BORG BACKUP

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ABOUT ME

Long time Linux user, and hoarder of data

By day, code slinger

By night diaper changer

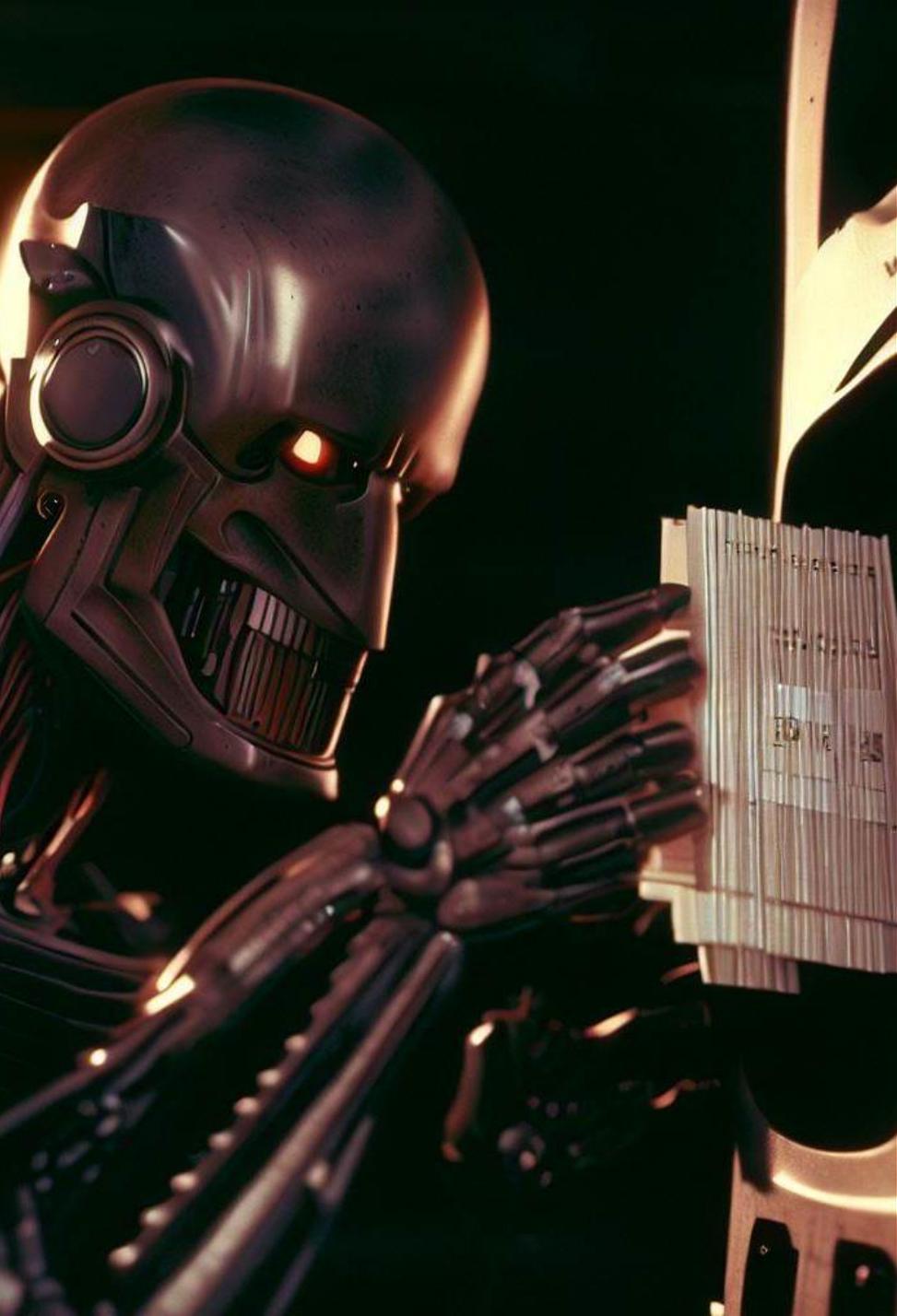http://denner.co

@adenner
https://hachyderm.io/@adenner

THERE ARE TWO TYPES OF PEOPLE IN THE WORLD...

Those who have lost data, and those who will.

IT'S ON THE RAID...

Isn't that backed up?

WELCOME TO MY JOURNEY

- Stack of USB hard drives and manual intervention
  - Not regular/no deduplication
  - What is SMART again?
- Enter my NAS
  - Automated backup, but slow as heck
 - No dedup
- Borg

STEP ONE CP

cp –r ~/my_files /mnt/backupdisk

- Easy
- Not automated
- Only one copy, no versioning
- Time consuming

RSYNC

•**Rsync -zvh source/fiolders /mnt/backups**

•**-v** : verbose

•**-r** : copies data recursively (but don't preserve timestamps and permission while transferring data.

•**-a** : archive mode, which allows copying files recursively and it also preserves symbolic links, file permissions, user & group ownerships, and timestamps.

•**-z** : compress file data.

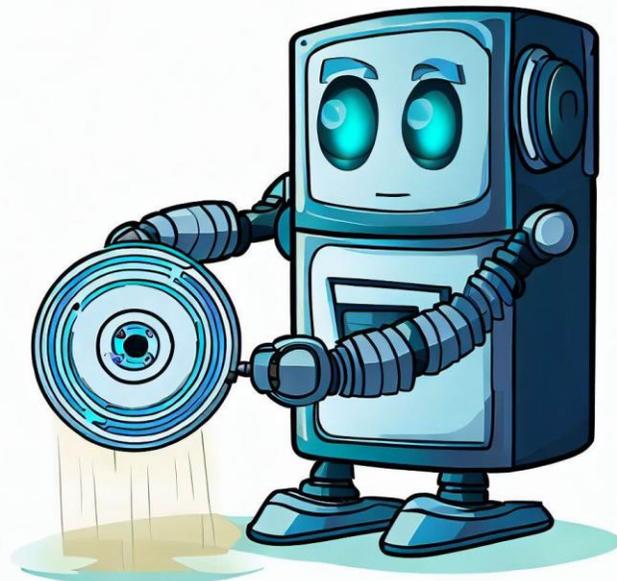•**-h** : human-readable, output numbers in a human-readable format.
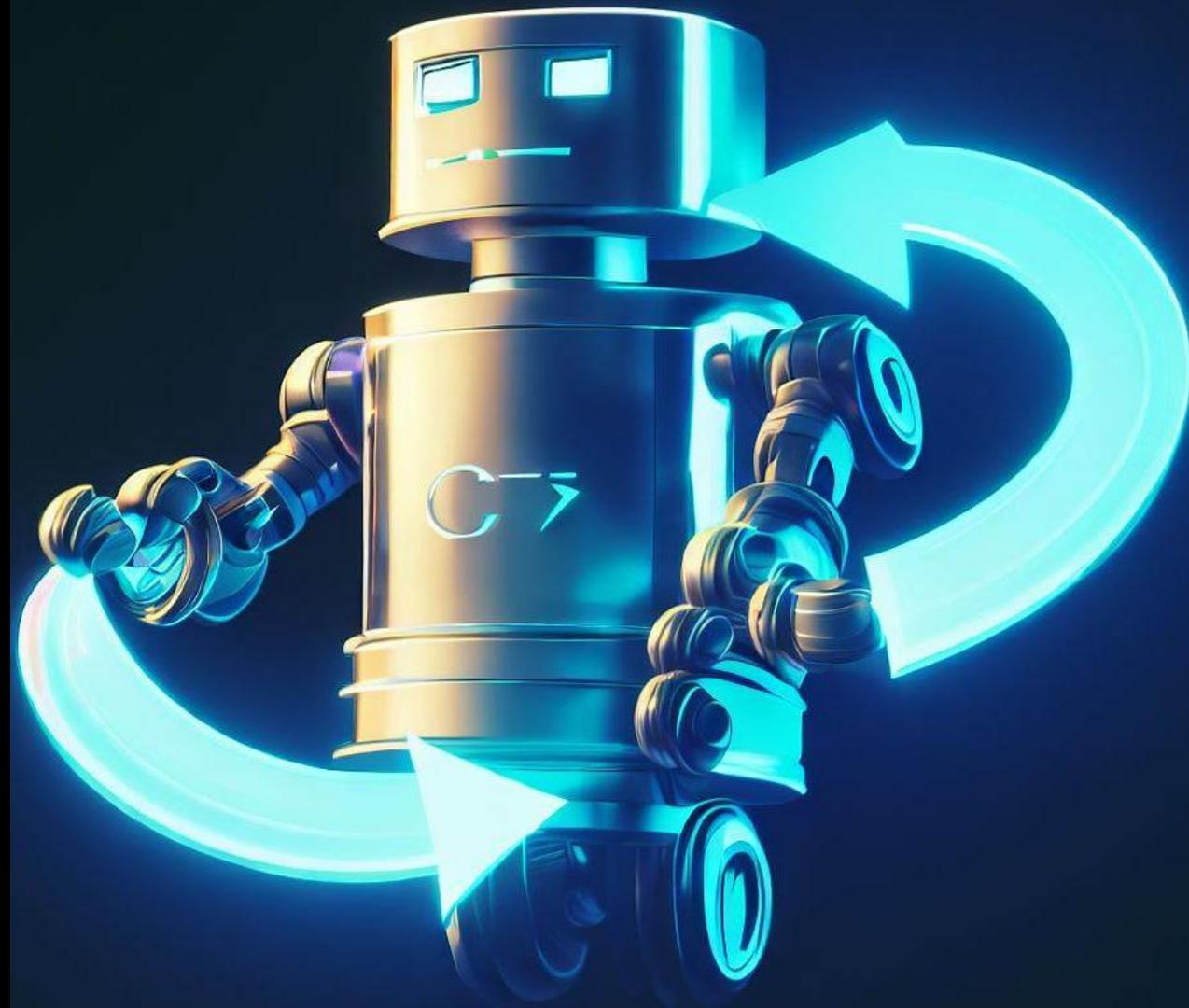
UPSIDES TO RSYNC

- Only moving changed data

- Better error handling

- Easy to use

- Remote transfer ssh

DOWNSIDES TO RSYNC

Still was doing it manually

Did eventually play around with hard linking by day... i.e. day1, day2 etc. and then rsync backup into day0
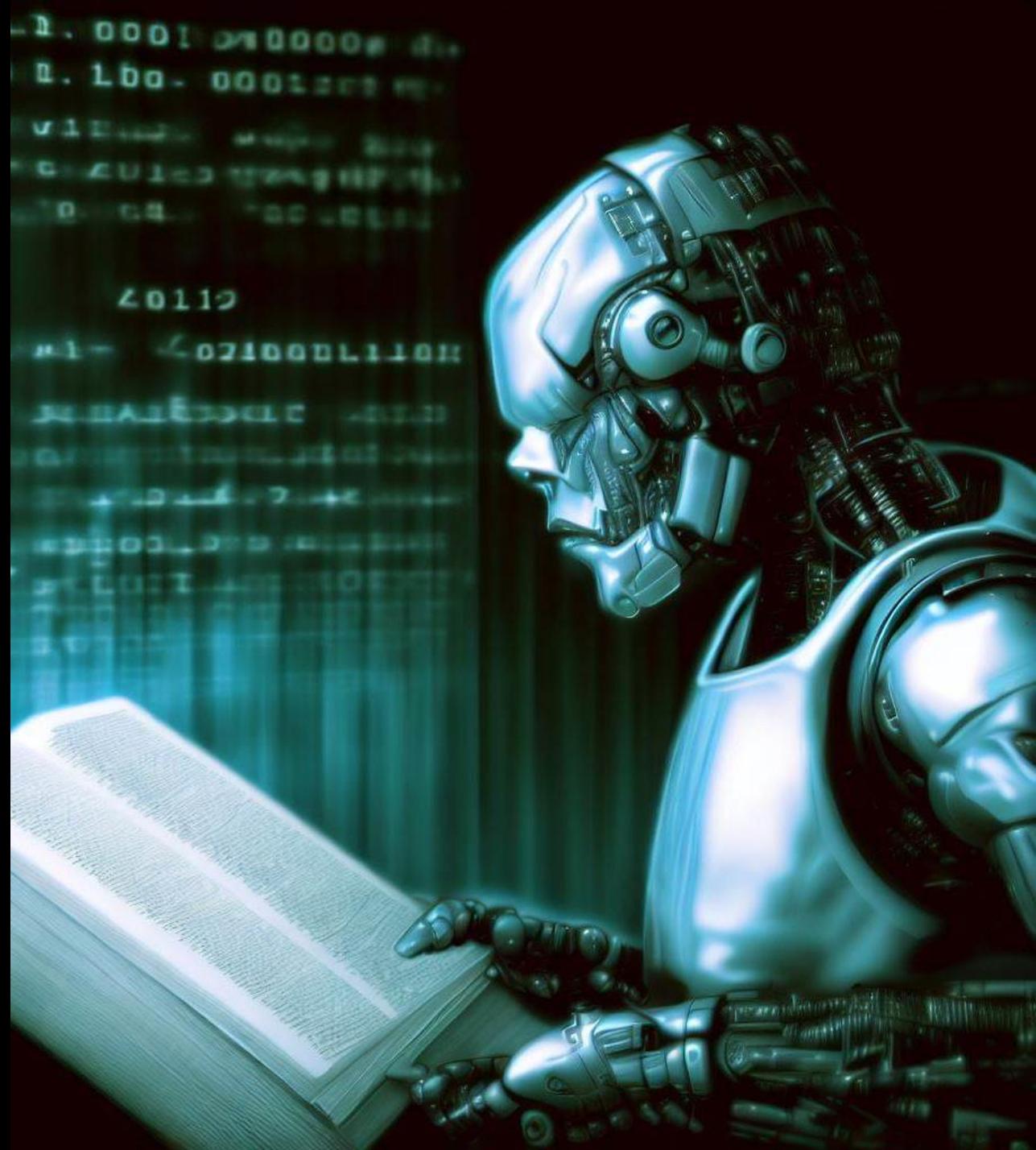
BORG

"Deduplicating archiver with compression and encryption"

- Space efficient storage of backup

- Secure authenticated encryption

- Compression

- Mountable

- Cross platform

- Free

TERMS

Archives—a backup copy of your data (snapshot)

Repositories—The directory that borg stores it's files in

ENCRYPTION OPTIONS

Set per repo at creation, can't change mode
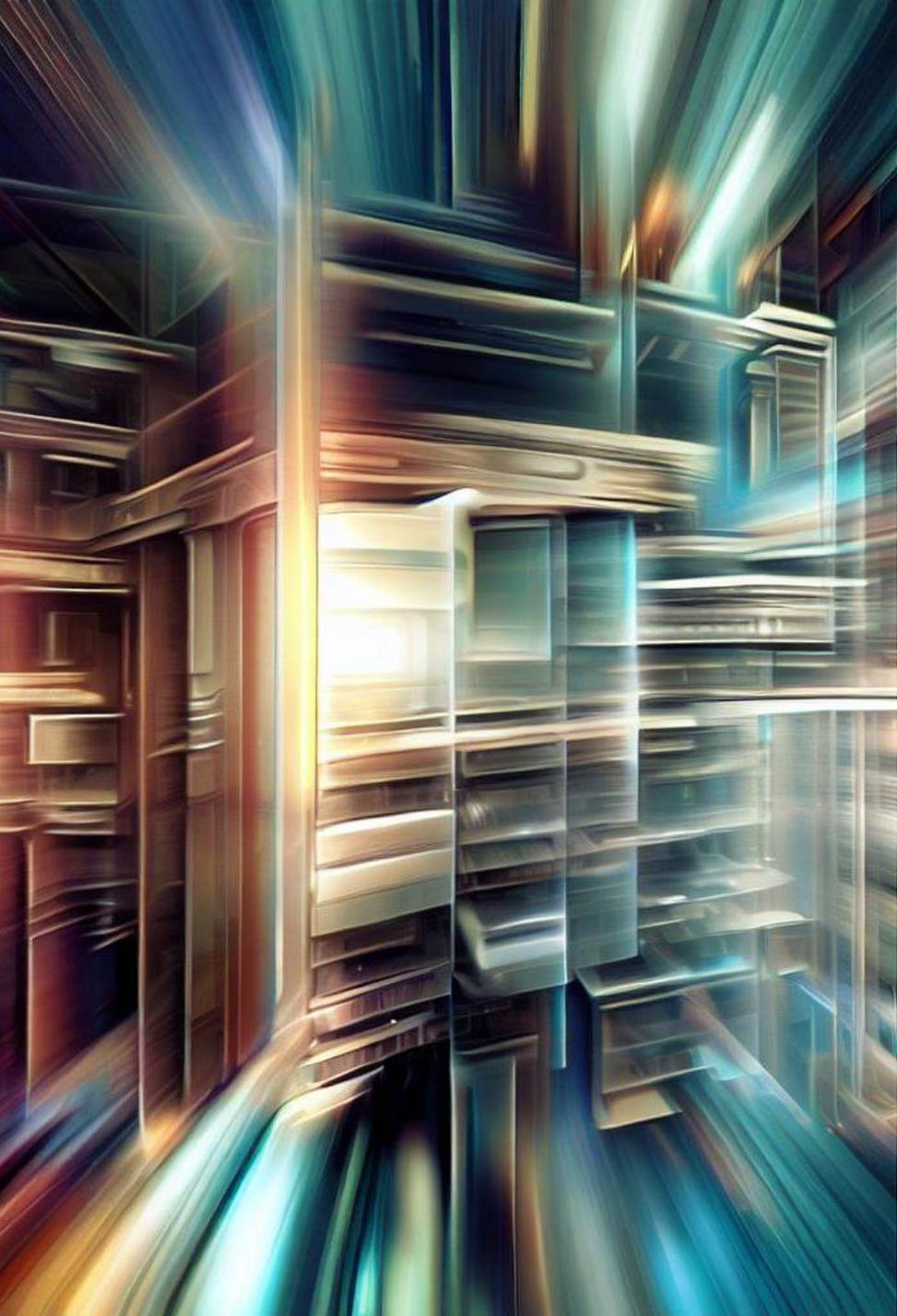
Repo key

repokey-blake2

Keyfile (stores some data in ~/.config/borg/keys)

Authenticated (no encryption but tamper detection sha256)

Authenticated-blake2

COMPRESSION

- Lz4
  - super fast, low compression
- Zstd-
  - everything
- Zlib
  - medium speed medium compression
- Lzma
  - low speed high compression

INSTALLING BORG

sudo dnf install borgbackup

sudo apt install borgbackup

sudo pacman -S borg

Pip install borgbackup

```
tory will not be applied.
root@c2cdbd3f00b1:/# apt install borgbackup
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  fuse libexpat1 libfuse2 libfuse3-3 libmpdec3 libpython3-stdlib libpython3.10-minimal libpython3.10-stdlib libreadline8 libsqlite3-0 media-types python3
  python3-async-generator python3-attr python3-idna python3-llfuse python3-minimal python3-msgpack python3-outcome python3-packaging python3-pkg-resources
  python3-pyfuse3 python3-pyparsing python3-sniffio python3-sortedcontainers python3-trio python3.10 python3.10-minimal readline-common
Suggested packages:
  borgbackup-doc fuse3 python3-doc python3-tk python3-venv python-attr-doc python-llfuse-doc python3-setuptools python-pyparsing-doc python-sortedcontainers-doc
  python3.10-venv python3.10-doc binutils binfmt-support readline-doc
The following NEW packages will be installed:
  borgbackup fuse libexpat1 libfuse2 libfuse3-3 libmpdec3 libpython3-stdlib libpython3.10-minimal libpython3.10-stdlib libreadline8 libsqlite3-0 media-types python3
  python3-async-generator python3-attr python3-idna python3-llfuse python3-minimal python3-msgpack python3-outcome python3-packaging python3-pkg-resources
  python3-pyfuse3 python3-pyparsing python3-sniffio python3-sortedcontainers python3-trio python3.10 python3.10-minimal readline-common
0 upgraded, 30 newly installed, 0 to remove and 0 not upgraded.
Need to get 8544 kB of archives.
After this operation, 31.5 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

DEMO TIME

PRUNE

`--keep-within INTERVAL`	keep all archives within this time interval
`--keep-last,` `--keep-secondly`	number of secondly archives to keep
`--keep-minutely`	number of minutely archives to keep
`-H, --keep-hourly`	number of hourly archives to keep
`-d, --keep-daily`	number of daily archives to keep
`-w, --keep-weekly`	number of weekly archives to keep
`-m, --keep-monthly`	number of monthly archives to keep
`-y, --keep-yearly`	number of yearly archives to keep

Borg prune command options