

APT-CACHE(8)

APT

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NAME

apt-cache - query the APT cache

SYNOPSIS

```
apt-cache [-agipns] [-o=config_string] [-c=config_file] {gencaches |
  showpkg pkg... | showsrc pkg... | stats | dump | dumpavail
  | unmet | search regex... |
  show pkg [{=pkg_version_number | /target_release}]... |
  depends pkg [{=pkg_version_number | /target_release}]... |
  rdepends pkg [{=pkg_version_number | /target_release}]... |
  pkgnames [prefix] |
  dotty pkg [{=pkg_version_number | /target_release}]... |
  xvcg pkg [{=pkg_version_number | /target_release}]... |
  policy [pkg...] | madison pkg... | {-v | --version} |
  {-h | --help}}
```

DESCRIPTION

apt-cache performs a variety of operations on APT's package cache. **apt-cache** does not manipulate the state of the system but does provide operations to search and generate interesting output from the package metadata. The metadata is acquired and updated via the 'update' command

long ago, but in exchange apt-cache works independently of the availability of the configured sources (e.g. offline).

Unless the `-h`, or `--help` option is given, one of the commands below must be present.

gencaches

`gencaches` creates APT's package cache. This is done implicitly by all commands needing this cache if it is missing or outdated.

showpkg pkg...

`showpkg` displays information about the packages listed on the command line. Remaining arguments are package names. The available versions and reverse dependencies of each package listed are listed, as well as forward dependencies for each version. Forward (normal) dependencies are those packages upon which the package in question depends; reverse dependencies are those packages that depend upon the package in question. Thus, forward dependencies must be satisfied for a package, but reverse dependencies need not be. For instance, `apt-cache showpkg libreadline2` would produce output similar to the following:

Package: libreadline2

Versions: 2.1-12(/var/state/apt/lists/foo_Packages),

libreadlineg2,libreadline2

libreadline2-altdev,libreadline2

Dependencies:

2.1-12 - libc5 (2 5.4.0-0) ncurses3.0 (0 (null))

Provides:

2.1-12 -

Reverse Provides:

Thus it may be seen that **libreadline2**, version **2.1-12**, depends on **libc5** and **ncurses3.0** which must be installed for **libreadline2** to work. In turn, **libreadlineg2** and **libreadline2-altdev** depend on **libreadline2**. If **libreadline2** is installed, **libc5** and **ncurses3.0** (and **ldso**) must also be installed; **libreadlineg2** and **libreadline2-altdev** do not have to be installed. For the specific meaning of the remainder of the output it is best to consult the **apt** source code.

stats

stats displays some statistics about the cache. No further arguments are expected. Statistics reported are:

? **Total package names** is the number of package names found in the cache.

? **Normal packages** is the number of regular, ordinary package

between their names and the names used by other packages for them in dependencies. The majority of packages fall into this category.

- ? **Pure virtual packages** is the number of packages that exist only as a virtual package name; that is, packages only "provide" the virtual package name, and no package actually uses the name. For instance, "mail-transport-agent" in the Debian system is a pure virtual package; several packages provide "mail-transport-agent", but there is no package named "mail-transport-agent".
- ? **Single virtual packages** is the number of packages with only one package providing a particular virtual package. For example, in the Debian system, "X11-text-viewer" is a virtual package, but only one package, xless, provides "X11-text-viewer".
- ? **Mixed virtual packages** is the number of packages that either provide a particular virtual package or have the virtual package name as the package name. For instance, in the Debian system, "debconf" is both an actual package, and provided by the debconf-tiny package.
- ? **Missing** is the number of package names that were referenced in

packages may be an evidence if a full distribution is not accessed, or if a package (real or virtual) has been dropped from the distribution. Usually they are referenced from Conflicts or Breaks statements.

? Total distinct versions is the number of package versions found in the cache. If more than one distribution is being accessed (for instance, "stable" and "unstable"), this value can be considerably larger than the number of total package names.

? Total dependencies is the number of dependency relationships claimed by all of the packages in the cache.

showsrc pkg...

showsrc displays all the source package records that match the given package names. All versions are shown, as well as all records that declare the name to be a binary package. Use --only-source to display only source package names.

dump

dump shows a short listing of every package in the cache. It is primarily for debugging.

dumpavail

for use with `dpkg(1)` and is used by the `dselect(1)` method.

unmet

`unmet` displays a summary of all unmet dependencies in the package cache.

show pkg...

`show` performs a function similar to `dpkg --print-avail`; it displays the package records for the named packages.

search regex...

`search` performs a full text search on all available package lists for the POSIX regex pattern given, see `regex(7)`. It searches the package names and the descriptions for an occurrence of the regular expression and prints out the package name and the short description, including virtual package names. If `--full` is given then output identical to `show` is produced for each matched package, and if `--names-only` is given then the long description is not searched, only the package name and provided packages are.

Separate arguments can be used to specify multiple search patterns that are and'ed together.

depends pkg...

the possible other packages that can fulfill that dependency.

rdepends pkg...

rdepends shows a listing of each reverse dependency a package has.

pkgnames [prefix]

This command prints the name of each package APT knows. The optional argument is a prefix match to filter the name list. The output is suitable for use in a shell tab complete function and the output is generated extremely quickly. This command is best used with the **--generate** option.

Note that a package which APT knows of is not necessarily available to download, installable or installed, e.g. virtual packages are also listed in the generated list.

dotty pkg...

dotty takes a list of packages on the command line and generates output suitable for use by **dotty** from the **GraphViz[1]** package. The result will be a set of nodes and edges representing the relationships between the packages. By default the given packages will trace out all dependent packages; this can produce a very large graph. To limit the output to only the packages listed on the command line, set the **APT::Cache::GivenOnly** option.

The resulting nodes will have several shapes; normal packages are boxes, pure virtual packages are triangles, mixed virtual packages are diamonds, missing packages are hexagons. Orange boxes mean recursion was stopped (leaf packages), blue lines are pre-dependends, green lines are conflicts.

Caution, `dotty` cannot graph larger sets of packages.

`xvcg pkg...`

The same as `dotty`, only for `xvcg` from the VCG tool[2].

`policy [pkg...]`

`policy` is meant to help debug issues relating to the preferences file. With no arguments it will print out the priorities of each source. Otherwise it prints out detailed information about the priority selection of the named package.

`madison pkg...`

`apt-cache`'s `madison` command attempts to mimic the output format and a subset of the functionality of the Debian archive management tool, `madison`. It displays available versions of a package in a tabular format. Unlike the original `madison`, it can only display information for the architecture for which APT has retrieved package lists (`APT::Architecture`).

OPTIONS

All command line options may be set using the configuration file, the descriptions indicate the configuration option to set. For boolean options you can override the config file by using something like `-f`, `--no-f`, `-f=no` or several other variations.

`-p, --pkg-cache`

Select the file to store the package cache. The package cache is the primary cache used by all operations. Configuration Item: `Dir::Cache::pkgcache`.

`-s, --src-cache`

Select the file to store the source cache. The source is used only by gencaches and it stores a parsed version of the package information from remote sources. When building the package cache the source cache is used to avoid reparsing all of the package files. Configuration Item: `Dir::Cache::srcpkgcache`.

`-q, --quiet`

Quiet; produces output suitable for logging, omitting progress indicators. More q's will produce more quietness up to a maximum of 2. You can also use `-q=#` to set the quietness level, overriding the configuration file. Configuration Item: `quiet`.

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Print only important dependencies; for use with unmet and depends.

Causes only Depends and Pre-Depends relations to be printed.

Configuration Item: APT::Cache::Important.

--no-pre-depends, --no-depends, --no-recommends, --no-suggests,

--no-conflicts, --no-breaks, --no-replaces, --no-enhances

Per default the depends and rdepends print all dependencies. This

can be tweaked with these flags which will omit the specified

dependency type. Configuration Item: APT::Cache::ShowDependencyType

e.g. APT::Cache::ShowRecommends.

--implicit

Per default depends and rdepends print only dependencies explicitly

expressed in the metadata. With this flag it will also show

dependencies implicitly added based on the encountered data. A

Conflicts: foo e.g. expresses implicitly that this package also

conflicts with the package foo from any other architecture.

Configuration Item: APT::Cache::ShowImplicit.

-f, --full

Print full package records when searching. Configuration Item:

APT::Cache::ShowFull.

-a, --all-versions

to turn it off, use `--no-all-versions`. If `--no-all-versions` is specified, only the candidate version will be displayed (the one which would be selected for installation). This option is only applicable to the `show` command. Configuration Item: `APT::Cache::AllVersions`.

-g, --generate

Perform automatic package cache regeneration, rather than use the cache as it is. This is the default; to turn it off, use `--no-generate`. Configuration Item: `APT::Cache::Generate`.

--names-only, -n

Only search on the package and provided package names, not the long descriptions. Configuration Item: `APT::Cache::NamesOnly`.

--all-names

Make `pkgnames` print all names, including virtual packages and missing dependencies. Configuration Item: `APT::Cache::AllNames`.

--recurse

Make `depends` and `rdepends` recursive so that all packages mentioned are printed once. Configuration Item: `APT::Cache::RecurseDepends`.

--installed

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currently installed. Configuration Item: APT::Cache::Installed.

--with-source filename

Adds the given file as a source for metadata. Can be repeated to add multiple files. Supported are currently *.deb, *.dsc, *.changes, Sources and Packages files as well as source package directories. Files are matched based on their name only, not their content!

Sources and Packages can be compressed in any format apt supports as long as they have the correct extension. If you need to store multiple of these files in one directory you can prefix a name of your choice with the last character being an underscore ("_").

Example: my.example_Packages.xz

Note that these sources are treated as trusted (see apt-secure(8)).

Configuration Item: APT::Sources::With.

-h, --help

Show a short usage summary.

-v, --version

Show the program version.

Configuration File; Specify a configuration file to use. The program will read the default configuration file and then this configuration file. If configuration settings need to be set before the default configuration files are parsed specify a file with the **APT_CONFIG** environment variable. See **apt.conf(5)** for syntax information.

-o, --option

Set a Configuration Option; This will set an arbitrary configuration option. The syntax is **-o Foo::Bar=bar**. **-o** and **--option** can be used multiple times to set different options.

FILES

/etc/apt/sources.list

Locations to fetch packages from. Configuration Item:

Dir::Etc::SourceList.

/etc/apt/sources.list.d/

File fragments for locations to fetch packages from. Configuration

Item: Dir::Etc::SourceParts.

/var/lib/apt/lists/

Storage area for state information for each package resource

specified in sources.list(5) Configuration Item: Dir::State::Lists.

`/var/lib/apt/lists/partial/`

Storage area for state information in transit. Configuration Item:

`Dir::State::Lists` (partial will be implicitly appended)

SEE ALSO

`apt.conf(5)`, `sources.list(5)`, `apt-get(8)`, `apt-patterns(7)`

DIAGNOSTICS

`apt-cache` returns zero on normal operation, decimal 100 on error.

BUGS

APT bug page[3]. If you wish to report a bug in APT, please see

`/usr/share/doc/debian/bug-reporting.txt` or the `reportbug(1)` command.

AUTHORS

Jason Gunthorpe

APT team

NOTES

1. GraphViz

<https://graphviz.org/>

2. VCG tool

3. APT bug page

<https://bugs.debian.org/src:apt>

APT 2.8.3

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