

How to add bookmarks to a PDF document on Linux

4–5 minút

Last updated on July 22, 2020 by Dan Nanni

Question: I would like to add bookmarks to a PDF file, so that the bookmarks appear in the left hand side bookmarks panel. Is there a command-line approach to create bookmarks and embed bookmark links in a PDF file on Linux?

In a PDF document, bookmarks can be added as a navigational tool to allow readers to locate and quickly move to particular sections in the document by clicking on bookmark links. If a PDF file is a very long document with hundreds of pages, adding properly organized bookmarks can be essential to guide users to browse the document effectively.

PDF bookmarks can be implemented with the `pdfmark` operator, which is part of a PostScript language extension. Among other things, `pdfmark` can be used to add a hotlink to a small piece of text in a PDF, which is pretty much a bookmark function.

`pdfmark` can be embedded into a PDF file with Ghostscript. Here is **how to add PDF bookmarks from the command line with Ghostscript on Linux**.

Add Bookmarks in a PDF file with Ghostscript

To add PDF bookmarks, first create an index file (`index.info`) in the format of:

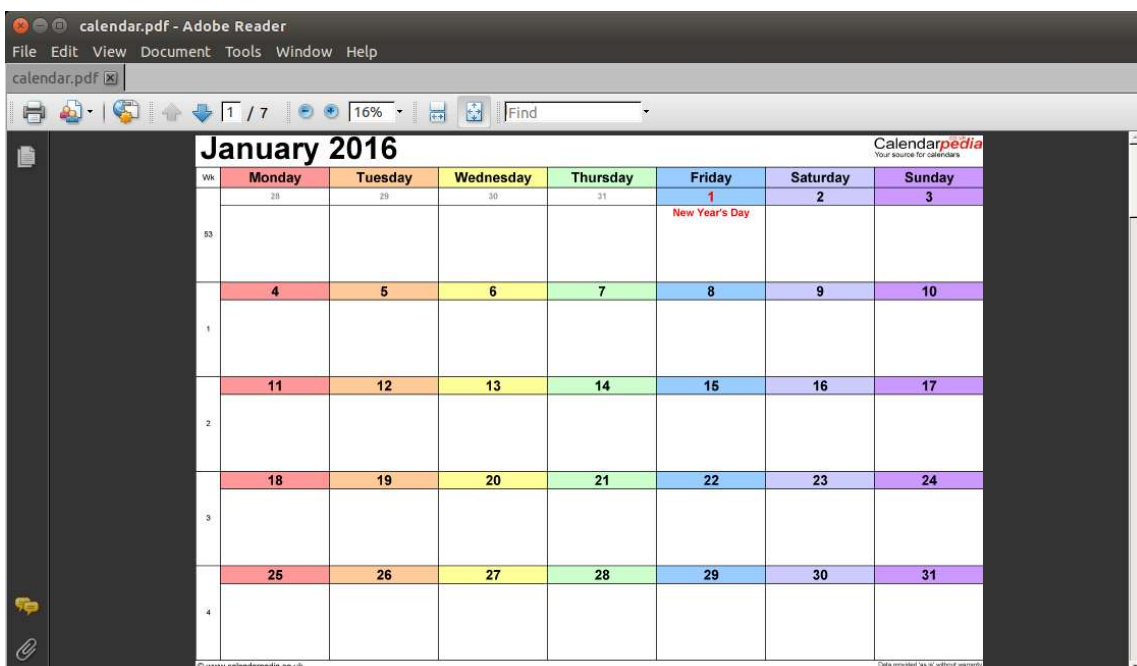
```
[/Page 1 /Title (January) /OUT pdfmark  
[/Page 2 /Title (February) /OUT pdfmark  
[/Page 3 /Title (March) /OUT pdfmark  
[/Page 4 /Title (April) /OUT pdfmark  
[/Page 5 /Title (May) /OUT pdfmark  
[/Page 6 /Title (June) /OUT pdfmark  
[/Page 7 /Title (July) /OUT pdfmark
```

In the above, `/Page` indicates the page number to the bookmark jumps to, and `/Title` represents the name of the bookmark.

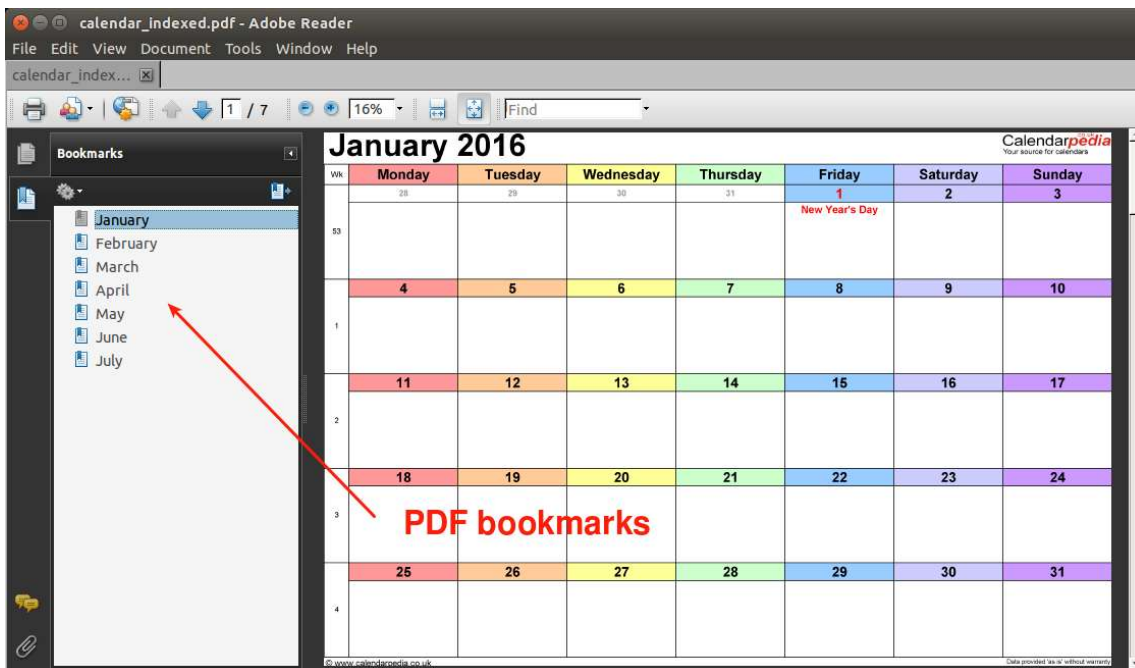
Once you created `index.info`, use the following command to add the bookmarks in the PDF file `input.pdf`. `output.pdf` will have the bookmarks embedded.

```
$ gs -sDEVICE=pdfwrite -q -dBATC H -dNOPAUSE  
-sOutputFile=output.pdf -dPDFSETTINGS=/prepress index.info  
-f input.pdf
```

For example, given the input PDF file:



The output PDF file will look like:



Add Nested Bookmarks in a PDF file with Ghostscript

If you have a structured PDF document with chapters, sections, subsections, etc., you may want to add "nested" bookmarks in the PDF file. In that case, use `/Count N` attribute with `pdfmark` to represent nested levels. The argument `N` corresponds to the number of immediately subordinate bookmarks. For example, if the first chapter has three sections, you can add `/Count 3` in that chapter's bookmark, and if a given section has two subsections, include `/Count 2` in the section's bookmark.

Let's create nested bookmarks for the following document.



2.1.2	Windows	7
2.2	Binary packages	7
3	Installation	7
3.1	Requirements	7
3.2	Installing on shell account	8
3.3	Adding new system user and group	8
3.4	Compilation of base package	9
3.5	Compilation with clamav-milter enabled	9
3.6	Running unit tests	9
3.7	Reporting a unit test failure bug	10

The created index file looks like the following.

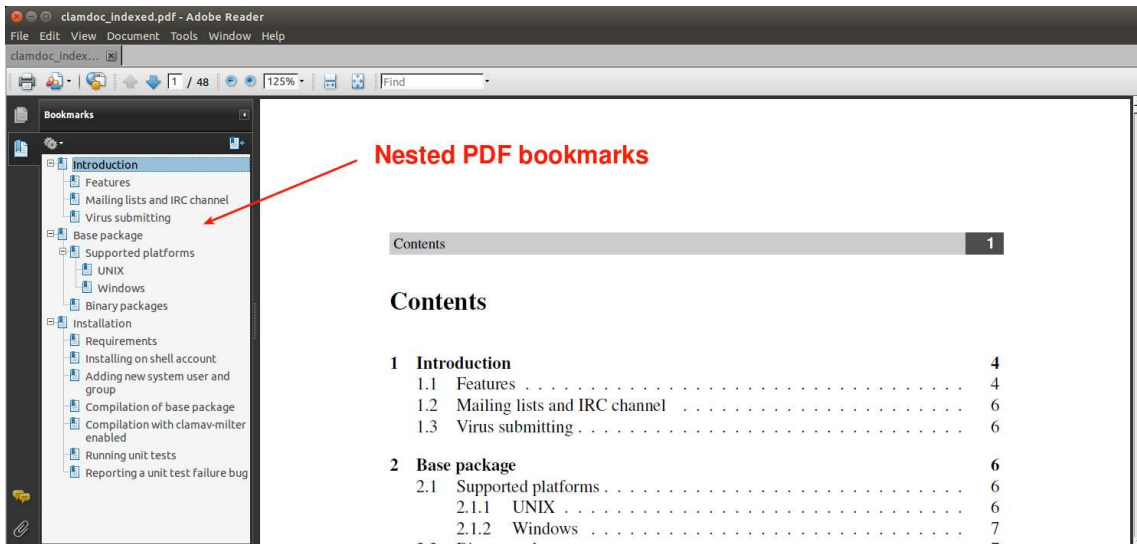
```
[/Count 3 /Page 4 /Title (Introduction) /OUT pdfmark
[/Page 4 /Title (Features) /OUT pdfmark
[/Page 6 /Title (Mailing lists and IRC channel) /OUT pdfmark
[/Page 6 /Title (Virus submitting) /OUT pdfmark
[/Count 2 /Page 6 /Title (Base package) /OUT pdfmark
[/Count 2 /Page 6 /Title (Supported platforms) /OUT pdfmark
[/Page 6 /Title (UNIX) /OUT pdfmark
[/Page 7 /Title (Windows) /OUT pdfmark
[/Page 7 /Title (Binary packages) /OUT pdfmark
[/Count 7 /Page 7 /Title (Installation) /OUT pdfmark
[/Page 7 /Title (Requirements) /OUT pdfmark
[/Page 8 /Title (Installing on shell account) /OUT pdfmark
[/Page 8 /Title (Adding new system user and group) /OUT
pdfmark
[/Page 9 /Title (Compilation of base package) /OUT pdfmark
[/Page 9 /Title (Compilation with clamav-milter enabled) /OUT
pdfmark
[/Page 9 /Title (Running unit tests) /OUT pdfmark
[/Page 10 /Title (Reporting a unit test failure bug) /OUT pdfmark
```

Use the same command as above to add nested bookmarks in the input PDF file.

```
$ gs -sDEVICE=pdfwrite -q -dBATC -dNOPAUSE
-sOutputFile=output.pdf -dPDFSETTINGS=/prepress index.info
-f input.pdf
```

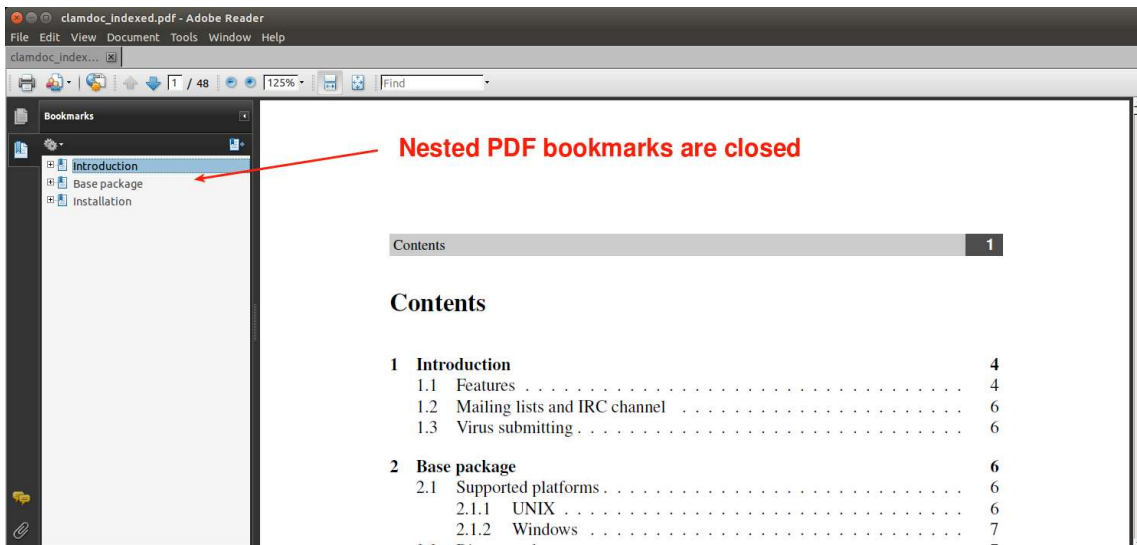
The output PDF file with nested bookmarks will look like the

following.



All nested bookmarks are expanded by default. If you want nested bookmarks to be collapsed initially, use [/Count -N] format (i.e., add - sign in front of the number).

With that, the output will look like the following.



You will need to click on each closed bookmark to expand it.