qpdf PDF page surgery

START HERE

`qpdf --check <in.pdf>`
Check file structure

`qpdf --linearize <in.pdf> <out.pdf>`
Optimize for web

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

`qpdf --show-npages <in.pdf>`
Count pages

`qpdf <in.pdf> --pages . 1-3 -- <out.pdf>`
Extract pages

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

`qpdf <in.pdf> --rotate=+90:1-z <out.pdf>`
Rotate pages

`qpdf --decrypt --password=<pw> <in.pdf> <out.pdf>`
Remove password

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

CONCEPTS

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

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

INSPECT AND REPAIR (cont.)

`qpdf <in.pdf> <out.pdf>`
Rewrite file, often repairs damage
qpdf reconstructs a broken xref table and warns; check the exit code 3.

`qpdf --check-linearization <in.pdf>`
Verify web-optimized layout

`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
The dot means the primary input; the closing -- is required.

`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

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

`r1 / z`
Last page

PAGE SELECTION (cont.)

`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
x needs qpdf 11.7.1 or newer.

`--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
Files are named out-01.pdf, out-02.pdf and so on.

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

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

SPLIT AND ROTATE (cont.)

`--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

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

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

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

ENCRYPTION (cont.)

`--password-file=<file>`
Read password from first line of file
Keeps the password out of shell history and process lists.

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

`--remove-restrictions`
Drop signature restrictions

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

Owner passwords only restrict well-behaved viewers; the file is still readable with the user password.

OPTIMIZE AND EDIT

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

`qpdf --replace-input <in.pdf> --linearize`
Overwrite the input file
Original kept as in.pdf.~qpdf-orig if there were warnings.

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

`--compress-streams=y`
Flate-compress streams

OPTIMIZE AND EDIT (cont.)

`--recompress-flate --compression-level=9`
Recompress with stronger flate

`--stream-data=uncompress`
Write streams uncompressed

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

`fix-qdf <edited.pdf> > <out.pdf>`
Repair offsets after hand edits

`--remove-page-labels`
Drop page label definitions

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
```