

Frequently Asked Questions for Apsfilter

The Apsfilter Documentation Project

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by The Apsfilter Documentation Project

Published 20.08.2000

This is the FAQ for the new Apsfilter version 6.x. If you are interested in helping with this project, send email to the Apsfilter documentation project mailing list <apsfilter-doc@apsfilter.org>. The latest version of this document is always available from the Apsfilter World Wide Web server (<http://www.apsfilter.org/doc/>).

It may also be downloaded as one large HTML (book.html) file with HTTP or as plain text, (book.txt) plain text (gzipped), (book.txt.gz) postscript, (book.ps) postscript (gzipped), (book.ps.gz) PDF, (book.pdf) PDF (gzipped), (book.pdf.gz) TeX DVI, (book.dvi) or TeX DVI (gzipped) (book.dvi.gz) file.

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Preface

Welcome to the Apsfilter FAQ!

As is usual with Usenet FAQs, this document aims to cover the most frequently asked questions concerning the Apsfilter lineprinter input filter (and of course answer them!). Although originally intended to reduce bandwidth and avoid the same old questions being asked over and over again, FAQs have become recognized as valuable information resources.

Every effort has been made to make this FAQ as informative as possible; if you have any suggestions as to how it may be improved, please feel free to mail them to <apsfilter-doc@apsfilter.org>.

Q: What is Apsfilter?

A: Briefly, Apsfilter is a lineprinter input filter

Apsfilter is used by companies, Internet Service Providers, researchers, computer professionals, students and home users all over the world in their work, education and recreation.

For more detailed information on Apsfilter, please see the Apsfilter Handbook (../handbook/index.html).

Q: What are the goals of Apsfilter?

A: The goal of the Apsfilter Project is to provide printing services under Unix environment that are powerful and easy to use and maintain.

Q: Why is it called Apsfilter?

A: It means something like “A Postscript Filter” or “Andreas’ Postscript Filter”.

Q: What is the latest version of Apsfilter?

A: Version 5.4.2 (<http://www.apsfilter.org/download.html>) is the latest “stable” version; it was released in early, 2000.

Version 6.0 (<http://www.apsfilter.org/download.html>) is the latest “development” version; it was released in August, 2000.

Q: Is Apsfilter only available for FreeBSD or Linux ?

A: Apsfilter is available for all flavors of Unix which have at least a Berkeley compatible *lpd* or *LPRng* (lineprinter next generation) installed as *lineprinter scheduler*.

Q: Who is responsible for Apsfilter?

A: The key decisions concerning the Apsfilter project, such as the overall direction of the project and who is allowed to add code to the source tree, are made by its author, Andreas Klemm. There is a much larger team of several people, called the “apsfilter developers”, who are authorized to make changes directly to the apsfilter source tree.

Q: Where can I get Apsfilter?

A: Every apsfilter -STABLE and -CURRENT release of Apsfilter is available via Apsfilter Software Center (<http://www.apsfilter.org/download.html>):

Q: Where do I find info on the apsfilter mailing lists?

A: You can find full information on www.apsfilter.org. (<http://www.apsfilter.org/support.html>)

Q: What apsfilter news groups are available in USENET?

A: Currently there are no apsfilter or Unix printing specific newsgroups available.

Q: Books on Apsfilter?

A: There is an Apsfilter Documentation Project which you may contact (or even better, join) at the doc mailing list: apsfilter-doc@apsfilter.org. This list is for discussion of the Apsfilter documentation. For actual questions about apsfilter, there is the `apsfilter-help` mailing list: apsfilter-help@apsfilter.org.

A “handbook” is available: the Apsfilter Handbook (../handbook/index.html). Note that this is a work in progress; some parts may be missing

Q: How do I access your Problem Report database?

A: Currently there is no problem tracking system installed. Please use the mailing-lists to report comments, bug reports or bugfixes.

Chapter 1. Installation

Q: Why do I get *** missing separator. Stop. when using make?

A: The Makefile is only used for installing apsfiler within the environment of the FreeBSD ports collection (<http://www.FreeBSD.org/ports/>). Other operating systems have packaging utilities of their own to create “easy to install” apsfiler packages.

If you downloaded apsfiler yourself without the help of such a OS specific packaging system, then simply extract the apsfiler *tar archive* in a destination directory of your choice (typically `/usr/local/share/apsfilter`) and run `./SETUP` to create printers.

```
root# cd /usr/local/share
root# tar xvzf apsfiler-x.y.z.tar.gz
root# cd apsfiler
root# ./SETUP
```

Quite easy, isn't it ? ;-)

Q: Error message can't determine the lpd spool directory when calling bin/apsfiler directly.

A: Don't do that then ;-). The script is just for use as lineprinter input filter as part of the line printer scheduler (lpd or LPRng). You only need to type

```
lpr filename
```

to print a file on printers that have been installed by SETUP and apsfiler is automatically executed by the lineprinter scheduler.

Q: SETUP: How do I setup a printer that's not included in the driver list ?

A: First, install an arbitrary printer. Remember the queue name you enter for the “auto” printer during SETUP.

Then edit `/etc/apsfilter/QUEUE/apsfilterrc` (replace `QUEUE` by the queue name mentioned above). Change the line `PRINTER=...` to the gs-device of your printer. For special options you may have to set `GS_FEATURES` to contain the features you want.

Be sure that gs can handle your device and options!

Q: Does `apsfilter` run on Solaris 7 (x86), and how do I set it up?

A: Solaris is a SYSVR4 based system, and as such it uses a spooling system that doesn't work with `apsfilter` (and vice versa).

The solution is to remove Solaris own printer spooler subsystem and then to install LPRng, which is supported by `apsfilter`.

Since LPRng offers many cool features and is more secure than plain BSD `lpr` spoolers, this step is "kind of" recommended anyway.

Q: SETUP: Should I install the "raw" printer? What's the deal?

A: That (virtual) printer passes all input unmodified. If you have some network environment that you want to use the printer in, or you want to access the printer directly for fast ASCII text, you should choose to install that printer.

Since you can run SETUP more than once in order to create multiple `printcap` entries for the same "physical" printer with different defaults (other print resolution, although this is handled more clever by the new "CLASS support"), its not advisable to install multiple "raw" printers.

Therefore you can skip creating raw printer entries for any further "virtual printer".

Chapter 2. Printing Errors

Q: I just set up my printers, but get error messages like `unknown printer unknown printer unknown printer` or `non-existent printer non-existent printer non-existent printer` on printing.

A: SETUP alters the line printer schedulers (lpd, LPRng) configuration file `/etc/printcap`, so you have to tell the daemon to use the new configuration.

For LPRng use:

```
lpc reread
```

For Berkeley-style lpd use:

```
lpc restart all
```

alternatively use the vendor-specific init script

```
/etc/rc.d/init.d/lpd restart
```

Please note, paths and names are OS specific.

Q: Can't print anything with `lpr` after installing printer with SETUP. Using `echo 'Hello World!' > /dev/lp0` works. Any ideas?

A: First of all, try this answer ([./chap-errors.html#unknown-printer](#)).

If that doesn't work, enable debugging in the `apsfilter` script ([./chap-misc.html#enable-debugging](#)).

If the output in the logfile (see `:lf=...` in `/etc/printcap`) doesn't help you, have a look at `HOWTO-BUGREPORTS`, which can be found in the `apsfilter` installation directory.

Q: I want to print to a remote printer, but my spooler doesn't allow input filters for remote printers in `/etc/printcap`.

A: In this case you must use a "fake" printer that just does the filtering.

Install a normal local printer with SETUP. Then create a new file `/etc/apsfilter/QUEUE/lpr.conf` (substitute `QUEUE` for the queue name you entered during SETUP) that just has one line in it:

```
REMOTE_NAME=insert_the_real_remote_printer_name_here
```

Then edit `/etc/printcap` and change the entry for the given printer so that it says

```
:lp=/dev/null:\
```

instead of what you entered as the local device in SETUP. Restart the daemon (see here) ([./chap-errors.html#unknown-printer](#)) and you should be set!

Q: I always get error messages concerning “missing filters”, but I know they are installed!

A: By default `apsfilter` uses a restricted PATH for security reasons. You can alter the PATH in `/etc/apsfilterrc` (global) or in the printer specific `apsfilterrc`.

Q: Why resolution for `dvips` doesn't get set properly?

A: Unfortunately there are different versions of `dvips` available with different command line options, some use “-P” some “-D”.

The default is “-D”, so you want to edit `/etc/apsfilterrc` now to use “-P”.

Q: I get error messages saying that the spool dir can't be found, but its there!

A: It might even be there, but the filter needs to know where it is. For BSD-style spoolers (not LPRng) the only chance to get this information is to look at the accounting file name, which normally is placed within the spool dir.

So do not remove the “:af=...: line” in `/etc/printcap`, it is really needed!

Q: I get "permission denied" messages for some file with a wierd name!

A: You are referring to the *control file* (`cf...`) which must be parsed to get some information about the print job when a BSD spooler is used.

This file apparently is created with the wrong owner/group and/or with too restrictive read permissions. Actually, your distributor didn't do his job well. Get around this problem by reinstalling `lpd` or `LPRng`.

Q: When using `PS_UTILS` to process PostScript files I get error messages about DSC... What's up?

A: The `pstools` need properly created PostScript files to process them the way you want. They have to follow the DSC (Document Structuring Conventions) so that they can be handled.

Please try the `fixps` tool (or some variant) on your input file to get it working.

Q: Why can't I print DVI/HTML/Sketch/FIG files with embedded images etc.?

A: That depends on the file format and the way the images are embedded.

For inline images, i.e. images that are literally included in the file, there shouldn't be any problems.

If the image is referenced by a filename, it must not only be found but it must also be accessible.

Relative pathnames are very hard for the filter to expand, since it must know a directory (or a set of directories) to search in. Absolute pathnames are more pleasant, but you still have to make sure that the referenced file is readable by anyone *and* every directory down the path is executable by anyone.

The easiest way to print the file correctly might be to convert it to PostScript manually (maybe the application has an export option, otherwise have a look at the script to get a hint what to do) and then print it the usual way.

Chapter 3. Tuning

Q: My printer needs special treatment to reset it, set the codepage, enable LF->CR+LF conversion, add an extra formfeed afterwards etc.

A: Grab your printer documentation to look for the escape sequences needed. Enter these into the configuration variables RAW_PROLOGUE and RAW_EPILOGUE resp. (remember to use octal values).

E.g. for a printer reset that consists of "ESC c":

```
RAW_PROLOGUE='\033c'
```

An extra formfeed at the end would be enabled by:

```
RAW_EPILOGUE='\014'
```

Q: Printing program listings etc. is dog slow.

A: If you use *a2ps* (default) or *mpage* to print ASCII text, it first gets translated to PostScript and then rastered by ghostscript; actually you're printing a bitmap in this case.

Edit the appropriate `apsfilterrc` file to include "ASCII_FILTER=recode" (and be sure to have `recode` installed). You may also need to set `RECODE_OPTS` to use the right conversion (default: latin1 to ibmpc).

After that ASCII files will directly be sent to the printer, without any conversion to PostScript. But you also lose all the spiffy features like borders, headers and multiple pages per sheet.

Q: I want to print the source code of some PostScript, HTML, Sketch, ... file, but it doesn't seem to work.

A: Use

```
lpr -C ascii filename
```

to force treatment of *filename* as ASCII text.

Q: Wrong print margins when printing ASCII using *a2ps*.

A: Please fix them. :)

If you use FreeBSD, please use one of the a2ps ports (-letter, -a4, -hpdj).

Otherwise you have to edit the Medium definition in the a2ps config file (probably /usr/local/etc/a2ps.cfg). For example:

```
#      name      width height  llx    lly     urx    ury
Medium: A4stylus  595    842    22     45     566    815
```

The numbers are PostScript points (1pt = 1/72"), for width, height, left, bottom, right and top coordinate of the usable part of the page (where (0,0) is lower left).

In this example the margins are about 0.3" left, 0.625" bottom, 0.4" right and 0.375" top.

Q: The margins are completely wrong for all printouts.

A: You have to adjust ghostscript to recognize the proper margins. First of all, print out setup/test.ps – you'll see a raster around the page. This has a millimeter scale, so beware (1" = 25.4mm).

You should easily see what area your printer can use.

uniprint drivers contain a line '-dupMargins="{ 9.0 39.96 9.0 9.0}"' or similar; these are the left, bottom, right, top margins in points (1pt = 1/72"). Other

If not the margins, but the page `_offset_` is wrong (the whole page is shifted left/right or up/down), you must measure the distance the inner rectangle of setup/test.ps is shifted to the left/top and get the correction parameter from those values.

The left top corner of the (white) inner rectangle is 20mm from the left/top corner of the page (20mm = 0.7874" = 56.7pt). Let's say the distance of that corner is L from the left edge and T from the top edge; then you get

```
X = (20 - L) * 28.35      X = (0.7874 - L) * 72
Y = (20 - T) * 28.35      Y = (0.7874 - T) * 72
if units are mm           if units are inches
```

Now add '-dMargins="{X Y}"' to GS_FEATURES in the configuration file.

Q: My PostScript printer doesn't properly render the page, some bits are missing.

A: Pages in higher resolutions need plenty of RAM to be rendered. For some printers the standard amount of memory that is built in is just not enough. The only solution is to lower the resolution (to probably half the amount).

Q: When I print more than one file at a time, the headers for ASCII files are wrong – they still show the name of the first file!

A: This ever-annoying problem only occurs with BSD spoolers which just don't give that much information about a print job to the filter.

Install LPRng, or print just one file at a time, or disable headers.

Q: Why is my dvi-file messed up? It should be in landscape mode, but the right border is chopped off!

A: The problem is that dvips doesn't know if the file is in landscape mode or not. You have to explicitly use the "landscape" class option to print that file properly:

```
lpr -C landscape file.dvi
```

Q: My printer/driver can only produce grayscale output. So it doesn't matter what value COLOR has, right?

A: Wrong. For examples, a2ps uses colors to render headers, do pretty- printing etc. These colors look different on a grayscale printer than the gray levels used when COLOR=mono is set.

Additionally, some converters use special algorithms when they are told to produce grayscale output; this might improve the result. They usually run faster in this mode, as well.

Chapter 4. Miscellaneous

Q: I understand that users can provide printer specific settings in `~user/.apsfilter/apsfilterrc.apsN` ; isn't it dangerous?

A: Yes it is. That's why it is disabled by default.

That file is a shell script which gets sourced if the administrator allows this kind of configuration. This is done while running the filter, i.e. under the same user and group IDs, which are frequently privileged users/groups such as root, daemon, lp or bin.

Q: Are there any information I can get if `apsfilter` acts strange?

A: Of course:

- check your console (if available: your xconsole) for any error reports
- search `/var/log/messages` etc. for `lpd` errors
- enable verbose mode of client programs like `lpr`, `lpq` etc.
- enable debugging mode of `apsfilter`

To debug `apsfilter`, edit `/etc/apsfilter/basedir/bin/apsfilter` and remove the comment sign before `"#set -x"`.

You might want to save paper while debugging; move to the end of the script and uncomment the three lines in the `DEBUG` sections.

After the next (failed) printing attempt there's lots of output in the log file (a.k.a. status file) which is located in the printer specific spool dir (see the `:"lf=...:"` line in `/etc/printcap`).

