

NAME

apropos, **whatis** - search manual page databases

SYNOPSIS

apropos [-**afk**] [-**C** *file*] [-**M** *path*] [-**m** *path*] [-**O** *outkey*] [-**S** *arch*] [-**s** *section*] *expression* ...

DESCRIPTION

The **apropos** and **whatis** utilities query manual page databases generated by `makewhatis(8)`, evaluating *expression* for each file in each database. By default, they display the names, section numbers, and description lines of all matching manuals.

By default, **apropos** searches for `makewhatis(8)` databases in the default paths stipulated by `man(1)` and uses case-insensitive extended regular expression matching over manual names and descriptions (the `Nm` and `Nd` macro keys). Multiple terms imply pairwise **-o**.

whatis is a synonym for **apropos -f**.

The options are as follows:

- a** Instead of showing only the title lines, show the complete manual pages, just like `man(1) -a` would. If the standard output is a terminal device and **-c** is not specified, use `less(1)` to paginate them. In **-a** mode, the options **-IKOTW** described in the `mandoc(1)` manual are also available.
- C file** Specify an alternative configuration *file* in `man.conf(5)` format.
- f** Search for all words in *expression* in manual page names only. The search is case-insensitive and matches whole words only. In this mode, macro keys, comparison operators, and logical operators are not available.
- k** Support the full *expression* syntax. It is the default for **apropos**.
- M path**
Use the colon-separated path instead of the default list of paths searched for `makewhatis(8)` databases. Invalid paths, or paths without manual databases, are ignored.
- m path**
Prepend the colon-separated paths to the list of paths searched for `makewhatis(8)` databases. Invalid paths, or paths without manual databases, are ignored.
- O outkey**

Show the values associated with the key *outkey* instead of the manual descriptions.

-S *arch* Restrict the search to pages for the specified machine(1) architecture. *arch* is case-insensitive. By default, pages for all architectures are shown.

-s *section*

Restrict the search to the specified section of the manual. By default, pages from all sections are shown. See *man(1)* for a listing of sections.

The options **-chlw** are also supported and are documented in *man(1)*. The options **-fkl** are mutually exclusive and override each other.

An *expression* consists of search terms joined by logical operators **-a** (and) and **-o** (or). The **-a** operator has precedence over **-o** and both are evaluated left-to-right.

(*expr*) True if the subexpression *expr* is true.

expr1 **-a** *expr2*

True if both *expr1* and *expr2* are true (logical 'and').

expr1 [**-o**] *expr2*

True if *expr1* and/or *expr2* evaluate to true (logical 'or').

term True if *term* is satisfied. This has syntax *[[key[,key...]](=|~)]val*, where *key* is an *mdoc(7)* macro to query and *val* is its value. See *Macro Keys* for a list of available keys. Operator = evaluates a substring, while ~ evaluates a case-sensitive extended regular expression.

-i *term* If *term* is a regular expression, it is evaluated case-insensitively. Has no effect on substring terms.

Results are sorted first according to the section number in ascending numerical order, then by the page name in ascending *ascii(7)* alphabetical order, case-insensitive.

Each output line is formatted as

name[, name...](sec) - description

Where "name" is the manual's name, "sec" is the manual section, and "description" is the manual's short description. If an architecture is specified for the manual, it is displayed as

name(sec/arch) - description

Resulting manuals may be accessed as

```
$ man -s sec name
```

If an architecture is specified in the output, use

```
$ man -s sec -S arch name
```

Macro Keys

Queries evaluate over a subset of `mdoc(7)` macros indexed by `makewhatis(8)`. In addition to the macro keys listed below, the special key **any** may be used to match any available macro key.

Names and description:

Nm	manual name
Nd	one-line manual description
arch	machine architecture (case-insensitive)
sec	manual section number

Sections and cross references:

Sh	section header (excluding standard sections)
Ss	subsection header
Xr	cross reference to another manual page
Rs	bibliographic reference

Semantic markup for command line utilities:

Fl	command line options (flags)
Cm	command modifier
Ar	command argument
Ic	internal or interactive command
Ev	environmental variable
Pa	file system path

Semantic markup for function libraries:

Lb	function library name
In	include file
Ft	function return type
Fn	function name
Fa	function argument type and name

Vt variable type
Va variable name
Dv defined variable or preprocessor constant
Er error constant
Ev environmental variable

Various semantic markup:

An author name
Lk hyperlink
Mt "mailto" hyperlink
Cd kernel configuration declaration
Ms mathematical symbol
Tn tradename

Physical markup:

Em italic font or underline
Sy boldface font
Li typewriter font

Text production:

St reference to a standards document
At AT&T UNIX version reference
Bx BSD version reference
Bsx BSD/OS version reference
Nx NetBSD version reference
Fx FreeBSD version reference
Ox OpenBSD version reference
Dx DragonFly version reference

In general, macro keys are supposed to yield complete results without expecting the user to consider actual macro usage. For example, results include:

Fa function arguments appearing on **Fn** lines
Fn function names marked up with **Fo** macros
In include file names marked up with **Fd** macros
Vt types appearing as function return types and
types appearing in function arguments in the SYNOPSIS

ENVIRONMENT

MANPAGER Any non-empty value of the environment variable MANPAGER is used instead of the

standard pagination program, `less(1)`; see `man(1)` for details. Only used if **-a** or **-l** is specified.

MANPATH A colon-separated list of directories to search for manual pages; see `man(1)` for details. Overridden by **-M**, ignored if **-l** is specified.

PAGER Specifies the pagination program to use when `MANPAGER` is not defined. If neither `PAGER` nor `MANPAGER` is defined, `less(1)` is used. Only used if **-a** or **-l** is specified.

FILES

mandoc.db name of the `makewhatis(8)` keyword database
/etc/man.conf default `man(1)` configuration file

EXIT STATUS

The **apropos** utility exits 0 on success, and >0 if an error occurs.

EXAMPLES

Search for ".cf" as a substring of manual names and descriptions:

```
$ apropos =.cf
```

Include matches for ".cnf" and ".conf" as well:

```
$ apropos =.cf =.cnf =.conf
```

Search in names and descriptions using a case-sensitive regular expression:

```
$ apropos '~set.?[ug]id'
```

Search for all manual pages in a given section:

```
$ apropos -s 9 .
```

Search for manuals in the library section mentioning both the "optind" and the "optarg" variables:

```
$ apropos -s 3 Va=optind -a Va=optarg
```

Do exactly the same as calling **whatis** with the argument "ssh":

```
$ apropos -- -i 'Nm~[[[:<:]]ssh[[[:>:]]]
```

The following two invocations are equivalent:

```
$ apropos -S arch -s section expression
```

```
$ apropos \( expression \) -a arch~^(arch|any)$ -a sec~^section$
```

SEE ALSO

man(1), re_format(7), makewhatis(8)

STANDARDS

The **apropos** utility is compliant with the IEEE Std 1003.1-2008 ("POSIX.1") specification of man(1) **-k**.

All options, the **whatis** command, support for logical operators, macro keys, substring matching, sorting of results, the environment variables MANPAGER and MANPATH, the database format, and the configuration file are extensions to that specification.

HISTORY

Part of the functionality of **whatis** was already provided by the former **manwhere** utility in 1BSD. The **apropos** and **whatis** utilities first appeared in 2BSD. They were rewritten from scratch for OpenBSD 5.6.

The **-M** option and the MANPATH variable first appeared in 4.3BSD; **-m** in 4.3BSD-Reno; **-C** in 4.4BSD-Lite1; and **-S** and **-s** in OpenBSD 4.5 for **apropos** and in OpenBSD 5.6 for **whatis**. The options **-acfhIKklOTWw** appeared in OpenBSD 5.7.

AUTHORS

Bill Joy wrote **manwhere** in 1977 and the original BSD **apropos** and **whatis** in February 1979. The current version was written by Kristaps Dzonsons <kristaps@bsd.lv> and Ingo Schwarze <schwarze@openbsd.org>.