Phone USB File Transfer with MTP

"But one of these days, it would be wonderful to have a special ABI-breaking kernel release, where every part of the kernel is free to break the ABI for just that one time. Oh the feeding frenzy! Oh the carnage! And afterward … oh the regret! Oh the recrimination! It would be glorious."

– Zack Brown, Zack's Kernel News

Phone USB File Transfer with MTP

by Trevor E Cordes

(c) 2018

Presented to Manitoba UNIX User Group

February 13, 2018

Phone USB File Transfer with MTP

- What?

- Why?

- Cloud? We don't need no stinking cloud

MTP: Media Transfer Protocol

- Originally PTP: Picture Transfer Protocol for cameras

- Extended for media players

- Ties to Windows Media and DRM

- Full-fledged USB device class

- Supported on most portable media devices

- Built-in!

- No extra/new apps required!

- Except...

Thanks Apple

- iOS doesn't support MTP

- Apple made their own USB driver and protocol

- Thanks Apple

- (Linux does support Apple's protocol using other tools)

Why Not USB Mass Storage?

- MTP is file-oriented, not block-oriented

- Atomic ops

- Filesystem agnostic

- Phone can use the filesystem at the same time

- Access to all user areas of the phone

- Access to SD card if present

- Only supports media file types!

Show Me the MTP

- simple-mtpfs

- jmtpfs

- gvfs-mtp (GNOME)

- kio_mtp (KDE)

RTFM

- man simple-mtpfs

- jmtpfs -h

- no manpage on Fedora, maybe on other distros

- options mostly the same

jmtpfs Usage

- simple-mtpfs gave me more problems

- List your devices: jmtpfs -l

- Mount: jmtpfs /mnt/misc

- I like:

- jmtpfs /mnt/misc -d -o \
  allow_root,auto_unmount,hard_remove,big_writes,entry_ti
  meout=600,attr_timeout=600,kernel_cache

- ^C to unmount and quit

Sync Your Entire Music Collection

- rsync -rW -v --size-only --modify-window=2 --inplace --no-perms --omit-dir-times --size-only --no-owner --no-group --copy-links --delete --delete-excluded --max-delete=25 --exclude index.txt --exclude *.log /data/Audio/VBR/ /mnt/misc/SD\ card/Audio/VBR/

- Slooooow

- But it works and gets the job done

- No extra apps required!

- Special characters

Questions?

- Bueller?