# qpdf PDF page surgery

## CONCEPTS

qpdf never changes how pages look. It restructures the PDF: select, merge, split, rotate, encrypt, repair.

**Input PDF** or --empty
↓ --pages / --rotate
**Transform** pages, crypto, streams
↓ write
**Output PDF** or --replace-input

Output is always the last plain argument. Options may come before or after the input file.

Exit code 0 is clean, 2 is an error, 3 means warnings only (output was still written).

## INSPECT AND REPAIR

**qpdf --check** *<in.pdf>*
Check structure and stream data

**qpdf --show-npages** *<in.pdf>*
Print the page count

**qpdf --is-encrypted** *<in.pdf>*
Exit status tells if encrypted

**qpdf --requires-password** *<in.pdf>*
Exit status tells if a password is needed

**qpdf --show-encryption** *<in.pdf>*
Show encryption and permissions

**qpdf** *<in.pdf> <out.pdf>*
Rewrite file, often repairs damage

**qpdf --json** *<in.pdf>*
Dump structure as JSON

**qpdf --warning-exit-0** *<in> <out>*
Treat warnings as success

## PAGE SELECTION

**qpdf** *<in.pdf>* **--pages .** *<range>* **--** *<out.pdf>*
Keep only these pages

**qpdf --empty --pages** *<a.pdf> <b.pdf>* **--** *<out.pdf>*
Merge whole files

**--pages** *<a.pdf>* **1-3** *<b.pdf>* **5,z --**
Mix ranges from several files

## PAGE SELECTION (cont.)

**1-5,8,10-z**
Range: list, span, to last page

**r1 / z**
Last page

**r3-r1**
Last three pages

**5-1**
Reversed range

**1-z:odd / 1-z:even**
Odd or even positions in a range

**1-z,x3-4**
Exclude pages from a range

**--pages** *<enc.pdf>* **--password=***<pw>* **1-z --**
Password for one input

**--collate=***<n>* **--empty --pages ...**
Interleave pages from inputs

**--keep-files-open=n**
Merge hundreds of files

## SPLIT AND ROTATE

**qpdf --split-pages** *<in.pdf> <out.pdf>*
One file per page

**qpdf --split-pages=***<n> <in.pdf> <out.pdf>*
Groups of n pages

**--rotate=+90:***<range>*
Turn pages clockwise

**--rotate=-90:***<range>*
Turn pages counterclockwise

**--rotate=180**
Set rotation on every page

**qpdf** *<in>* **--overlay** *<top.pdf>* **--** *<out>*
Stamp pages over the input

**qpdf** *<in>* **--underlay** *<bg.pdf>* **--** *<out>*
Put pages behind the input

**--overlay** *<f.pdf>* **--to=1-5 --from=1 --repeat=2 --**
Choose target and source pages

**--flatten-annotations=all**
Bake annotations into the page

## ENCRYPTION

**qpdf --encrypt** *<user-pw> <owner-pw>* **256 --** *<in> <out>*
Password-protect, AES-256

## ENCRYPTION (cont.)

**--encrypt ... --print=none --modify=none --**
Restrict printing and editing

**--encrypt ... --extract=n --**
Forbid copying text

**qpdf --decrypt --password=***<pw> <in> <out>*
Remove encryption

**--password-file=***<file>*
Read password from first line of file

**--copy-encryption=***<other.pdf>*
Reuse another file's encryption

Passwords on the command line show up in history and ps. Prefer --password-file.

## OPTIMIZE AND EDIT

**qpdf --linearize** *<in.pdf> <out.pdf>*
Fast web view layout

**qpdf --replace-input** *<in.pdf>* **--linearize**
Overwrite the input file

**--object-streams=generate**
Pack objects for smaller files

**--compress-streams=y**
Flate-compress streams

**qpdf --qdf --object-streams=disable** *<in> <out>*
Make a text-editable PDF

## RECIPES

**Merge, skipping covers**

```
qpdf --empty --pages \
  a.pdf 2-z b.pdf 2-z --
merged.pdf
```

**Split into chapters of 10 pages**

```
qpdf --split-pages=10 book.pdf
ch.pdf
# ch-01-10.pdf, ch-11-20.pdf, ...
```

**Unlock and shrink in place**

```
qpdf --password-file=pw.txt --
decrypt \
  --object-streams=generate --
replace-input in.pdf
```

**Fix one sideways scan page**

```
qpdf --check scan.pdf
qpdf scan.pdf --rotate=+90:3
fixed.pdf
```