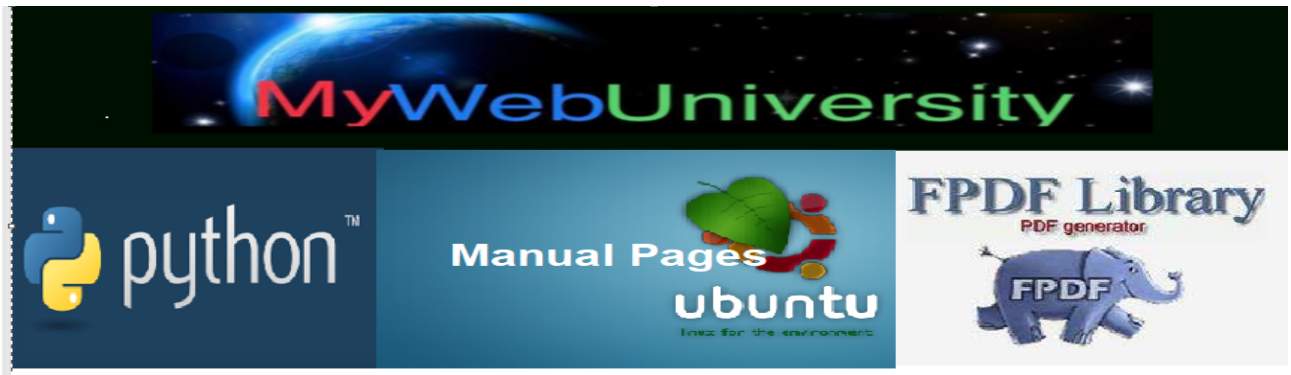

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Linux Ubuntu 26.04 Manual Pages on command 'unsquashfs.1'

$ man unsquashfs.1

UNSQUASHFS(1) User Commands UNSQUASHFS(1)

NAME

unsquashfs - tool to uncompress, extract and list squashfs filesystems

SYNOPSIS

unsquashfs [OPTIONS] FILESYSTEM [files to extract or exclude (with -excludes) or cat (with -cat)]

DESCRIPTION

Squashfs is a highly compressed read-only filesystem for Linux. It uses either gzip/xz/lzo/lz4/zstd compression to compress both files, inodes and directories. Inodes in the system are very small and all blocks are packed to minimise data overhead. Block sizes greater than 4K are supported up to a maximum of 1Mbytes (default block size 128K).

Squashfs is intended for general read-only filesystem use, for archival use (i.e. in cases where a .tar.gz file may be used), and in constrained block device/memory systems (e.g. em? bedded systems) where low overhead is needed.

OPTIONS

Filesystem extraction (filtering) options:

-d PATHNAME, -dest PATHNAME

extract to PATHNAME, default "squashfs-root". This option also sets the prefix used when listing the filesystem.

-max LEVELS, -max-depth LEVELS

descend at most LEVELS of directories when extracting.

-excludes

treat files on command line as exclude files.

-ex, -exclude-list

list of files to be excluded, terminated with ; e.g. file1 file2 ;.

-extract-file FILE

list of directories or files to extract. One per line.

-exclude-file FILE

list of directories or files to exclude. One per line.

-match abort if any extract file does not match on anything, and can not be resolved. Im?

plies -missing-symlinks and -no-wildcards.

-follow, -follow-symlinks

follow symlinks in extract files, and add all files/symlinks needed to resolve ex?

tract file. Implies -no-wildcards.

-missing, -missing-symlinks

Unsquashfs will abort if any symlink can't be resolved in -follow-symlinks.

-no-wild, -no-wildcards

do not use wildcard matching in extract and exclude names.

-r, -regex

treat extract names as POSIX regular expressions rather than use the default shell

wildcard expansion (globbing).

-all TIME, -all-time TIME

set all file timestamps to TIME, rather than the time stored in the filesystem inode.

TIME can be an unsigned 32-bit int indicating seconds since the epoch (1970-01-01) or

a string value which is passed to the "date" command to parse. Any string value which

the date command recognises can be used such as "now", "last week", or "Wed Feb 15

21:02:39 GMT 2023".

-cat cat the files on the command line to stdout.

-f, -force

if destination directory already exists, descend into it and any sub-directories, and

unlink (delete) files if they already exist before extracting to them.

-pf FILE

output a pseudo file equivalent of the input Squashfs filesystem, use - for stdout.

Filesystem information and listing options:

-s, -stat

display filesystem superblock information.

-max LEVELS, -max-depth LEVELS

descend at most LEVELS of directories when listing.

-i, -info

print files as they are extracted.

-li, -linfo

print files as they are extracted with file attributes (like ls -l output).

-l, -ls

list filesystem, but do not extract files.

-ll, -lls

list filesystem with file attributes (like ls -l output), but do not extract files.

-lln, -llnumeric

same as -lls but with numeric uids and gids.

-lc list filesystem concisely, displaying only files and empty directories. Do not ex?

tract files.

-llc list filesystem concisely with file attributes, displaying only files and empty di?

rectories. Do not extract files.

-full, -full-precision

use full precision when displaying times including seconds. Use with -linfo, -lls,

-lln and -llc.

-UTC use UTC rather than local time zone when displaying time.

-mkfs-time

display filesystem superblock time, which is an unsigned 32-bit int representing the

time in seconds since the epoch (1970-01-01).

Filesystem extended attribute (xattrs) options:

-no, -no-xattrs

do not extract xattrs in file system.

-x, -xattrs

extract xattrs in file system (default).

-xattrs-exclude REGEX

exclude any xattr names matching REGEX. REGEX is a POSIX regular expression, e.g.

-xattrs-exclude '^user.' excludes xattrs from the user namespace.

-xattrs-include REGEX

include any xattr names matching REGEX. REGEX is a POSIX regular expression, e.g.

-xattrs-include '^user.' includes xattrs from the user namespace.

Unsquashfs runtime options:

-v, -version

print version, licence and copyright information.

-p NUMBER, -processors NUMBER

use NUMBER processors. By default will use the number of processors available.

-mem SIZE

use SIZE physical memory for caches. Use K, M or G to specify Kbytes, Mbytes or Gbytes respectively. Default 512 Mbytes.

-mem-percent PERCENT

use PERCENT physical memory for caches.

-q, -quiet

no verbose output.

-n, -no-progress

do not display the progress bar.

-percentage

display a percentage rather than the full progress bar. Can be used with dialog --gauge etc.

-ig, -ignore-errors

treat errors writing files to output as non-fatal.

-st, -strict-errors

treat all errors as fatal.

-no-exit, -no-exit-code

do not set exit code (to nonzero) on non-fatal errors.

Help options:

-h, -help

print help summary information to pager (or stdout if not a terminal).

-help-option REGEX

print the help information for options matching REGEX to pager (or stdout if not a terminal).

-help-section SECTION

print the help information for section SECTION to pager (or stdout if not a termi?nal). If SECTION does not exactly match a section name, it is treated as a regular

expression, and all section names that match are displayed. Use "list" as section name to get a list of sections and their names.

-help-all

print help information for all Unsquashfs options and sections to pager (or stdout if not a terminal).

-ho REGEX

shorthand alternative to -help-option.

-hs SECTION

shorthand alternative to -help-section.

-ha shorthand alternative to -help-all.

-no-pager

do not use a pager to output help information.

-cols WIDTH

use WIDTH columns to output help information. Useful if output is not to a terminal.

Miscellaneous options:

-o BYTES, -offset BYTES

skip BYTES at start of FILESYSTEM. Optionally a suffix of K, M or G can be given to specify Kbytes, Mbytes or Gbytes respectively (default 0 bytes).

-fstime

synonym for -mkfs-time.

-e, -ef EXTRACT FILE

synonym for -extract-file.

-exc, -excf EXCLUDE FILE

synonym for -exclude-file.

-L synonym for -follow-symlinks.

-pseudo-file FILE

alternative name for -pf.

EXIT STATUS

0 The filesystem listed or extracted OK.

1 FATAL errors occurred, e.g. filesystem corruption, I/O errors. Unsquashfs did not continue and aborted.

2 Non-fatal errors occurred, e.g. no support for XATTRs, Symbolic links in output filesystem or couldn't write permissions to output filesystem. Unsquashfs continued

and did not abort.

See -ignore-errors, -strict-errors and -no-exit-code options for how they affect the exit status.

DECOMPRESSORS AVAILABLE

gzip, lzo, lz4, xz, zstd, lzma

ENVIRONMENT

SQFS_CMDLINE

If set, this is used as the directory to write the file sqfs_cmdline which contains the command line arguments given to Unsquashfs. Each command line argument is wrapped in quotes to ensure there is no ambiguity when arguments contain spaces. If the file already exists then the command line is appended to the file.

PAGER If set, this is used as the name of the program used to display the help text. The value can be a simple command or a pathname. The default is /usr/bin/pager.

EXAMPLES

unsquashfs IMAGE.SQFS

Extract IMAGE.SQFS to "squashfs-root" in the current working directory.

unsquashfs -d output IMAGE.SQFS

Extract IMAGE.SQFS to "output" in the current working directory.

unsquashfs -d . IMAGE.SQFS

Extract IMAGE.SQFS to current working directory.

unsquashfs -linfo IMAGE.SQFS

Output a listing of IMAGE.SQFS with file attributes to stdout, while extracting the filesystem to "squashfs-root".

unsquashfs -lls IMAGE.SQFS

Output a listing of IMAGE.SQFS with file attributes to stdout, but do not extract the filesystem. The listing will be prefixed with "squashfs-root".

unsquashfs -d "" -lls IMAGE.SQFS

Output a listing of IMAGE.SQFS with file attributes to stdout, but do not extract the filesystem. The listing will not be prefixed with "squashfs-root".

unsquashfs IMAGE.SQFS fs/squashfs

Extract only the "fs/squashfs" directory.

unsquashfs IMAGE.SQFS "[Tt]est/example*"

Extract all files beginning with "example" inside top level directories called "Test"

or "test".

unsquashfs -excludes IMAGE.SQFS "test/*data*.gz"

This will extract everything except for files that match *data*.gz in the test direc?
tory. The -excludes option tells Unsquashfs to exclude the files on the command line
rather than extract them.

unsquashfs -excludes IMAGE.SQFS "... *.gz"

This will extract everything except for files that match *.gz anywhere in the image.
The "..." means this is a non-anchored exclude which matches anywhere.

unsquashfs -ex "test/*data*.gz" ; IMAGE.SQFS test

This uses both extract and exclude options, to tell Unsquashfs to only extract the
"test" directory, and to exclude any files within it that match *data*.gz.

unsquashfs -ex "... *.gz" IMAGE.SQFS test

This uses both extract and exclude options, to tell Unsquashfs to only extract the
"test" directory, and to exclude files which match "*.gz" anywhere within "test" di?
rectory or sub-directories.

unsquashfs -dest output -max-depth 2 IMAGE.SQFS

Extract only the top two levels of IMAGE.SQFS to "output" directory.

unsquashfs -max-depth 2 IMAGE.SQFS "test/*.gz"

Only extract the gzipped files in the test directory.

unsquashfs -llc -max-depth 2 IMAGE.SQFS "test/*.gz"

Output a listing of the gzipped files in the test directory to stdout, but do not ex?
tract them.

unsquashfs -no-xattrs IMAGE.SQFS

Do not extract any extended attributes. Any extended attributes in the filesystem
will be ignored.

unsquashfs -xattrs-include "^user." IMAGE.SQFS

Filter the extended attributes and only extract extended attributes in the user name?
space from the Squashfs filesystem.

unsquashfs -xattrs-exclude "^user." IMAGE.SQFS

Filter the extended attributes and do not extract any extended attributes in the user
namespace from the Squashfs filesystem.

Note: when passing wildcarded names to Unsquashfs, they should be quoted (as in the above examples), to ensure that they are not processed by the shell.

AUTHOR

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SEE ALSO

mksquashfs(1), sqfstar(1), sqfscat(1)

The README for the Squashfs-tools 4.7.5 release, describing the new features can be read here https://github.com/plougher/squashfs-tools/blob/master/Documentation/4.7.5/README.md

The Unsquashfs usage guide can be read here https://github.com/plougher/squashfs-tools/blob/master/Documentation/4.7.5/USAGE-UN?SQUASHFS.md

The CHANGELOG for Squashfs tools can be read here https://github.com/plougher/squashfs-tools/blob/master/CHANGES.md