

**NAME**

blkid - locate/print block device attributes

**SYNOPSIS**

**blkid** **-L** *label* | **-U** *uuid*

**blkid** [**-dghlv**] [**-c** *file*] [**-o** *format*] [**-s** *tag*]  
 [**-t** *NAME=value*] [*device ...*]

**blkid -p** [**-O** *offset*] [**-o** *format*] [**-S** *size*] [**-s** *tag*]  
 [**-n** *list*] [**-u** *list*] *device ...*

**blkid -i** [**-o** *format*] [**-s** *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).

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 devices which appear in */proc/partitions* are shown, if they are recognized.

Note that **blkid** reads information directly from devices and for non-root users it returns cached unverified information. It is better to use **lsblk --fs** to get a user-friendly overview of filesystems and devices. [lsblk\(8\)](#) is also easy to use in scripts. **blkid** is mostly designed for system services and to test libblkid functionality.

**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.

**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** *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** Don't encode non-printing characters. The non-printing characters are encoded by ^ and M- notation by default. Note that the **-o udev** output format uses a different encoding which cannot be disabled.

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

**-h** Display a usage message and exit.

**-i** 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 **-p** option.

**-k** List all known filesystems and RAIDs and exit.

**-l** Look up only one device that matches the search parameter specified with the **-t** 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. 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.

**-L** *label*

Look up the device that uses this filesystem *label*; this is equal to **-l -o device -t 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 **-L** 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 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 -p -n vfat,ext3,ext4 /dev/sda1
```

probes for vfat, ext3 and ext4 filesystems, and

```
blkid -p -n nominux /dev/sda1
```

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

**-o 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 (**-p** or **-i**).

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 **-L** and **-U** 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 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 (**-i** option) are requested.

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

**-O offset**

Probe at the given *offset* (only useful with **-p**). This option can be used together with the **-i** option.

**-p** 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).

**-s tag** For each (specified) device, show only the tags that match *tag*. It is possible to specify multiple **-s** 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 **-s none** with no other options.

**-S size** Override the size of device/file (only useful with **-p**).

**-t 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 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 -p -u filesystem,other /dev/sda1
```

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

```
blkid -p -u noraid /dev/sda1
```

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

**-U uuid** Look up the device that uses this filesystem *uuid*. For more details see the **-L** option.

**-V** Display version number and exit.

## RETURN CODE

If the specified token was found, or if any tags were shown from (specified) devices, 0 is returned.

If the specified token was not found, or no (specified) devices could be identified, an exit code of 2 is returned.

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

If an ambivalent low-level probing result was detected, an exit code 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.

## AUTHOR

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

## ENVIRONMENT

Setting `LIBBLKID_DEBUG=0xffff` enables debug output.

## SEE ALSO

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

## AVAILABILITY

The **blkid** command is part of the *util-linux* package and is available from <ftp://ftp.kernel.org/pub/linux/utils/util-linux/>.