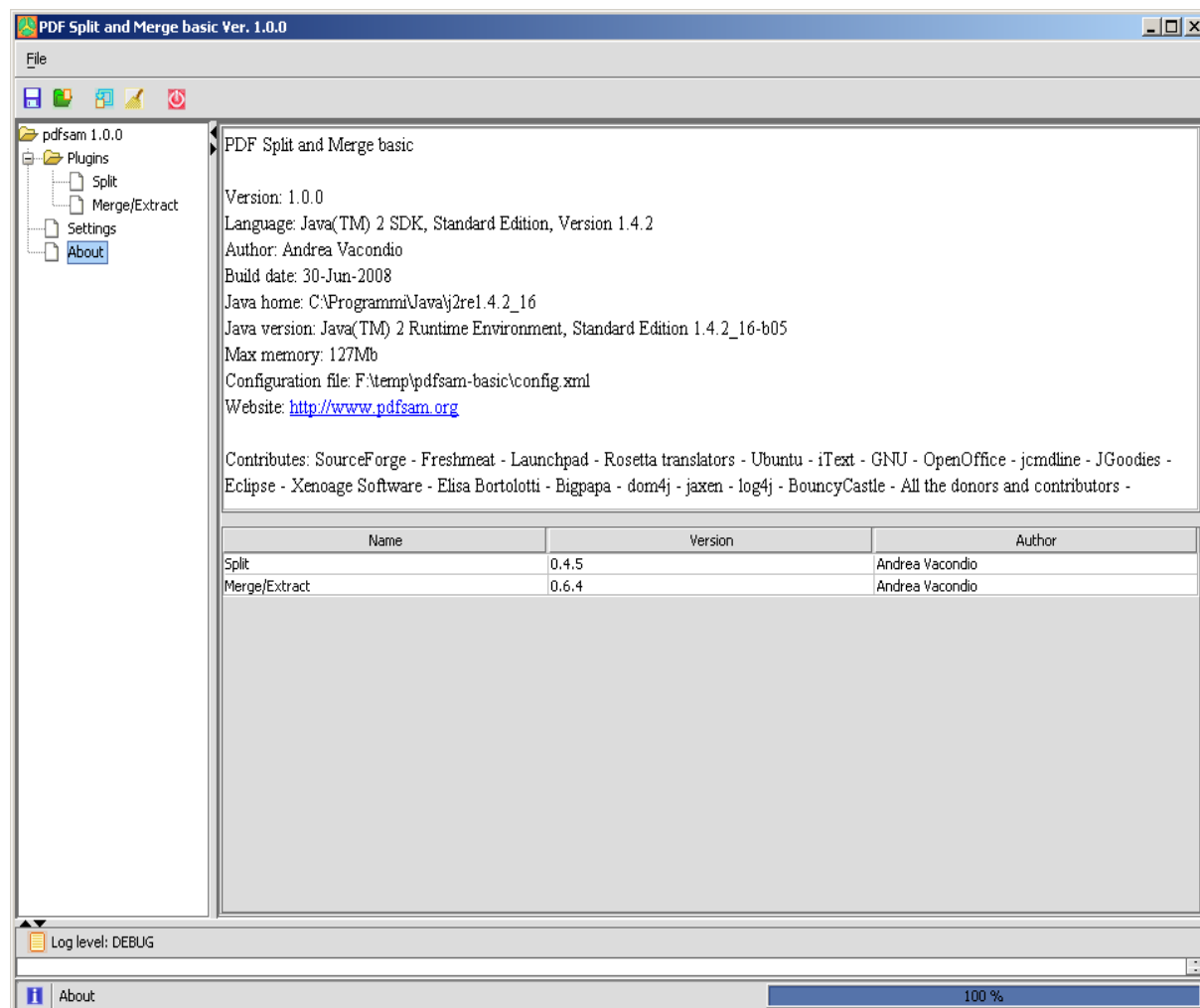
In this section you'll be able to set your preferences.

- *Language*: set your language
- *Look and feel*: pdfsam look and feel
- *Log level*: log messages level you want to see in the log panel.
- *Check for updates*: set when pdfsam should check for a new version available
- *Default environment*: pdfsam will load this file at start up.
- *Default working directory*: set the default working directory. This will tell pdfsam where to open file chooser and where to save output files if you don't set an output file or directory

Click “Save” and restart pdfsam to have your changes applied.

ABOUT

This window will give you some information about the pdfsam version you are running.



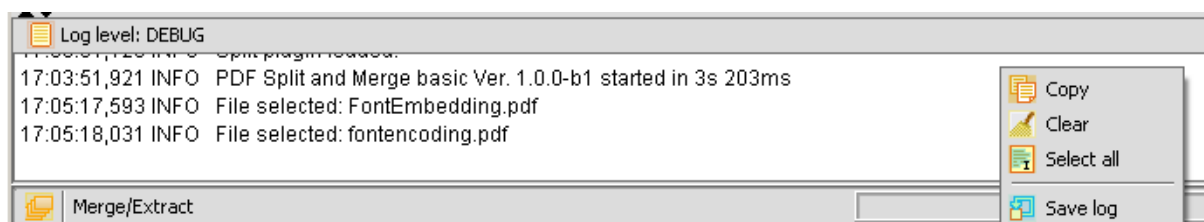
Here you'll find information about the pdfsam version, plugins version, JVM version and configuration file used. Starting from the 1.0.0 version, pdfsam looks for the config.xml in the \${user.home}/.pdfsam directory, if it doesn't find the file it looks in the pdfsam directory.

LOG WINDOW

The pdfsam log window will help you to understand how pdfsam is working. Any black message (DEBUG or INFO) is just an information about what pdfsam is doing, a blue message (WARNING) is a warning telling that there's an unexpected situation that pdfsam can handle, a red message (ERROR or FATAL) tells that there's an error that pdfsam can't handle.

Right clicking on the log window a context menu will appear. You can select and copy the log text, clear the log window or save the log text to a file.

Setting the log level to OFF using the settings panel will switch off any log message.



CONSOLE

pdfsam-console is a command line application. It uses jcmdline to parse input parameters and it executes the proper command. It's the core application and it provides pdf manipulation. The main GUI loads plugins, once clicked the plugin "Run" button (merge or split), the plugin performs input data validation and, if everything is correct, it creates an arguments array and then it sends it to the console.

To run the console use the scripts in the "bin" subdirectory or type the following command: `java -Dlog4j.configuration=console-log4j.xml -jar /PATH_TO_PDFSAM/lib/pdfsam-console-CURRENT_VERSION.jar`. It's important to add the argument `-Dlog4j.configuration=console-log4j.xml`, this will configure the log4j framework to print log messages to the system output.

Starting from the 1.0.0 version of pdfsam (1.1.0 version of the pdfsam-console), enhanced and basic console have been unified, this mean that you can find all the enhanced feature in the basic console.

Run the console with the option `-h` to have a generic help, run it with `-h command` to have a specific help on the command.

Here is a list of the console arguments:

Usage: `java -jar pdfsam-console-VERSION.jar [options] command`

where:

command = command to execute {[concat], [split], [encrypt], [mix], [unpack]} (required)

and options are:

Merge

`-?`

prints usage to stdout; exits (optional)

`-compressed`

compress output file (optional)

`-copyfields`

input pdf documents contain forms (high memory usage) (optional)

`-f <f>`

pdf files to concat: a list of existing pdf files (EX. `-f /tmp/file1.pdf -f /tmp/file2.pdf:password`) (optional)

`-h`

prints usage to stdout; exits (optional)

`-help`

displays verbose help information (optional)

`-l <f>`

xml or csv file containing pdf files list to concat. If csv file in comma separated value format; if xml file `<filelist><file value="filepath" /></filelist>` (optional)

`-license`

displays license information (optional)

`-log <f>`

text file to log output messages (optional)

- o <f>
pdf output file: if it doesn't exist it's created, if it exists it must be writeable (required)
- overwrite
overwrite existing output file (optional)
- pdfversion <s>
pdf version of the output document/s. (optional)
- u <s>
page selection script. You can set a subset of pages to merge. Accepted values: "all" or "num1-num2" (EX. -f /tmp/file1.pdf -f /tmp/file2.pdf -u all:all:), (EX. -f /tmp/file1.pdf -f /tmp/file2.pdf -u all:12-14:) to merge file1.pdf and pages 12,13,14 of file2.pdf. If -u is not set default behaviour is to merge document completely (optional)
- version
displays command's version (optional)

The -l option takes an xml input file as pdf document input list.
This is an example:

```
<?xml version="1.0" encoding="UTF-8"?>
<filelist>
  <file value="f:\pdf\inputFile.pdf" />
  <file value="f:\pdf\inputFile2.pdf" password="test"/>
  <fileset usecurrentdir="true">
    <file value="inputFile1.pdf" />
    <file value="inputFile2.pdf" />
  </fileset>
  <fileset dir="f:\tempdir\subdir" usecurrentdir="false">
    <file value="inputFile1.pdf" />
    <file value="inputFile2.pdf" />
  </fileset>
  <fileset dir="f:\tempdir\subdir2">
    <file value="inputFile1.pdf" />
    <file value="inputFile2.pdf" />
    <file value="inputFile3.pdf" />
  </fileset>
</filelist>
```

There are different ways to set the files you want to concat.

- <file value="f:\pdf\inputFile.pdf" />
can be used for a single file and accept the "password" attribute if the document is password protected.
- <fileset usecurrentdir="true">
 <file value="inputFile1.pdf" />
 <file value="inputFile2.pdf" />
</fileset>
can be used for a set of files placed into the same directory of the xml input file.
- <fileset dir="f:\tempdir\subdir" usecurrentdir="false">
 <file value="inputFile1.pdf" />
 <file value="inputFile2.pdf" />

```
</fileset>
<fileset dir="f:\tempdir\subdir2">
  <file value="inputFile1.pdf" />
  <file value="inputFile2.pdf" />
  <file value="inputFile3.pdf" />
</fileset>
```

can be both used for a set of files placed into the “dir” directory

Split

```
-?
    prints usage to stdout; exits (optional)

-b <n>
    size in bytes to split at if -s is SIZE (optional)

-compressed
    compress output file (optional)

-f <f>
    input pdf file to split (required)

-h
    prints usage to stdout; exits (optional)

-help
    displays verbose help information (optional)

-license
    displays license information (optional)

-log <f>
    text file to log output messages (optional)

-n <s>
    page number to split at if -s is SPLIT or NSPLIT (optional)

-o <dir>
    output directory (required)

-overwrite
    overwrite existing output file (optional)

-p <s>
    prefix for the output files name (optional)

-pdfversion <s>
    pdf version of the output document/s. (optional)

-s <s>
    split type {[BURST], [ODD], [EVEN], [SPLIT], [NSPLIT], [SIZE]}
    (required)

-version
    displays command's version (optional)
```

Encrypt

```
-?
    prints usage to stdout; exits (optional)

-allow <s>
    permissions: a list of permissions {[print], [modify], [copy], [fill], [assembly],
    [screenreaders], [modifyannotation], [degradedprinting]} (optional)
```

- apwd <s>
administrator password for the document (optional)
- compressed
compress output file (optional)
- etype <s>
encryption algorithm {[rc4_40], [rc4_128], [aes_128]}. If omitted it uses rc4_128 (optional)
- f <f>
pdf files to encrypt: a list of existing pdf files (EX. -f /tmp/file1.pdf -f /tmp/file2.pdf)
(required)
- h
prints usage to stdout; exits (optional)
- help
displays verbose help information (optional)
- license
displays license information (optional)
- log <f>
text file to log output messages (optional)
- o <dir>
output directory (required)
- overwrite
overwrite existing output file (optional)
- p <s>
prefix for the output files name (optional)
- pdfversion <s>
pdf version of the output document/s. (optional)
- upwd <s>
user password for the document (optional)
- version
displays command's version (optional)

Mix

- ?
prints usage to stdout; exits (optional)
- compressed
compress output file (optional)
- f1 <f>
first input pdf file to split (required)
- f2 <f>
second input pdf file to split (required)
- h
prints usage to stdout; exits (optional)
- help
displays verbose help information (optional)
- license
displays license information (optional)
- log <f>
text file to log output messages (optional)
- o <f>
pdf output file: if it doesn't exist it's created, if it exists it must be writeable (required)

-overwrite
 overwrite existing output file (optional)

-pdfversion <s>
 pdf version of the output document/s. (optional)

-reversefirst
 reverse first input file (optional)

-reversesecond
 reverse second input file (optional)

-version
 displays command's version (optional)

Unpack

-?
 prints usage to stdout; exits (optional)

-d <dir>
 input directory (optional)

-f <f>
 pdf files to unpack: a list of existing pdf files (EX. -f /tmp/file1.pdf -f /tmp/file2.pdf)

(optional)

-h
 prints usage to stdout; exits (optional)

-help
 displays verbose help information (optional)

-license
 displays license information (optional)

-log <f>
 text file to log output messages (optional)

-o <dir>
 output directory (required)

-overwrite
 overwrite existing output file (optional)

-version
 displays command's version (optional)

TWEAK&TIPS

1.

When you see this



move the mouse over it to have some tooltip help.

2.

If you have some trouble loading plugins try this:

- Open the file config.xml with good editor (Notepad++..) .
- Fill the tag *“plugs_absolute_dir”* with the absolute path to your plugins direcotry .
- Save .

pdfsam tries to find plugins directory but, if there's some trouble, you can specify the absolute path as described.

3.

Move to the “doc/examples” subdirectory to have some examples on how run the concat command using xml or csv file input.

4.

Move to the “doc/licenses” subdirectory to have informations about licenses of pdfsam and libraries used by pdfsam.

5.

If you have to work with big pdf documents (hundreds MB) try running pdfsam setting a different Xmx value. Example: running the command “java -Xmx512m -jar pdfsam-1.0.0.jar” will run pdfsam with 512 Mb of memory instead of 64, this should prevent OutOfMemory errors (unless your documents are very very big). You can also set the Xmx value into the shell scripts provided into the bin subdirectory.

THANKS TO OPEN SOURCE PROJECTS INVOLVED

This simple tool is free software and this has been possible thanks to many other open source projects.

I'd like to thank:

Ubuntu linux distro because most of the time i work on pdfsam at home, on my personal pc.

Eclipse, the development platform i used.

OpenOffice, the suite i used to write this document.

Notepad++, the editor i used many times to make changes in text files (php, txt etc) while working on win32 platform.

SourceForge because it hosts pdfsam giving me a lot of useful services.

Launchpad for the translation platform.

WordPress for the website.

phpBB for the forum.

iText, **jGoodies**, **jcmdline**, **jaxen**, **dom4j**, **log4j**, **Bouncy Castle** libraries to make pdfsam a working tool.

Elisa Bortolotti for her icons.

Bigpapa for tests and translations.

Free Software Foundation for the GPL license.

All the pdfsam community for contributions, tests, translations, support and suggestions.

LICENSE

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Version 2, June 1991

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