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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'blkid.8' command

\$ man blkid.8

BLKID(8) System Administration BLKID(8)

NAME

blkid - locate/print block device attributes

SYNOPSIS

blkid --label label | --uuid uuid

blkid [--no-encoding --garbage-collect --list-one --cache-file file]

[--output format] [--match-tag tag] [--match-token NAME=value]

[device...]

blkid --probe [--offset offset] [--output format] [--size size]

[--match-tag tag] [--match-types list] [--usages list]

[--no-part-details] device...

blkid --info [--output format] [--match-tag tag] device...

DESCRIPTION

The blkid program is the command-line interface to working with the libblkid(3) library. It can determine the type of content (e.g., filesystem or swap) that a block device holds, and also the attributes (tokens, NAME=value pairs) from the content metadata (e.g., LABEL or UUID fields).

It is recommended to use lsblk(8) command to get information about block devices, or lsblk --fs to get an overview of filesystems, or findmnt(8) to search in already mounted filesystems.

lsblk(8) provides more information, better control on output formatting, easy to use in scripts and it does not require

root permissions to get actual information. blkid reads information directly from devices and for non-root users it returns cached unverified information. blkid is mostly designed for system services and to test libblkid(3) functionality.

When device is specified, tokens from only this device are displayed.

It is possible to specify multiple device arguments on the command line. If none is given, all partitions or unpartitioned devices which appear in `/proc/partitions` are shown, if they are recognized.

blkid has two main forms of operation: either searching for a device with a specific NAME=value pair, or displaying NAME=value pairs for one or more specified devices.

For security reasons blkid silently ignores all devices where the probing result is ambivalent (multiple colliding filesystems are detected). The low-level probing mode (-p) provides more information and extra exit status in this case. It's recommended to use `wipefs(8)` to get a detailed overview and to erase obsolete stuff (magic strings) from the device.

OPTIONS

The size and offset arguments may be followed by the multiplicative suffixes like KiB (=1024), MiB (=1024*1024), and so on for GiB, TiB, PiB, EiB, ZiB and YiB (the "iB" is optional, e.g., "K" has the same meaning as "KiB"), or the suffixes KB (=1000), MB (=1000*1000), and so on for GB, TB, PB, EB, ZB and YB.

`-c, --cache-file cachefile`

Read from cachefile instead of reading from the default cache file (see the CONFIGURATION FILE section for more details). If you want to start with a clean cache (i.e., don't report devices previously scanned but not necessarily available at this time), specify `/dev/null`.

`-d, --no-encoding`

Don't encode non-printing characters. The non-printing characters are encoded by ^ and M- notation by default. Note that the `--output`

udev output format uses a different encoding which cannot be disabled.

-D, --no-part-details

Don't print information (PART_ENTRY_* tags) from partition table in low-level probing mode.

-g, --garbage-collect

Perform a garbage collection pass on the blkid cache to remove devices which no longer exist.

-h, --help

Display a usage message and exit.

-H, --hint setting

Set probing hint. The hints are optional way how to force probing functions to check for example another location. The currently supported is "session_offset=number" to set session offset on multi-session UDF.

-i, --info

Display information about I/O Limits (aka I/O topology). The 'export' output format is automatically enabled. This option can be used together with the --probe option.

-k, --list-filesystems

List all known filesystems and RAIDs and exit.

-l, --list-one

Look up only one device that matches the search parameter specified with the --match-token option. If there are multiple devices that match the specified search parameter, then the device with the highest priority is returned, and/or the first device found at a given priority (but see below note about udev). Device types in order of decreasing priority are: Device Mapper, EVMS, LVM, MD, and finally regular block devices. If this option is not specified, blkid will print all of the devices that match the search parameter.

This option forces blkid to use udev when used for LABEL or UUID tokens in --match-token. The goal is to provide output consistent

with other utils (like `mount(8)`, etc.) on systems where the same tag is used for multiple devices.

`-L, --label label`

Look up the device that uses this filesystem label; this is equal to `--list-one --output device --match-token LABEL=label`. This lookup method is able to reliably use `/dev/disk/by-label` udev symlinks (dependent on a setting in `/etc/blkid.conf`). Avoid using the symlinks directly; it is not reliable to use the symlinks without verification. The `--label` option works on systems with and without udev.

Unfortunately, the original `blkid(8)` from `e2fsprogs` uses the `-L` option as a synonym for `-o list`. For better portability, use `-l -o device -t LABEL=label` and `-o list` in your scripts rather than the `-L` option.

`-n, --match-types list`

Restrict the probing functions to the specified (comma-separated) list of superblock types (names). The list items may be prefixed with "no" to specify the types which should be ignored. For example:

```
blkid --probe --match-types vfat,ext3,ext4 /dev/sda1
```

probes for vfat, ext3 and ext4 filesystems, and

```
blkid --probe --match-types nominix /dev/sda1
```

probes for all supported formats except minix filesystems. This option is only useful together with `--probe`.

`-o, --output format`

Use the specified output format. Note that the order of variables and devices is not fixed. See also option `-s`. The format parameter may be:

full

print all tags (the default)

value

print the value of the tags

list

print the devices in a user-friendly format; this output format is unsupported for low-level probing (`--probe` or `--info`).

This output format is DEPRECATED in favour of the `lsblk(8)` command.

device

print the device name only; this output format is always enabled for the `--label` and `--uuid` options

udev

print `key="value"` pairs for easy import into the udev environment; the keys are prefixed by `ID_FS_` or `ID_PART_` prefixes. The value may be modified to be safe for udev environment; allowed is plain ASCII, hex-escaping and valid UTF-8, everything else (including whitespaces) is replaced with `'_'`. The keys with `_ENC` postfix use hex-escaping for unsafe chars.

The udev output returns the `ID_FS_AMBIVALENT` tag if more superblocks are detected, and `ID_PART_ENTRY_*` tags are always returned for all partitions including empty partitions.

This output format is DEPRECATED.

export

print `key=value` pairs for easy import into the environment; this output format is automatically enabled when I/O Limits (`--info` option) are requested.

The non-printing characters are encoded by `^` and `M-` notation and all potentially unsafe characters are escaped.

`-O, --offset offset`

Probe at the given offset (only useful with `--probe`). This option can be used together with the `--info` option.

`-p, --probe`

Switch to low-level superblock probing mode (bypassing the cache).

Note that low-level probing also returns information about partition table type (`PTTYPE` tag) and partitions (`PART_ENTRY_*` tags). The tag names produced by low-level probing are based on

names used internally by libblkid and it may be different than when executed without `--probe` (for example `PART_ENTRY_UUID=` vs `PARTUUID=`). See also `--no-part-details`.

`-s, --match-tag tag`

For each (specified) device, show only the tags that match tag. It is possible to specify multiple `--match-tag` options. If no tag is specified, then all tokens are shown for all (specified) devices.

In order to just refresh the cache without showing any tokens, use `--match-tag none` with no other options.

`-S, --size size`

Override the size of device/file (only useful with `--probe`).

`-t, --match-token NAME=value`

Search for block devices with tokens named NAME that have the value value, and display any devices which are found. Common values for NAME include TYPE, LABEL, and UUID. If there are no devices specified on the command line, all block devices will be searched; otherwise only the specified devices are searched.

`-u, --usages list`

Restrict the probing functions to the specified (comma-separated) list of "usage" types. Supported usage types are: filesystem, raid, crypto and other. The list items may be prefixed with "no" to specify the usage types which should be ignored. For example:

```
blkid --probe --usages filesystem,other /dev/sda1
```

probes for all filesystem and other (e.g., swap) formats, and

```
blkid --probe --usages noraid /dev/sda1
```

probes for all supported formats except RAIDs. This option is only useful together with `--probe`.

`-U, --uuid uuid`

Look up the device that uses this filesystem uuid. For more details see the `--label` option.

`-V, --version`

Display version number and exit.

If the specified device or device addressed by specified token (option `--match-token`) was found and it's possible to gather any information about the device, an exit status 0 is returned. Note the option `--match-tag` filters output tags, but it does not affect exit status.

If the specified token was not found, or no (specified) devices could be identified, or it is impossible to gather any information about the device identifiers or device content an exit status of 2 is returned.

For usage or other errors, an exit status of 4 is returned.

If an ambivalent probing result was detected by low-level probing mode (`-p`), an exit status of 8 is returned.

CONFIGURATION FILE

The standard location of the `/etc/blkid.conf` config file can be overridden by the environment variable `BLKID_CONF`. The following options control the `libblkid` library:

`SEND_UEVENT=<yes|not>`

Sends uevent when `/dev/disk/by-
{label,uuid,partuuid,partlabel}/
symlink` does not match with `LABEL`, `UUID`, `PARTUUID` or `PARTLABEL` on the device. Default is "yes".

`CACHE_FILE=<path>`

Overrides the standard location of the cache file. This setting can be overridden by the environment variable `BLKID_FILE`. Default is `/run/blkid/blkid.tab`, or `/etc/blkid.tab` on systems without a `/run` directory.

`EVALUATE=<methods>`

Defines `LABEL` and `UUID` evaluation method(s). Currently, the `libblkid` library supports the "udev" and "scan" methods. More than one method may be specified in a comma-separated list. Default is "udev,scan". The "udev" method uses `udev /dev/disk/by-*` symlinks and the "scan" method scans all block devices from the `/proc/partitions` file.

ENVIRONMENT

Setting `LIBBLKID_DEBUG=all` enables debug output.

AUTHORS

blkid was written by Andreas Dilger for libblkid and improved by Theodore Ts'o and Karel Zak.

SEE ALSO

libblkid(3), findfs(8), lsblk(8), wipefs(8)

REPORTING BUGS

For bug reports, use the issue tracker at

<https://github.com/karelzak/util-linux/issues>.

AVAILABILITY

The blkid command is part of the util-linux package which can be downloaded from Linux Kernel Archive

<<https://www.kernel.org/pub/linux/utils/util-linux/>>.

util-linux 2.37.4

2022-02-14

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