

Linux USB-Mount

Recently I noticed the problem, that I could write only with speeds of about 500kByte/s onto USB flash drives. 20MBytes/s should be normally possible.

My observations so far:

Errors on already mounted

My system mounts a plugged in USB drive automatically on `/media/usb0`, or with the suffix 1,2,3. These directories exist on my system permanently. When plug the drive in the first time after boot, it will be mounted to `usb0`, after remounting it 3 times, it will be mounted in `usb3`. On the next replug, it will be mounted e.g. on `/media/karl/E2A3-F90D`. All the `/media/usb*` dirs cannot be deleted:

```
sudo rm -R /media/usb0
rm: cannot remove 'usb0': Device or resource busy
```

usbmount

`usbmount` is a service installed on my system. It's config is in `/etc/usbmount/usbmount.conf`:

```
# Configuration file for the usbmount package, which mounts removable
# storage devices when they are plugged in and unmounts them when they
# are removed.

# Change to zero to disable usbmount
ENABLED=1

# Mountpoints: These directories are eligible as mountpoints for
# removable storage devices. A newly plugged in device is mounted on
# the first directory in this list that exists and on which nothing is
# mounted yet.
MOUNTPOINTS="/media/usb0 /media/usb1 /media/usb2 /media/usb3
             /media/usb4 /media/usb5 /media/usb6 /media/usb7"

# Filesystem types: removable storage devices are only mounted if they
# contain a filesystem type which is in this list.
FILESYSTEMS="vfat ext2 ext3 ext4 hfsplus ntfs exfat"

#####
#
# WARNING!
#
#
```

```
# The "sync" option may not be a good choice to use with flash drives, as
#
# it forces a greater amount of writing operating on the drive. This makes
#
# the writing speed considerably lower and also leads to a faster wear out
#
# of the disk.
#
#
#
# If you omit it, don't forget to use the command "sync" to synchronize the
#
# data on your disk before removing the drive or you may experience data
#
# loss.
#
#
#
# It is highly recommended that you use the pumount command (as a regular
#
# user) before unplugging the device. It makes calling the "sync" command
#
# and mounting with the sync option unnecessary---this is similar to other
#
# operating system's "safely disconnect the device" option.
#
#####
#
# Mount options: Options passed to the mount command with the -o flag.
# See the warning above regarding removing "sync" from the options.
MOUNTOPTIONS="sync,noexec,nodev,noatime,nodiratime,uid=1000,gid=1000"
#
# Filesystem type specific mount options: This variable contains a space
# separated list of strings, each which the form "-fstype=TYPE,OPTIONS".
#
# If a filesystem with a type listed here is mounted, the corresponding
# options are appended to those specified in the MOUNTOPTIONS variable.
#
# For example, "-fstype=vfat,gid=floppy,dmask=0007,fmask=0117" would add
# the options "gid=floppy,dmask=0007,fmask=0117" when a vfat filesystem
# is mounted.
FS_MOUNTOPTIONS=""
#
# If set to "yes", more information will be logged via the syslog
# facility.
VERBOSE=no
```

mount

Calling mount on a terminal shows these last lines:

```
/dev/sdc on /media/usb0 type vfat
(rw,nodev,noexec,noatime,nodiratime,sync,uid=1000,gid=1000,fmask=0022,dmask=
0022,codepage=437,iocharset=iso8859-1,shortname=mixed,errors=remount-ro)
/dev/sdd on /media/usb1 type vfat
(rw,nodev,noexec,noatime,nodiratime,sync,uid=1000,gid=1000,fmask=0022,dmask=
0022,codepage=437,iocharset=iso8859-1,shortname=mixed,errors=remount-ro)
/dev/sde on /media/usb2 type vfat
(rw,nodev,noexec,noatime,nodiratime,sync,uid=1000,gid=1000,fmask=0022,dmask=
0022,codepage=437,iocharset=iso8859-1,shortname=mixed,errors=remount-ro)
/dev/sdf on /media/usb3 type vfat
(rw,nodev,noexec,noatime,nodiratime,sync,uid=1000,gid=1000,fmask=0022,dmask=
0022,codepage=437,iocharset=iso8859-1,shortname=mixed,errors=remount-ro)
/dev/sdh on /media/karl/E2A3-F90D type vfat
(rw,nosuid,nodev,relatime,uid=1000,gid=1000,fmask=0022,dmask=0022,codepage=4
37,iocharset=iso8859-1,shortname=mixed,showexec,utf8,flush,errors=remount-
ro,uhelper=udisks2)
```

The mount options are quite different.

The option `nosuid` is missing for `usb0...usb3`, which prevents the normal user to unmount it.

Nemo's reported writing speed

Normally it shows a reasonable writing speed. But recently this changed to very high speeds, and then hanging at 98 or 100%.

Calling `sync` in the terminal synchronizes all block devices (as far as I understand). Calling it with `time sync` reports the time sync needed to finish it's job.

Flash drives should not be mounted with the mount-option `sync`, since this could cause such issues.

From:

<http://www.zeilhofer.co.at/wiki/> - **Verschiedenste Artikel von Karl Zeilhofer**

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Last update: **2019/05/14 08:24**

