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
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