



User Manual

3-Heights® PDF Merge Split Shell

Version 6.27.6



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1 Introduction

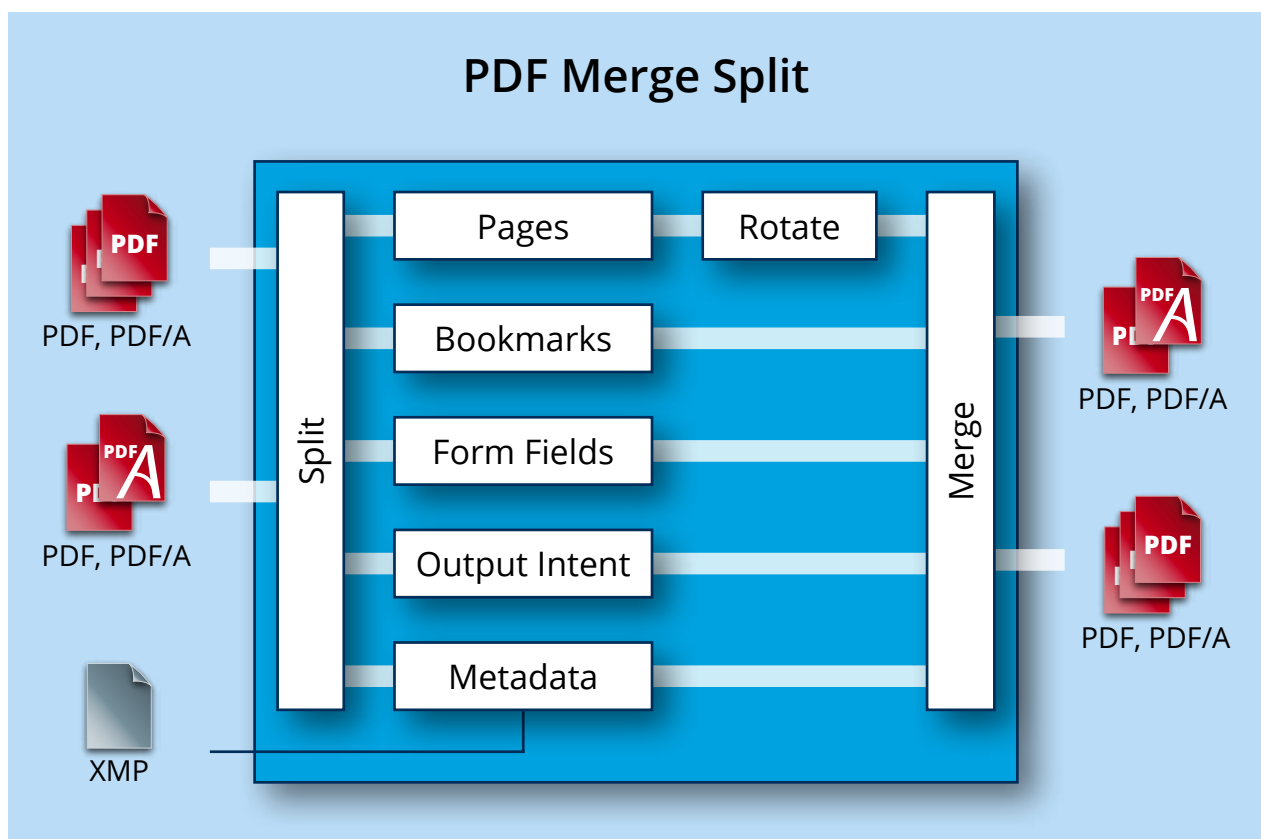
The 3-Heights® PDF Merge Split Shell is a component for splitting and merging the pages of PDF documents with useful additional functions.

In addition to its main functions of splitting and merging, the 3-Heights® PDF Merge Split Shell can also rotate pages, copy or add metadata, and other document attributes such as document outlines (bookmark), form fields, color profiles for output devices, and flatten form fields.

A special feature is the component's ability to process and create PDF/A conforming files.

1.1 Functions

The 3-Heights® PDF Merge Split Shell can operate on multiple input and output documents in one processing step.



1.1.1 Features

The 3-Heights® PDF Merge Split Shell comes with the following features:

- Merge different PDF documents or pages thereof to form a single PDF document
- Split a PDF document of many pages into a number of smaller PDF documents
- Process PDF/A documents: If all the input documents are PDF/A, then the output is PDF/A with automatically chosen version and conformance level (down-grade).
- Automatic PDF version upgrade when merging documents with differing PDF version. Merging PDF 1.x and PDF 2.0 is currently not supported.
- Rotate pages
- Flatten or remove form fields and annotations

- Copy the color profile for the output device (output intent)
- Copy document information and metadata (XMP)
- Add embedded files to a PDF document
- Optimize page resources when merging PDF documents
- Set passwords and permission flags
- Copy or remove outlines (bookmarks) and create custom outlines
- Merge or remove document structure information
- Remove named destinations
- Set document information entries (title, author, ...)
- Write a linearized PDF (fast web view) (not PDF 2.0)
- Set the page mode and open action
- Split vertical or horizontal double pages into single pages

Input formats

- PDF 1.x (PDF 1.0, ..., PDF 1.7)
- PDF 2.0
- PDF/A-1, PDF/A-2, PDF/A-3

Output formats

- PDF 1.x (PDF 1.0, ..., PDF 1.7)
- PDF 2.0
- PDF/A-1, PDF/A-2, PDF/A-3

Conformance

Standards:

- ISO 32000-1 (PDF 1.7)
- ISO 32000-2 (PDF 2.0)
- ISO 19005-1 (PDF/A-1)
- ISO 19005-2 (PDF/A-2)
- ISO 19005-3 (PDF/A-3)

1.2 Operating systems

The 3-Heights® PDF Merge Split Shell is available for the following operating systems:

- Windows Client 7+ | x86 and x64
- Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, 2019, 2022 | x86 and x64
- Linux:
 - Red Hat, CentOS, Oracle Linux 7+ | x64
 - Fedora 29+ | x64
 - Debian 8+ | x64
 - Other: Linux kernel 2.6+, GCC toolset 4.8+ | x64
- macOS 10.10+ | x64

'+' indicates the minimum supported version.

2 Installation

2.1 Windows

The 3-Heights® PDF Merge Split Shell comes as a ZIP archive or as an MSI installer.

To install the software, proceed as follows:

1. You need administrator rights to install this software.
2. Log in to your download account at <https://www.pdf-tools.com>. Select the product “PDF Merge Split Shell”. If you have no active downloads available or cannot log in, please contact pdfsales@pdf-tools.com for assistance.

You can find different versions of the product available. Download the version that is selected by default. You can select a different version.

There is an MSI (*.msi) package and a ZIP (*.zip) archive available. The MSI (Microsoft Installer) package provides an installation routine that installs and uninstalls the product for you. The ZIP archive allows you to select and install everything manually.

There is a 32 and a 64-bit version of the product available. While the 32-bit version runs on both 32 and 64-bit platforms, the 64-bit version runs on 64-bit platforms only. The MSI installs the 64-bit version, whereas the ZIP archive contains both the 32-bit and the 64-bit version of the product. Therefore, on 32-bit systems, the ZIP archive must be used.

3. If you select an MSI package, start it and follow the steps in the installation routine.
4. If you are using the ZIP archive, unzip the archive to a local folder, e.g. C:\Program Files\PDF Tools AG\.

This creates the following subdirectories:

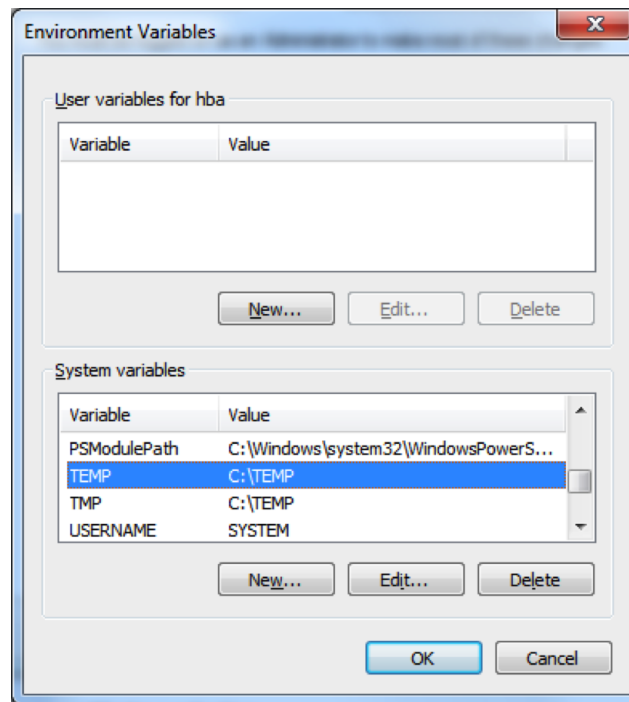
Subdirectory	Description
bin	Runtime executable binaries
doc	Documentation

5. (Optional) To easily use the 3-Heights® PDF Merge Split Shell from a shell, the directory needs to be included in the “Path” environment variable.
6. (Optional) Register your license key using the [License management](#).

2.1.1 How to set the environment variable “Path”

To set the environment variable “Path” in Windows, go to Start → Control Panel (classic view) → System → Advanced → Environment Variables.

Select “Path” and “Edit”, then add the directory where `pdfsplmrg.exe` is located to the “Path” variable. If the environment variable “Path” does not exist, create it.



2.2 Linux and macOS

This section describes installation steps required on Linux or macOS.

Here is an overview of the files that come with the 3-Heights® PDF Merge Split Shell:

File description

Name	Description
bin/x64/pdfsplmrg	Main executable
doc/*.*	Documentation

2.2.1 Linux

1. Unpack the archive in an installation directory, e.g. `/opt/pdf-tools.com/`
2. Verify that the GNU shared libraries required by the product are available on your system:

```
ldd pdfsplmrg
```

If the previous step reports any missing libraries, you have two options:

- a. Download an archive that is linked to a different version of the GNU shared libraries and verify whether they are available on your system. Use any version whose requirements are met. Note that this option is not available for all platforms.
 - b. Use your system's package manager to install the missing libraries. It usually suffices to install the package `libc++6`.
3. Create a link to the executable from one of the standard executable directories, e.g.

```
ln -s /opt/pdf-tools.com/bin/x64/pdfsplmrg /usr/bin
```

4. Optionally, register your license key using the [license manager](#).

2.3 Uninstall

If you have used the MSI for the installation, go to Start → 3-Heights® PDF Merge Split Shell... → Uninstall ...

If you have used the ZIP file for the installation, undo all the steps done during installation.

2.4 Note about the evaluation license

With the evaluation license, the 3-Heights® PDF Merge Split Shell automatically adds a watermark to the output files.

3 License management

The 3-Heights® PDF Merge Split Shell requires a valid license in order to run correctly. If no license key is set or the license is not valid, then the executable will fail and the return code is set to 10.

More information about license management is available in the [license key technote](#).

4 User guide

The 3-Heights® PDF Merge Split Shell provides two executables:

- `pdfsplmrg` is used to split and combine pages from several input documents into several output documents.
- `pdfsplitpage` is used to split each page of a double-page document into two.

4.1 Shell pdfsplmrg

The `pdfsplmrg` tool uses a multiple-in/multiple-out architecture, thus allowing flexible and efficient merge and split operations. Merging and splitting is not confined to pages, but also affects resources (images, fonts, color spaces, etc.), form fields, outlines (bookmarks), tags, and more. Notably, these elements are merged correctly, when previously split from the same document.

4.1.1 Modes of operation

The 3-Heights® PDF Merge Split Shell supports three modes of operation, which are activated using the `-m`, `-s`, and `-c` options. If none of these options are specified, then the merge mode is activated.

Merge mode

In this mode, one or several input documents are specified. Each document is specified potentially with a page set `-pg`. The input documents are then merged in the order of appearance on the command line to the output document. This is the default mode of operation.

Example: Two documents are merged as:

```
pdfsplmrg in1.pdf in2.pdf out.pdf
```

Example: Merge all PDF documents as:

```
pdfsplmrg *.pdf out.pdf
```

Example: Input documents can be specified several times and pages can be selected with the `-pg` option.

```
pdfsplmrg -pg 1-2 in1.pdf in2.pdf -pg 9 in1.pdf out.pdf
```

Note: Merging PDF 1.x and PDF 2.0 is currently not supported and results in an exit code 4. Additionally, the following error message is printed:

```
* Error: Invalid compliance specified.
```

Split mode

This mode is activated by specifying the [-s](#) option. In this mode, one or several input documents are merged as in the [Merge mode](#). The resulting document is, however, split into chunks.

Example: A document is split into chunks of (at most) 5 pages as:

```
pdfsplmrg -s :5 in.pdf out.pdf
```

Example: A document is split according to its outlines (bookmarks) on the first level of the outline hierarchy:

```
pdfsplmrg -s o in.pdf out.pdf
```

Example: Two documents are first merged. The result is then split into chunks of (at most) 5 pages:

```
pdfsplmrg -s :5 in1.pdf in2.pdf out.pdf
```

Example: Input documents can be specified several times and pages can be selected with the [-pg](#) option.

```
pdfsplmrg -s :5 -pg 1-20 in1.pdf in2.pdf out.pdf
```

Collate mode

This mode is activated by specifying the [-c](#) option. In this mode, input files are treated in one of two ways:

- If the [-pc](#) option is specified for an input file, then this input file is split into chunks. The m'th chunk ends up in the m'th output file.
- If a page set [-pg](#) (or no option) is specified for an input file, then the specified page set (or all pages) ends up in every output file.

Example: A document is split into chunks of (at most) 5 pages as:

```
pdfsplmrg -c -pc :5 in.pdf out.pdf
```

Example: A document is split according to its outlines (bookmarks) on the first level of the outline hierarchy:

```
pdfsplmrg -c -pc o in.pdf out.pdf
```

The two examples above result in the same output files as the first two examples in [Split mode](#).

Example: A first document is split into 5-page chunks. Each of these chunks is merged with a second document into a separate output file:

```
pdfsplmrg -c -pc :5 in1.pdf in2.pdf out.pdf
```

Example: A title document is merged with each of the outlines of another document:

```
pdfsplmrg -c title.pdf -pc o in.pdf out.pdf
```

Example: The first page of a title document is merged with a 2-page chunk of a first document and a 5-page chunk of a second document:

```
pdfsplmrg -c -pg 1 title.pdf -pc :2 in1.pdf -pc :5 in2.pdf out.pdf
```

4.2 Shell pdfsplitpage

The `pdfsplitpage` tool takes one input document and splits every page that exceeds the given dimension (either height or width) into two pages.

Example: Split all pages that are wider than 210 mm (the paper width of A4) into two pages:

```
pdfsplitpage -w 595 input.pdf output.pdf
```

The units of all dimensions given to `-w` and `-h` must be specified in PDF points (1 in/72).

Note: If you plan to use both `pdfsplmrg` and `pdfsplitpage`, then you should use `pdfsplmrg` first and `pdfsplitpage` second.

4.3 Return codes

All return codes other than 0 indicate an error in the processing.

Return codes

Value	Description
0	Success.
1	Couldn't open input file.
2	PDF output file could not be created.
3	Error with given options, e.g. too many parameters.
4	Generic processing error.
10	License error, e.g. invalid license key.

5 Interface reference

Switches are options that are provided with the command to define how the document should be processed.

Switches can occur in two forms: As standalone option such as `-ow` (optimize for fast web view), or they may require a parameter such as `-pw password` (set password to read encrypted input document).

Switches are parsed from left to right. If the same switch is applied multiple times, the last set value is applied.

5.1 Shell pdfsplmrg

Input file names

Wildcards characters "*" and "?" are permitted and expand into a set of input files.

Note: If options for input files precede an input file name with wildcards, then these options are only applied to the first file in the set.

Output file names

The last parameter of the command line should always be the output document. When splitting, several output files are created. For numbering the output files, a `printf` format mechanism is used. For example:

```
out%3.2d.pdf
```

specifies a number with field width 3 and precision 2. If the output file name contains no % character, then an automatic number is generated.

The argument supplied to the format is always an integer number (the page number). Therefore, you can use `d` (for decimal), `x` (for hexadecimal), `u` (unsigned decimal), or `o` (octal). Specifying `s` (char string) results in a crash, because the page number is not a valid string address.

See <https://www.cplusplus.com/reference/cstdio/printf> for a complete specification of `printf`.

5.1.1 Mode selection options

-m Merge mode

Merge mode `-m`

Activate the [Merge mode](#). This is the default mode.

-s Split mode

Split mode `-s <spec>`

Activate the [Split mode](#). This option requires the `<spec>` parameter, which can be either of the two following:

- :n** This indicates that the document should be split into n-page sized chunks. For example: **-s :5** specifies a chunk size of 5 pages. The last chunk has less than n pages if the total number of pages is not a multiple of n.
- o** This indicates that the document should be split according to the document outlines (bookmarks). Only the first level in the outline hierarchy is honored. If the document has no outlines, then it is regarded as one contiguous chunk.

If several input files are specified, then these are merged before splitting.

-c Collate mode

Collate mode **-c**

Activate the [Collate mode](#).

5.1.2 General options

@<filename> Use a control file

Use a control file **@<filename>**

Read the parameters from a control file. This is particularly useful for long commands, as usually shells have a limited length of a command. Each option and file name is to be written on a new line in the control file. Use double quotes around strings containing blanks.

Example: Control file `control.txt`

```
-go
-od
"First Document.pdf"
"Second Document.pdf"
"Another Document.pdf"
"Output Document.pdf"
```

Example: A command using a control file:

```
pdfsplmrg @control.txt
```

Add embedded file

Add embedded file -ae <file>
Set embedded file name -aen <name>
Set embedded file association object -aea <n>
Set embedded file association relationship -aer <rel>
Set embedded file MIME type -aem <mime>
Set embedded file description -aes <desc>
Set embedded file modification date -aed <date>

Add a file to each output document's embedded files. The file is embedded as-is. Embedding files is not allowed for PDF/A-1 and is restricted to PDF/A conforming files for PDF/A-2. When using the **-aea** option and the output document is PDF/A-3, then the embedded file is associated with an object of the output document, i.e. it is an **associated file**. Otherwise, this option has no effect.

Note: Several files can be embedded by using the **-aa** option multiple times. The **-aen**, **-aea**, **-aer**, **-aem**, **-aes**, and **-aed** options, if given, always apply to the preceding option **-ae**.

Parameters:

- <file>** The path (or URL) to the file to be embedded.
- <name>** The name used for the embedded file. This name is presented to the user when viewing the list of embedded files. Default: **<file>**'s name with the path removed.
- <n>** The object to associate the embedded file with. -1 for none, 0 for document, number greater than 0 for respective page. Default: -1.
- <rel>** The relationship of the embedded file to the object associate. (Ignored, if **<n>** is -1.) Allowed values are "Source", "Data", "Alternative", "Supplement", and "Unspecified". Default: "Unspecified".
- <mime>** MIME type of the embedded file. Common values other than the default are "application/pdf", "application/xml", or "application/msword". Default: "application/octet-stream".
- <desc>** A description of the embedded file. This is presented to the user when viewing the list of embedded files.
- <date>** The modification date of the file in ISO 8601 format as described in the [W3C note](#):
⟨YYYY⟩-⟨MM⟩-⟨DD⟩T⟨hh⟩:⟨mm⟩:⟨ss⟩⟨TZD⟩
- | | |
|----------------------|---|
| ■ ⟨YYYY⟩ year | ■ ⟨mm⟩ minute |
| ■ ⟨MM⟩ month | ■ ⟨ss⟩ second |
| ■ ⟨DD⟩ day | ■ ⟨TZD⟩ time zone designator (Z or +⟨hh⟩:⟨mm⟩ or -⟨hh⟩:⟨mm⟩) |
| ■ ⟨hh⟩ hour | |

Example: 2016-07-16T19:20:30+01:00

Default: The modification date of the file on the file system or current time, if not available.

Example: Add an embedded file.

```
pdfsplmrg -aa "C:\path\to\file.txt" -aan "My File.txt" input.pdf output.pdf
```

Example: Add an associated file to a PDF/A-3.

```
pdfsplmrg -aa "C:\path\to\file.doc" -aaa 0 -aar "Source" ^  
-aam "application/msword" inPDFA3.pdf outPDFA3.pdf
```

-ca Copy associated files

Copy associated files -ca

If this option is set, then associated files in an input document are copied to the output document.

-cm Copy XMP metadata from PDF document

Copy XMP metadata from PDF document -cm <file>

Specify a document from which the XMP metadata (if present) is copied to each output document.

-co Copy output intent from PDF document

Copy output intent from PDF document -co <file>

Specify a document from which the output intent (if present) is copied to each output document.

-cv Copy viewer properties from PDF document

Copy viewer properties from PDF document -cv <file>

Specify a document from which viewer properties are copied. These include: PageLayout, PageMode, OpenActions, and PiecelInfo.

-fa Flatten annotations

Flatten annotations -fa

Set the option to flatten all annotations.

Flattening means that the potentially interactive annotations are drawn as non-interactive graphic elements onto the page. The aim is that the document looks the same, but is not interactive anymore.

Note: This option does not flatten form fields, signature appearances, and links, even though technically these are annotations as well. Use [-ff](#) and [-fs](#) to flatten form fields and signature appearances.

-ff Flatten form fields

Flatten form fields -ff

If this option is set, then form fields annotations and annotations of unsigned signature appearances are removed and flattened.¹

Flattening means that the potentially interactive form fields are drawn as non-interactive graphic elements onto the page. The aim is that the document looks the same, but is not interactive anymore. Setting this option implies the [-sf](#) option.

-fs Flatten signature appearances

Flatten signature appearances -fs

If this option is set, then appearances of signatures are flattened.

A digital signature consists of two parts:

- A cryptographic part that includes a hash value based on the content of the document that is being signed. If the document is modified at a later time, the computed hash value is no longer correct and the signature becomes invalid, i.e. the validation fails and reports that the document has been modified since the signature has been applied.
- An optional visual appearance on a page of the PDF document. The signature appearance can be useful to indicate the presence of a digital signature by a particular signer.

Processing the PDF with 3-Heights® PDF Merge Split Shell breaks the signature, and therefore the cryptographic part needs to be removed. In general, the visual appearance is regarded as worthless without the cryptographic part, so it is removed by default. The visual appearance can be preserved by setting [-fs](#).

-gf Generate separate forms

Generate separate forms -gf

If this option is set, form fields of different input files are not merged. This means that fields are renamed if the output document already contains a field of the same name. Usually, this is the intent when merging documents.

This option has no effect if either the [-ff](#) or [-sf](#) options are set.

-go Generate outlines

Generate outlines -go

If this option is set, then an outline item (bookmark) is generated in the output document for each input document.

The name of the outline item is generated as follows: If the input document has a title in its information directory, then this title is used. Otherwise, the filename of the input document is used. You can override the name of the outline item with [-ot](#).

Unless the [-so](#) option is set, all outline items present in an input document are copied to the output document and placed as child elements of this input document's outline item.

¹ Up to version 4.5.14.0 of the 3-Heights® PDF Merge Split Shell, the [-ff](#) option also flattened signed signature appearances. In newer versions, the [-fs](#) option must be used to get the same result.

-id Set value in the document information dictionary

Set value in the document information dictionary -id <key> <value>

Set the value of an document information dictionary entry <key> in each output document. Popular entries specified in the [PDF Reference 1.7](#) are "Title", "Author", "Subject", "Creator" (sometimes referred to as Application), and "Producer" (sometimes referred to as PDF Creator). If the entry already exists then the previous entry is overwritten. If the key corresponds to a standard metadata key, then the XMP metadata is updated accordingly.

Example: Overwrite the default producer:

```
pdfsplmrg -id Producer "MyProgram 1.2" input.pdf output.pdf
```

-lk Set license key

Set license key -lk <key>

Pass a license key to the application at runtime, instead of using one that is installed on the system.

```
pdfsplmrg -lk X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX ...
```

This is required in an OEM scenario only.

-o Owner password

Owner password -o <owner>

The owner password is required to change the security settings of the document. To apply permission flags, an owner password must be set. Permission flags are set with the [-p](#) switch.

Example: Encrypt a document and set the owner password to <owner>.

```
pdfsplmrg -o owner input.pdf output.pdf
```

-oad Set an open action

Set an open action -oad <page> <mode> <par1> <par2> <par3> <par4>

Set a "PDF OpenAction Destination" for each output document. This option has at most 6 parameters.

<page> The target page number. (Required)

<mode> The name of the destination mode. (Required)

<par1> <par2> <par3> <par4> Further parameters, all numerical values. (Optional)

<mode>	<par1>	<par2>	<par3>	<par4>	Description
XYZ	left	top	zoom		The upper left corner of the view is positioned at the coordinate (left, top) with the given zoom factor.
Fit					The view is such that the whole page is visible.
FitH	top				The view is top-aligned with top and shows the whole page width.
FitV	left				The view is left-aligned with left and shows the whole page height.
FitR	left	bottom	right	top	The view contains the rectangle specified the two coordinates (left, bottom) and (right, top).
FitB					The view is such that the pages bounding box is visible.
FitBH	top				The view is top-aligned with top and shows the whole width of the page's bounding box.
FitBV	left				The view is left-aligned with left and shows the whole height of the page's bounding box.

In the table above, <left> and <right> are x-coordinates, <bottom> and <top> are y-coordinates in PDF user space. The units are PDF points (A4 = 595x842 points, Letter = 612x792 points). The <zoom> parameter is a zoom factor.

Example: Add an open action destination such that the PDF is opened at the top of the first page (assuming that the page size is A4) in "fit width"-mode:

```
pdfsplmrg -oad 1 FitH 842 input.pdf output.pdf
```

-od Optimize resources

Optimize resources -od

Find and merge redundant resources from different input files. Equal fonts, images and color spaces are detected. By activating this feature, much smaller output files are created, if similar files are merged. The merging process takes, however, more time and memory resources.

-ow Optimize for the web

Optimize for the web -ow

Note: This option has no effect when combined with [-owa](#).

Note: With this option enabled, non-Latin characters in the output file name are not supported.

Linearize the PDF output file, i.e. optimize file for fast web access.

The 3-Heights® PDF Merge Split Shell does not support linearization of PDF 2.0 documents. For such documents, processing fails. In order to automatically disable linearization for PDF 2.0 use [-owa](#).

A linearized document has a slightly larger file size than a non-linearized file and provides the following main features:

- When a document is opened in a PDF viewer of a web browser, the first page can be viewed without downloading the entire PDF file. In contrast, a non-linearized PDF file must be downloaded completely before the first page can be displayed.
- When another page is requested by the user, that page is displayed as quickly as possible and incrementally as data arrives, without downloading the entire PDF file.

The above applies only if the PDF viewer supports fast viewing of linearized PDFs.

Note: To use a linearized PDF file, the PDF must reside as a “file” on the web server. It must not be streamed.

When enabling this option, then no PDF objects are stored in object streams in the output PDF. For certain input documents, this can lead to a significant increase of file size.

-owa Optimize for the Web automatically

Optimize for the Web automatically **-owa**

Note: With this option enabled, non-Latin characters in the output file name are not supported.

Automatically decide whether to linearize the PDF output file for fast web access.

Applying linearization can lead to a large increase in file size for certain documents. Enabling this option lets the 3-Heights® PDF Merge Split Shell automatically apply linearization or refrain from doing so based on the estimated file size increase.

With this option enabled, PDF 2.0 documents are automatically excluded from linearization.

See also [-ow](#) for more information for linearized PDFs.

Note: When **-owa** is given, then the [-ow](#) option has no effect.

-p Permission flags

Permission flags **-p <flags>**

This option sets the permission flags. It is only usable when producing encrypted documents. In other words, at least an owner password must be set with [-o](#), and additionally a user password can be set with [-u](#). When omitting the [-p](#) option, then all permissions are granted. The permissions that can be granted are listed below.

Permission flags

Flag	Description
p	Allow printing (low resolution)
m	Allow change of the document
c	Allow content copying or extraction
o	Allow commenting
f	Allow filling of form fields
s	Allow content extraction for accessibility
a	Allow document assembly
d	Allow high quality printing
0	Allow nothing (no permissions are granted)

The actual `<flags>` given to this option is a string that contains one or several of the permission flags above.

Note: The 0 value cannot be combined with any other permission flags.

Example: The following command sets the owner password to “owner” and the permission flags to “allow printing in low resolution” and “allow form filling”.

```
pdfsplmrg -o owner -p pf input.pdf output.pdf
```

Example: “High quality printing” requires the standard printing flag to be set too.

```
pdfsplmrg -o owner -p pd input.pdf output.pdf
```

For further information about the permission flags, see [PDF Reference 1.7](#) Section 3.5.2.

-pm Set page mode

```
Set page mode -pm <mode>
```

Set a page mode for each output document. This option has one parameter, a numerical value, to select the page mode.

Value	Page mode
0	Use None
1	UseOutlines
2	UseThumbs
3	FullScreen
4	UseOC
5	UseAttachments

(See Table 3.25 in the [PDF Reference 1.7](#) for more information on page modes.)

-sf Remove interactive form fields

Remove interactive form fields `-sf`

Do not copy interactive form fields. See also [-ff](#).

-sg Remove optional content configuration

Remove optional content configuration `-sg`

By default, compatible optional content groups (layers) are merged when merging input documents. Specifically, the current configuration of optional content is compared with the input document. If it is found to be the same, then the optional content groups are assumed to be the same in the input and the output document and merging takes place. If they are different, then optional content groups are assumed to be distinct and they are simply added.

By specifying this option, the above mechanism is deactivated and no configuration of optional content groups is copied to the output document.

-sl Remove logical structure

Remove logical structure `-sl`

By default, logical structure information is copied. If only some of the input documents contain such information, then this option can be used to discard any logical structure information to create smaller output files and speed up the process. This option must not be specified for PDF/A level A conformance.

-sn Remove named destinations

Remove named destinations `-sn`

If this property is set, all named destinations of the input document are removed and all internal named destinations are converted to regular destinations.

Use this option with care: If a document is split into multiple documents with the intention of merging the pieces back together at a later time, this option should not be used. The reason is that links between the pieces do not work after the merge.

Note: Even if this option is set, the output document may contain named destinations. This is because the PDF Merge Split Shell needs to create named destinations under some circumstances to preserve links.

-so Remove outlines

Remove outlines `-so`

If this option is set, then no outlines (bookmarks) are copied to the output documents.

-u User password

User password `-u <user>`

Set the user password of the document. If a document that has a user password is opened for any purpose (such as viewing, printing, editing), either the user or the owner password must be provided.

A user who knows the user password is able to open and read the document. A user who knows the owner password is able to open, read, and modify (e.g. change passwords) the document. A PDF document can have none, either, or both passwords.

Example: Encrypt a document with a user and an owner password

```
pdfsplmrg -u userpassword -o ownerpassword input.pdf output.pdf
```

-v Verbose mode

Verbose mode `-v`

This option turns on the verbose mode.

In the verbose mode, file actions and copy actions are written to the standard output.

5.1.3 Options for input documents

-ot Outline title

Outline title `-ot <name>`

This option only has significance if `-go` is used. This option overrides the automatic name for a generated outline by the name given in `<name>`.

-pc Split specification in collate mode

Split specification in collate mode -pc <spec>

In [Collate mode](#), an input document can be split into several chunks by using this option.

The <spec> parameter must have either of the two following forms:

- **n** This indicates that the document should be split into n-sized chunks. For example: -pc :5 specifies a chunk size of 5 pages. If the total number of pages is not a multiple of <n>, then the last chunk has less than <n> pages.
- **o** This indicates that the document should be split according to the document outlines (bookmarks). Only the first level in the outline hierarchy is honored. If the document has no outlines, then it is regarded as one contiguous chunk.

-pg Page set

Page set -pg <pageset>

By default, an input document is copied to the output document(s) in its entirety. This option lets you specify a set of pages to be copied. This option can be used in all three modes of operation, but it cannot be combined with the [-pc](#) option.

The <pageset> is a comma-separated list of page ranges, each of which has the form <n>-<m> or <n>, where <n> and <m> are page numbers of the input document. The <pageset> parameter must not contain spaces.

Example: Copy pages 3, 4, 5, 2, 6, 7, and 8 from input.pdf to output.pdf:

```
pdfsplmrg -pg 3-5,2,6-8 input.pdf output.pdf
```

-pw Read an encrypted PDF file

Read an encrypted PDF file -pw <pwd>

When the input PDF file is encrypted and has a user password set (the password to open the PDF), the password can be provided as parameter of the -pw switch.

5.2 Shell pdfsplitpage

5.2.1 -h Set page height threshold

Set page height threshold -h <height>

Pages in the input document that are taller than <height> are split into two consecutive pages in the output document.

Parameter:

<height> The threshold height in PDF points (1 PDF point = 1/72 inch)

When combining this option with [-w](#) and a page exceeds both the threshold height and the threshold width, then the page is split only into two pages according to [-w](#) and a warning is printed.

5.2.2 -lk Set license key

Set license key -lk <key>

Pass a license key to the application at runtime, instead of using one that is installed on the system.

```
pdfsplitpage -lk X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX ...
```

This is required in an OEM scenario only.

5.2.3 -pw Read an encrypted PDF file

Read an encrypted PDF file -pw <password>

A PDF document that has a user password (the password to open the document) can only be processed when either the user or the owner password is provided. The password can be provided using the option [-pw](#) followed by the password.

Example: The input PDF document is encrypted with a user password. Either the user or the owner password of the input PDF is "mypassword". The command to process such an encrypted file is:

```
pdfsplitpage -pw mypassword input.pdf output.pdf
```

When a PDF is encrypted with a user password and the password is not provided or is incorrect, the 3-Heights® PDF Merge Split Shell cannot read and process the file. Instead it generates the following error message:

```
Password wasn't correct.
```

5.2.4 -w Set page width threshold

Set page width threshold -w <width>

Pages in the input document that are wider than <width> are split into two consecutive pages in the output document.

Parameter:

<width> The threshold width in PDF points (1 PDF point = 1/72 inch)

When combining this option with [-h](#) and a page exceeds both the threshold height and the threshold width, then the page is split only into two pages according to [-w](#) and a warning is printed.

6 Version history

6.1 Changes in versions 6.19–6.27

- **Update** license agreement to version 2.9

6.2 Changes in versions 6.13–6.18

No functional changes.

6.3 Changes in versions 6.1–6.12

No functional changes.

6.4 Changes in version 5

- **New** additional supported operating system: Windows Server 2019.

6.5 Changes in version 4.12

- **New** support for encryption according to PDF 2.0 (revision 6, replaces deprecated revision 5).
- **New** HTTP proxy setting in the GUI license manager.

Shell pdfsp1mrg

- **New** option `-owa` to automatically choose whether to linearize the output document or not.
- **New** options `-o`, `-u`, `-p` for encrypting output PDFs with a user password and/or an owner password and specifying permission flags.

Shell pdfsplitpage

No functional changes.

6.6 Changes in version 4.11

- **New** support for the creation of appearance streams for free text annotations that contain rich text content.
- **New** support for reading and writing PDF 2.0 documents.

- **New** support for the creation of output files larger than 10GB (not PDF/A-1).
- **New** optimization of output file size for documents that contain structure information.

Shell pdfsplmrg

- **New** treatment of the DocumentID. In contrast to the InstanceID the DocumentID of the output document is inherited from the input document when copying a single document.

Shell pdfsplitpage

No functional changes.

6.7 Changes in version 4.10

- **Changed** the behavior when copying outlines. The outline structure in the output file now always matches the outline structure in the input file, regardless of the order in which pages are copied.
- **Improved** reparation of corrupt form fields.
- **New** support for writing PDF objects into object streams. Most objects that are contained in object streams in the input document are now also stored in object streams in the output document. When enabling linearization, however, no objects are stored in object streams.
- **Improved** robustness against corrupt input PDF documents.

6.8 Changes in version 4.9

- **Improved** support for and robustness against corrupt input PDF documents.
- **Improved** repair of embedded font programs that are corrupt.
- **Improved** metadata generation for standard PDF properties.

Shell pdfsplmrg

The tool allows adding of embedded or associated files by means of the following new options:

- **New** option -ae
- **New** option -aea
- **New** option -aed
- **New** option -aem
- **New** option -aen
- **New** option -aer
- **New** option -aes

6.9 Changes in version 4.8

- **New** warning issued if input page range is outside of the input document's pages.
- **Improved** creation of annotation appearances to use less memory and processing time.
- **Added** repair functionality for TrueType font programs whose glyphs are not ordered correctly.

7 Licensing, copyright, and contact

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