

thinlinc

The thinlinc environment provides a simple printing solution for workstations and personal devices.

- Workstation:
 - Every workspace at the institute provides access to Thinlinc (login with your I-MATH credentials)
 - All the Printers are already configured. Press Ctrl+P inside your document to print.
- Personal Device:
 - Install the TL-Client: <https://www.cendio.com/thinlinc/download/>
 - Once installed, login with your I-MATH Credentials. (URL=tl.math.zuh.ch)
 - All the Printers are already configured. Press Ctrl+P inside your document to print.

Create own printer instances

Create own printer instances with **personal settings**. Such instances are only available via command line.

```
[user@host
# Create an instance 'jcolor/bw', which prints to 'jcolor', but always in b/w:
$ lpoptions -p jcolor/bw -o ColorModel=Gray

# To use the new instance:
$ lp -d jcolor/bw output.pdf

# Show all printer, incl. instances:
$ lpstat -t

# The local instances are saved under
~/.cups/lpoptions
```

Printing with Command Line

Description	Syntax / Example
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List all printers	<code>lpstat -a</code>
Show default printer	<code>lpstat -d</code>
Set default printer	<code>lpoptions -d</code> Ex: <code>lpoptions -d k</code>
Print	<code>lp [-d]</code> Ex: <code>lp -d h52 paper.pdf</code>
Print several copies (see notes)	<code>lp -n [-d]</code> Ex: <code>lp -n 5 paper.pdf</code>
Print several copies (see notes) in the order 1,2,3...	<code>lp -o Collate=True -n</code> Ex: <code>lp -o Collate=true -n 5 paper.pdf</code>
Print several copies with staples (see notes)	<code>lp -d -o RepeatJob= -o StaplePos=1PLU</code> Ex: <code>lp -d j -o RepeatJob=10 -o StaplePos=1PLU exam.pdf</code>
Print 2 pages on one site	<code>lp -o number-up=2</code> Ex: <code>lp -p number-up=2 paper.pdf</code>
Printing one sided on a duplex printer	<code>lp -o duplex=None</code> Ex: <code>lp -o duplex=None paper.pdf</code>
Printing duplex with turning on short edge	<code>lp -o duplex=DuplexTumble</code> Ex: <code>lp -o duplex=DuplexTumble paper.pdf</code>
Printing transparencies	<code>lp -o media=Transparency</code> Ex: <code>lp -o media=Transparency</code>
Printing with stapling (see note 1) - only <code>j</code> , <code>jcolor</code> , <code>k</code> , <code>kcolor</code>	<code>lp -d jcolor -o StapleType=Staple0N -o StaplePos=(1PLU 1PRU 1PLB 1PRB 2PL 2PR 2PU 2PB)</code> Ex: <code>lp -d jcolor -o Duplex=None -o StapleType=Staple0N -o StaplePos=1PLU -o sides=one-sided</code>
Printing booklet via <code>jcolor_booklet</code> and <code>kcolor_booklet</code> (see note 3)	<code>lp -d -o print-color-mode=Color Grayscale</code> Ex: <code>lp -d jcolor_booklet -o print-color-mode=Color -o PageSize=A5 paper.pdf</code>
Printing booklet via <code>j-ps</code> and <code>k-ps</code> (see note 3)	<code>lp -d -o BindMode=SaddleStitch -o Duplex=None -o Booklet=Left -o print-color-mode=Color</code> Ex: <code>lp -d jcolor -o PageSize=A5 -o BindMode=SaddleStitch -o Duplex=None -o Booklet=Left -o Finishing=Col -o print-color-mode=Color paper.pdf</code>

Note 1: Pay attention on combining *copies* and *stapling*. If you like to print a PDF (e.g. 4 pages) 10 times, do **NOT** use the `-n` parameter. The whole printjob, 4 pages * 10 copies, will be stapled together (only one)!

Solution: Use the 'Repeat Job' option in the advanced tab of the print dialog

Note 2: Do not print many copies at once, because it requires a lot of resources of the printer.

Solution: Use the `lpRepeat` script instead (with the `-s` parameter to specify a delay):

```
$ lpRepeat -d h52 -n 30 -s 15 big_file.pdf
```

Note 3: Booklet printing can be simplified with the `lpBooklet` script:

```
# Color print
$ lpBooklet -d jcolor -f booklet.pdf

# Black & white print
$ lpBooklet -d j -f booklet.pdf
```

Option values

Duplex: one/two sided print

Value	Meaning
None	One sided
!DuplexTumble	Two sided along long edge
!DuplexNoTumble	Two sided along short edge

StaplePos: staple position

Value	Portrait mode	Landscape mode
!PosNone	No staple	No staple
1PLU	Upper left	Upper right
1PRU	Upper right	Bottom right
1PLB	Bottom left	Upper left
1PRB	Bottom right	Bottom left
2PL	Left x2	Upper x2
2PR	Right x2	Bottom x2
2PU	Upper x2	Right x2
2PB	Bottom x2	Left x2
SDL	Middle x2	Middle x2

Printing with graphical interface (evince PDF viewer)

Stapling

In the print preview dialog select j, jcolor, k, or kcolor and on the tab 'Advanced'

1. choose the position of a staple (here upper left corner)
2. specify *Repeat Job* if you need more than one copy

The screenshot shows the 'Print' dialog box with the 'Advanced' tab selected. The 'Repeat Job (0-999)' field is highlighted with a red box and set to 10. The 'Finishing' section is also highlighted with a red box, showing 'Staple Position' set to '1 Staple (Portrait LU/Landscape RU)'. The 'Quality' section shows 'Resolution' set to 600 dpi and 'Toner Save' set to Printer Default. The 'Preview', 'Cancel', and 'Print' buttons are at the bottom right.

Note: do not specify *Copies* on the *General* tab to print several stapled copies! If you do so, all copies are stapled together!

Booklet

In the print preview dialog select *jcolor_booklet* or *kcolor_booklet* - these printers are already configured for booklet printing.

Alternatively, select *j*, *jcolor*, *k*, or *kcolor* and choose the following options:

1. *Left binding* for *Booklet Printing* on the tab *Finishing*
2. *Saddle Stitch* for *Staple Position* on the tab *Advanced*

Print

General Page Setup Page Handling Job Color Finishing Advanced

Booklet Printing: Left Binding (Portrait)/Top Binding (Landscape) ▼

Preview Cancel Print

Print

General Page Setup Page Handling Job Color Finishing Advanced

☒ Optimise Repeat Job

Repeat Job (0-999): Printer default ▼

Finishing

Binding Location: Printer Default ▼

Finishing: Collate ▼

Staple Position: Saddle Stitch ▼

Paper Output: Auto ▼

Quality

Resolution: 600 dpi ▼

Toner Save: Printer Default ▼

Advanced Smoothing: Printer Default ▼

Halftones: Printer Default ▼

Preview Cancel Print

Note: booklet printing requires A4 or A5 format.

Printing exams - lpSequential

If you have a personalized exam, one PDF for all students, and you like to print it and the output should be:

- shifted (easy separation), or
- stapled,

than use the `lpSequential` script (commandline).

- For each exam print, the current page number is shown.
- You can stop a running print job, by pressing Ctrl-C in the commandline.
- If you stopped the printing, restart the printjob by specifying the last printed page + 1.
- : a printer name like `k`, `kcolor`, `j`, or `jcolor`.
- : If you have an exam pdf with 200 pages (one big file, 25 students, 8 pages per exam) the whole file will be split in jobs as and such part will be printed.
- : '1', if you start from scratch, else the last reported printed page + 1.
- : This is only necessary if you want to be sure that all exams are in exact same order as in the PDF. A **re**ordering might appear inside the printer, if there are multiple print jobs at the same time in the local printer queue. If a delay is specified, this helps to take care that are never more than 2 jobs in the local printer queue at the same time. The amount of delay in seconds depends on the print job size. Start with 5 seconds and stop and increase if it is too short. You can check the local printer queue on the touchscreen at the copier.

```
# K Floor (k)
$ lpSequential -o Duplex=None -o StaplePos=1PLU -o StapleType=StapleON -o sides=one-sided
<file.pdf> k <pages per exam> <start page to print from> <delay in seconds>

# J Floor (jcolor_booklet) - with color
$ lpSequential -o Duplex=None -o StaplePos=1PLU -o StapleType=StapleON -o sides=one-sided -o
print-color-mode=Color <file.pdf> jcolor <pages per exam> <start page to print from> <delay in
seconds>
```

Example:

Staple	<code>lpSequential -o Duplex=None -o StaplePos=1PLU -o StapleType=StapleON -o sides=one-sided exam.pdf k 16 1 0</code>	printer 'k', 16 pages per exam, starting at 1, no delay
Shifting	<code>lpSequential -o Duplex=None -o sides=one-sided exam.pdf jcolor 8 33 5</code>	printer 'jcolor', 8 pages per exam, starting at 33, 5 seconds delay

- Most exams are single sided, so switch of the default Duplex mode.

